deRSE25 and SE25 Timetables



Contribution ID: 86

Type: Workshop or Hackathon

An introduction to Machine-actionable Software Management Plans

Tuesday 25 February 2025 16:00 (1 hour)

The concept of software management plans (SMPs) is similar to Data management plans (DMPs) but focusing on the research software lifecycle aligned to the FAIR for research software (FAIR4RS). DMPs consist of a series of questions and answers to outline how data will be handled during and after a research project. Similarly, an SMP helps us outline some important elements to handle and share our research software, resulting in the production of more reproducible and reusable software. An SMP questionnaire covers research and technical information including, for instance, aspects about licenses, releases, and public availability. A machine-actionability layer can be added to SMPs turning them into maSMPs. This refers to a semantically structured description (i.e., metadata) of the research software and its lifecycle.

The ELIXIR SMP, proposed by the Software Best Practices focus group in ELIXIR Europe, aims at a low barrier entrance so both research software engineers and researchers who code ban benefit from it. We have collaborated with them to add a machine-actionable layer based on schema.org, and thus compatible with Codemeta. We provide types and profiles (i.e., usage recommendations on top of schema.org and our own types) to describe SMP, including source code and releases. We have aligned our maSMP to the SMP created by the eScience Center in the Netherlands and the one created by the Max Planck Digital Libraries. We have also analyzed its compatibility wrt the Research Software Metadata guidelines proposed by EOSC.

In this short tutorial, we will briefly introduce the FAIR4RS principles and discuss how they relate to software metadata. We will then show some sources of software metadata and practical steps to support FAIR4RS. Afterwards, we will introduce SMPs including differences wrt project planning and project management. We will then present our approach to maSMPs, including a practical approach to get the corresponding metadata.

Resources

- FAIR4RS https://doi.org/10.15497/RDA00068 and https://doi.org/10.1038/s41597-022-01710-x
- ELIXIR SMP https://doi.org/10.37044/osf.io/k8znb
- maSMP metadata schema https://doi.org/10.5281/zenodo.7806638
- maSMP profiles https://doi.org/10.5281/zenodo.10582120
- An example of maSMP in action https://doi.org/10.37044/osf.io/t94g8
- maSMP project pages https://zbmed-semtec.github.io/maSMPs/

Funding

The first version of the maSMP was funded by the European Union's Horizon 2020 Research and Innovation programme under grant agreement No 101017536, part of the Research Data Alliance and European Open Science Cloud Future call 2022.

The alignment to the EOSC RSMD guidelines was part of the FAIR-Impact support action calls funded by the European Commission, grant "FAIR-IMPACT –Expanding FAIR Solutions across EOSC" number 101057344. The maSMP project is part of NFDI4DataScience consortium funded by the German Research Foundation (DFG), project number 460234259.

I want to participate in the youngRSE prize

no

Primary authors: SOLANKI, Dhwani (ZB MED Information Centre for Life Sciences); VENKATESH, Suhasini (ZB MED Information Centre for Life Sciences); CASTRO, Leyla Jael (ZB MED Information Centre for Life Sciences)

Presenter: CASTRO, Leyla Jael (ZB MED Information Centre for Life Sciences)

Track Classification: Data and Software Management: software management plans