Bachelor Thesis Description, status: open, language:DE/EN

Rich Visualizations for Inner Source Patch-Flow

Summary

Inner source (IS) is the use of open source development practices within an organization. In inner source, companies open up source code internally so that all employees can see, reuse and contribute changes to it independently of their team. Inner source collaboration can be quantified by measuring patch-flow: the flow of code contributions across organizational boundaries such as organizational unit or project boundaries.

In this thesis, the student will extend our "collaboration management suite" (CMSuite) by develop features and visualizations that allow inner source stakeholders to explore the patch-flow in their organization. The student will iteratively design the visualizations (jointly with supervisor) and implement them as part of our CMSuite using a stack containing Java, TypeScript, Angular, Jersey, PostgreSQL.

Work Results

- **Goal: Enable IS stakeholders to explore patch-flow within their organization**
- Results
    - Different patch-flow visualizations
        - … as Sankey diagram
        - … as weighted graph (incl. and excl. Additional hierarchical information)
    - Features for customizing visualizations
        - Enable expanding, collapsing of selected org. units
        - Allow selection of different layouting incl. layouting by org. structure
        - Filtering, highlighting by defined attributes incl. receiver, contributor, date range
    - Features for storing, exporting, retrieving visualizations
- Working mode
    - Kanban- and inner source-inspired development approach
        - Joint feature specification between student and supervisor
        - Continuous asynchronous feedback, review by supervisor

Supervisor

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