Towards Sustainable Software Engineering and Citable Software Publications at GEOMAR

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A Common Process for Research Software Publications at GEOMAR

Libraries are essential in publishing scientific outcomes and are established in all research organisations. In recent years, most research organisations have established central data management units to facilitate publication of scientific data following FAIR principles. Policies and processes in these areas are widely adopted. For scientific software however, best practices, defined processes and central points of contacts for research software engineers are missing. This leads to open questions and uncertainties for software authors and contributors, e.g., regarding ownership, licensing as well as credit and recognition.

FAIR Data, Software and Science

The FAIR principles applied to all three aspects of gaining and sharing knowledge: daily software and the scientific outcome.

License Attribution

- Workflow for finding a suitable license
- Four software classes to simplify the licensing process
- Open Source Licenses preferred but closed licences considered
- Involvement of Technology Transfer group as needed

Community

- Developers Group: Open forum for programming staff members
- Internal DevOps Platform*: information about all aspects of software development and available services
- Training Camp*: Online Learning Platform for organizing hands-on sessions and providing material

DevOps

Software Publication Process

Scientist/RSE - Data management - Library

Software development

Release planning (licence selection etc.)

Revisions/QC

Release

Publication with DOI

Scientific publication

Data publication

Software publication

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Connections outside of GEOMAR

- Allianz der deutschen Wissenschaftsorganisationen – Working Group Wissenschaftliche Software: „Handreichung zum Umgang mit Forschungssoftware“

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