Collaborative working in formal methods

Context

Formal Methods are successfully established for verifying and validating safety-critical soft- and hardware. In addition, a wide variety of techniques are available, the most prominent being model checking and proofing.Event-B is a state-based formal method that uses proofs to verify a specification. Models are usually created via the eclipse-based [Rodin|http://www.event-b.org/platform.html] platform, which also assists in proofing.However, until now, modeling and verification of specifications are single-user tasks as a framework for collaborative working with formal specifications exists.[DesignSpace|https://www.jku.at/en/institute-of-software-systems-engineering/research/tools/designspace/] provides a uniform and collaborative environment for exchanging and analyzing engineering artifacts across tool boundaries. Its goal is to facilitate collaborative working between multiple users and tools. The goal of the thesis is now to provide a DesignSpace adapter for the Rodin platform, thus enabling collaborative working.

Goals

- Enabling collaborative work with the Rodin platform via DesignSpace
- Providing a Rodin-Eclipse plugin that integrates seamlessly into the existing Rodin environment
- Maintainable and tested code

Requirements

- Proficiency in Java programming language
- (Optional) knowledge in foundations of formal methods

Supervisor

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Event-B.org

The home of Event-B and the Rodin Platform