Legal Aspects of Research Software

GFZ Research Software Meeting
14.09.2022
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I. „Software" – What is it about?

- Computer programmes of all kinds:
  - from a short code to the complete, independently running product
    - examples: operating systems, application programmes, ancillary programmes and macros, router software, software agents, programme parts such as sub-programmes and routines, programme modules, etc.
  - As source code or implementable code
  - No software: data generated by software
  - No software, but similar interests: databases

II.How is software legally protected?

1. **Copyright protection**:
- When created by a human, "author", (not machine-generated) and not trivial, routine work;
- Copyright protection arises automatically when developing the software.
    (the © sign is not of relevance)
- Only protection of the **specific form of embodiment** (not: underlying ideas, methods, algorithms, scientific principles) ☾ NDA!

2. **Patent protection:**
- Only for "computer-implemented inventions";
- needs to be registered with Patent- and Trademark Office **<u>before</u>** being published first time. ☾ clarify with Technology Transfer before distribution!

III. Who owns the software?
Copyright - Authorship vs. Ownership

- Authorship
- **Who is author of the software?**

- Any individual person who has made a direct contribution to the software.

- If several persons are involved in the development: **co-authors**

- Ownership
- **Who owns the rights of use and can decide about the software's exploitation?**

- each **author**, unless:
- software development within an employment in the performance of his/her duties: **employer**, unless:
- **specific agreement** (employment contract, contract for services)
- **co-authors jointly**, unless:
- authors created software within in an employment: each **employer**, unless:
- **specific agreement**

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IV. Why are software licenses important?

Licenses grant rights.

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- ## Inbound/within GFZ:

 - If a new scientist at GFZ brings software that he/she has written within a previous employment relationship, the previous employer owns the rights of use.
 - If third party developers (for example scientists of another institute within a project) contribute to software-code, the developer must give GFZ a license to use the software for GFZ-purposes.

 à GFZ needs a license to be able to use and further work on this software!

 à Contributions by external developers shall be covered by **License Agreement.**

 à **Only internal use** is covered by employment contract; the internal GFZ-license does not allow the distribution of GFZ-software to third parties not employed at GFZ (also not to GFZ-guests!).

IV. Why are software licenses important?

- Outbound:
  - To secure ownership and opportunity of exploitation for GFZ!
  - Without the rights to use your software, nobody is allowed to reproduce/verify your results.
  - In case of open source software: Ensure that non-GFZ-employees can maintain or further develop the software. That keeps the software sustainable.

à For full exploitability ☾ **proprietary licenses;** also **dual licensing** possible.

à For use i.e. in scientific community ☾ **European Union Public License (EUPL)**
  ☾ **other strong copyleft license (AGPL, GPL)**
  ☾ **weak copyleft license (LGPL, EPL-2.0)**
  ☾ **permissive license (Apache, BSD, MIT)**

à For use in Helmholtz cross-centre activities of the Research Field Earth and Environment ☾ **Helmholtz Earth and Environment Software Infrastructure License (HEESIL)**

IV. excursion: EUPL - advantages

- first open source license to be released by an international governing body
- available and valid in 23 languages
- valid in all EU Member States, with precisely formulated limitations of liability or warranty, and conform to EU law requirements
- downstream compatible with many other copyleft licenses, including business-friendly OSS licenses and especially GPL-v.2/GPL-v.3
- covers also use case of *software as a service/cloud services* (without distribution of software)

V. What else?
Further legal aspects

- **Export control limitation** to be clarified before publishing software under open source license (=worldwide license!)
- **License Conditions of third party code** to be analysed; compatibility issues with copyleft licenses (no conflicting clauses allowed; strong copyleft license always prevails over permissive license).
- **License Conditions from forums or other network websites,** i.e. Stack Overflow, to be observed.
- **Funding conditions** for developing the software to be met.

VI. Don'ts

- Publish, upload or distribute your code without prior approval by GFZ (process „software dissemination").
  - Also for scientific publications: Go through the process before you apply for a DOI!
- (Re-)use software from a previous employment without written permission from previous employer.
- Develop software together with non-GFZ-employees without clarifying right ownership for the contributions.
- Use or work on third-party software without permission to do so.

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