Letter of intent

File number 175.2021.040
Grant 2021/2022

Applicant
Title
RASCAL-LAB: open and integrated collection of high quality data sources for empirical software engineering

Abstract
- Exacte en natuurwetenschappen
- Disciplinecodes: 16.10.00, 16.20.00, 16.40.00
- Investeringsvraag:

Real life software analysis is a strategic asset to safeguard society’s software quality and reliability. To develop this we require excellent research infrastructure that enables top quality empirical research methods. We propose to significantly extend the existing and successful Rascal platform (for software analysis and transformation) with new high-quality data sources and new instruments for software data acquisition and software data analysis. The extraction of high-quality data from source code and related information such as version control systems and discussion forums is burdened by countless, yet relevant, details. Researchers neither have the time nor the expertise to prepare and clean such information. This investment is supported by a broad consortium of researchers, because it bridges the gap of constructing an important part of their virtual laboratories. This pure engineering effort is not covered by any research funding. Solving this problem could have a positive flywheel effect in the field of empirical software engineering in the Netherlands and abroad. The proposal consists of the construction of data acquisition instruments, the actual acquisition of large corpora of prepared data using those instruments, and the connection of instruments for analysis and reporting on this data. Magnitude: 1.5M€

- Researchers:
Researchers in software engineering from all over the country are interested in this development: Tijs van der Storm (CWI), Alexander Serebrenik (TUE), Magiel Bruntink (Software Improvement Group), Ana Oprescu (UvA), Andrea Capiluppi (RUG), Michel Chaudron (TUE), Joost Visser (Leiden), Bedir Tekinerdogan (Wageningen), Bastiaan Heeren (OU). The list is still growing. We are currently not soliciting for support abroad, in the interest of cohesion and effective collaboration. However, it seems inevitable that the proposal will also have an impact abroad, given the international uses of the Rascal platform in empirical software research.

- Connection to GWI: due to circumstances there is no actual link with GWI, but this proposal fits perfectly with the goals and strategy of the LSI.

Organisation responsible for the application

Confirm letter of intent
With submitting this form via ISAAC I declare to have filled in this form completely and truthfully.

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