> **WARNING**
>
> This paper develops ONE specific idea (out of many) discussed during a reflexion on a renewed EC open source strategy: an update of the copyright on computer programs, facing the availability of open source code and new technologies like Artificial Intelligence code generation. **It is NOT A POSITION ENDORSED BY THE EUROPEAN COMMISSION**. The pro and contra of the proposed measure are still to be discussed internally and with various stakeholders.

Context: In the framework of the *" Study on the implementation of Commission's 2020-2023 Open Source Strategy and the Proposal for a Renewed Strategy",* a number of potential actions are currently discussed.

In one of them, Patrice-Emmanuel Schmitz (Interoperable Europe Portal – legal support) introduced (and then discussed with the JRC – see their opinion at the end of this paper) the idea of a possible update of the old Directive **2009/24 EC** on the legal protection of computer programs:

OBJECTIVE:

*Unlock open source **compatibility, reciprocity** and **AI licensing** issues resulting from the outdated copyright protection of computer programs.*

The aim is not to add another piece to the growing number of regulations, but to solve real issues inherited from the past. These issues cannot be solved by "open licences", simply because it is not up to the various licence producers (i.e. the Free Software Foundation, The Apache or the Mozilla foundations) to regulate copyright law and, in particular, what is to be considered as a **DERIVATIVE** of a copyrighted work by our own (sovereign) EU law.

The law applicable to computer programs and the possible specific exceptions regarding "standard copyright law" must be generally applicable to all kind of licensing (open or proprietary). It is significant that the European Union Public Licence (EUPL), for example, does not define what is a derivative and simply refers to the applicable law (which is, in the case of the EUPL, always the law of a Member State).

The origin of the current issues comes from the fact the old directive 2009/24 on the legal protection of computer programs needs refreshment: it is, without modifications, the much older council directive 91/250/EEC of 14 May 1991, which – some 35 years ago - was not at all written with open source in mind (the "open source" concept was forged later, in 1998). The Directive ignores as well new emerging technologies and the risk of potential copyright issues resulting from the use of AI for speeding up the software production through collecting open pieces of code from "the world" and

assembling it in a new program generated in response to "prompted" requirements. This sensitive copyright point is NOT covered by the 2024 AI act.

Without changing anything to the directive philosophy about interoperability, as it is expressed in its recitals 10 and 15, and in consideration of facilitating AI software factories in the EU, useful copyright clarifications could be provided in case the "used" source code base is free and open source.

Recitals 10 and 15 of the 2009/24 Directive (reproducing the older 1991 text) justify a specific computer programs copyright exception when the reproduction of copyrighted code and translation of its form are indispensable to obtain the necessary information for achieving interoperability, as follows:

(10)

The function of a computer program is to communicate and work together with other components of a computer system and with users and, for this purpose, a logical and, where appropriate, physical interconnection and interaction is required to permit all elements of software and hardware to work with other software and hardware and with users in all the ways in which they are intended to function. The parts of the program which provide for such interconnection and interaction between elements of software and hardware are generally known as 'interfaces'. This functional interconnection and interaction is generally known as 'interoperability'; such interoperability can be defined as the ability to exchange information and mutually to use the information which has been exchanged.

(15)

The unauthorised reproduction, translation, adaptation or transformation of the form of the code in which a copy of a computer program has been made available constitutes an infringement of the exclusive rights of the author. Nevertheless, circumstances may exist when such a reproduction of the code and translation of its form are indispensable to obtain the necessary information to achieve the interoperability of an independently created program with other programs. It has therefore to be considered that, in these limited circumstances only, performance of the acts of reproduction and translation by or on behalf of a person having a right to use a copy of the program is legitimate and compatible with fair practice and must therefore be deemed not to require the authorisation of the rightholder. An objective of this exception is to make it possible to connect all components of a computer system, including those of different manufacturers, so that they can work together. Such an exception to the author's exclusive rights may not be used in a way which prejudices the legitimate interests of the rightholder or which conflicts with a normal exploitation of the program

Based on these recitals 10 and 15, the Directive (art. 6) authorises object code decompilation as follows:

Article 6

Decompilation

1. The authorisation of the rightholder shall not be required where reproduction of the code and translation of its form within the meaning of points (a) and (b) of Article 4(1) are indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs, provided that the following conditions are met:

(a) those acts are performed by the licensee or by another person having a right to use a copy of a program, or on their behalf by a person authorised to do so;

(b) the information necessary to achieve interoperability has not previously been readily available to the persons referred to in point (a); and

(c) those acts are confined to the parts of the original program which are necessary in order to achieve interoperability.

2. The provisions of paragraph 1 shall not permit the information obtained through its application:

(a) to be used for goals other than to achieve the interoperability of the independently created computer program;

(b) to be given to others, except when necessary for the interoperability of the independently created computer program; or

(c) to be used for the development, production or marketing of a computer program substantially similar in its expression, or for any other act which infringes copyright.

3. In accordance with the provisions of the Berne Convention for the protection of Literary and Artistic Works, the provisions of this Article may not be interpreted in such a way as to allow its application to be used in a manner which unreasonably prejudices the rightholder's legitimate interests or conflicts with a normal exploitation of the computer program.

In a **hypothetic Directive update**, this article 6 (un-modified) could become "6a" and complemented by the *following new provisions (**6b, 6c and 6d**).*

6b Rationale: Binging an end to the endless "linking debate"

Written in line with recitals 10 and 15, Article 6 of the Directive authorises decompilation of software licensed (i.e. under a non-open, proprietary licence) in order to retrieve the source code and reuse the parts that are needed to build interoperability between independent programs.

It looks clear that the permission should be identical and the solution not be more restrictive regarding freedoms in case the source code was legitimately available, because free/open source.

Article 6b – Reuse of free open source code.
Under the same conditions fixed in article 6a, except 1.b, the authorisation of the rightholder shall not be required for linking and achieving interoperability between an independently created program and another program when its needed source code is available, not via decompilation, but because covered by a free / open source licence. If the two linked independent programs are distributed, together or independently, each of them will keep its primary licence.

6c Rationale: Solving dependencies issues

Reciprocity and Licence Compatibility issues are frequent when a new software is produced by using open source libraries or dependencies. This is typically the case, for example, when using a tool like Drupal, which is covered by the GPL. Is the resulting original work (i.e. the specific development of the Interoperable Europe Portal - IEP) considered, if distributed to the public, as a "derivative" of the tool used to produce it, and then must be distributed under the GPL? Or is the EC authorised to distribute the IEP under the EUPL (noting that Drupal and other interested users may then reuse this open source code and redistribute it in their own GPL-covered projects, because the EUPL is downstream compatible with the GPL) ?

Article 6c –Software resulting from the use of toolboxes or libraries, needed as dependencies.

When software is produced through the use of toolboxes or libraries that are licensed for the specific purpose of allowing users to produce their own work or software, these users may distribute the resulting work or software under licence terms of their choice, provide such distribution is not done in a way that impact the primary licence of the used tool, that prejudices the legitimate interests of the tool or library copyright holder or that conflicts with a normal exploitation of their program.

These conditions are presumably met:
a) if the tool or library is obtained under open source and permissive conditions, or
b) if the tool or library is obtained under a primary licence that is open source, share-alike and reciprocal (or so-called "copyleft"), provide the licence covering the distribution of the produced work or software is itself open source, share-alike and reciprocal, and – in addition – allows the reuse of the distributed work or software under the primary licence of the used tool or library.

6d Rationale: Solving potential copyright issues caused by the use of AI

The distribution of software forged (generated) via AI factories could be problematic when collecting pieces of code openly published but covered by different (potentially incompatible) copyleft licences.
Speeding up software generation through AI factories is promising and looks as the future of efficient programming. But what to do to ensure that AI collected code is always covered by permissive licences? Chances are high that some pieces will be covered by copyleft licences like the GPL or AGPL for example. The use on the EUPL, which is downstream compatible with all copyleft licences and grant permission to reuse the distributed code under these, presents an interesting opportunity of reinforcing European sovereignty in this field.

Article 6d - Software code composed via Artificial Intelligence

The distribution of software generated through AI software factories using the existing available code base is generally authorised if:
a) the used code base is available under various open source permissive conditions;
b) the used code base is available under primary licences that are open source, share-alike and reciprocal (or so-called "copyleft"), provide the licence covering the distribution of the generated software is itself open source, share-alike and reciprocal, and – in addition – allows the use of the distributed software under the relevant primary licence(s).

The JRC contribution (<mark>yellow marked</mark>):

In the preliminary discussions, the JRC was extremely cautious. On the principle, they said:

<mark>We agree that this would bring about more certainty for all players.</mark>

Discussion: Indeed, this point is confirmed by a number of user's questions (on the Interoperable Europe Portal), noting that the answers legal support has been giving to these users for years have been in the directions proposed, and that this is made public on the portal without there having been any contrary reaction.

But the JRC highlighted obstacles:

<mark>On the substance, the suggestions would have as their objective to give a certain binding interpretation to the clauses of open source licences.</mark>

<mark>We do not think the Commission would want to intervene on issues which should be decided by those who are behind these open source licences (FSF, OSI, etc.) – many of them being governed by US law, as we know.</mark>

<mark>We think it is their role to clarify issues on which there are discussions and/or to adapt the clauses in a next version of the licences if there is a sufficient consensus that a certain choice implemented in a specific clause does not lead to optimal results.</mark>

<mark>What you could certainly do is contacting the FSF and/or the OSI and try to launch/relaunch a discussion on these issues</mark>

Discussion: This should be perfectly true if the objective of the proposal was to interpret existing (US-law based) licences regarding the three above points (linking, dependencies and AI generated software). It is indeed true that no open source licence is explicit on these points. For example, the "virality" in the case of linking doesn't result from the text of the GPL, but from interpretations provided by stakeholders, mainly in the license steward (FSF) FAQs.

But there is a fundamental question: Is it to the licences (or to the license stewards) to determine what is or not a copyright *derivative* regarding EU law? Or is it to the copyright law? The objective of the proposition is not to interpret specific open licences, but to determine, like it was done for the decompilation copyright exception, in our own general EU copyright law and according to our **own sovereignty**, the notion of "*Derivative work*" in three cases that were not foreseen in 1991 (date when the original text of the Directive was published):

- linking by copying available open source code needed for interoperability;
- software works resulting from toolboxes/libraries needed as dependencies;
- software works generated by AI (exploiting the existing open code base);

It is true that we are at the frontier between two "interests": the one of the source code licensor opting for a specific licence and the one of implementing a general "state of law" clarification, providing more freedom to the EU software industry. Directive 2009/24 (and its predecessor 91/250) has considered both interests and refers indeed to avoiding applying the copyright exception "*in a manner which unreasonably prejudices the rightholder's legitimate interests*". So, contacting OSI (the Open Source Initiative) for informing them is a nice and fair idea and we may do it, but it cannot be decisive. We should not expect from them any conclusion or even any contribution to a solution: OSI is not a license steward and will probably declare itself incompetent. OSI defines their Open Source principles in a general way, and – based on that – declares which licences are compliant with

the principles. The propositions are not impacting the OSI general open source principles. Defining the scope of **copyright derivative works in EU law** belongs to EU sovereignty and OSI is not competent for that.

Contacting the FSF could be more relevant, noting that their voice must be considered as "one among many". It would be inappropriate to grant them to take a "decisive" position on a point of potential EU law, because the clarification on what is or not a "derivative" must be done by the applicable law. It is not their competence and when they tried to do so regarding linking, and later with patents or DRMs, this has generated raging debates. They are currently known to be rather opposed to any move, internally contested, and deprived from funding by several other organisations. The FSF historical role was really great in the 1990ties, but looks not as prominent today as it was in the past. The fact is that since 2005-2007 and the publication of the complex GPL-3.0, developers have massively preferred to adopt simple permissive licences (MIT, BSD, Apache).

In case the FSF would be contacted, it is advised to do it via its European branch, The Free Software Foundation Europe. It is also advised to contact other open source foundations that are forming a more complete panel of opinions, knowing however, that nearly all of them (even Drupal which has a strong EU implementation) are registered in USA.

For example (non limitative):

- The Apache Software Foundation
- The Cloud Native Computing Foundation
- The Digital Freedom Foundation
- The Drupal Association
- The Eclipse Foundation
- The GNOME Foundation
- The KDE eingetragener Verein
- the Linux Foundation
- The Mozilla Foundation

The JRC highlights other potential "barriers".

1. The Commission is usually quite hesitant in updating an existing directive. We have a similar experience about the Copyright Directive of 2001 (also a text which would deserve an update).

Discussion: true, but with known exceptions. Directives are updated in cases where the evolution of the art leads the Commission and EP to do so, i.e. the Directive 2009/48/EC on the safety of toys, which is currently updated for similar reasons: scientific advances having revealed the role of endocrine disruptors, carcinogenic substances and PFAS in toys distributed on the EU territory.

2. The Commission would need to be presented with factual and substantial evidence that the current situation leads to a lack of harmonisation between Member States and thus requires a harmonisation initiative.

Discussion: in the three "copyright issues" that are considered as relevant above (linking, dependencies and AI generated software) a number of Interoperable Europe Portal users have submitted questions. It is important that all Member States jurisdictions (where copyright related cases are addressed in front line) will have the same perception of what is a "Derivative work" and

that the Court of Justice of the EU will have clear references to address prejudicial questions. The IEP users' questions illustrate the need and the European AI industry will most probably take advantage of the proposals.

Further contacts with this Industry are needed in order to verify this last point.