

Bachelor/Master project: Comparison of Visual Modeling Language Specification Approaches

Semester: Sommersemester 2017

Language: English

Motivation

Meta-modeling environments for creating domain-specific modeling languages (DSMLs) typically consist of a conceptual modeling component, with which the classes and relationships of the domain are modeled, and a concrete syntax specification component, with which a visual language to display model instances is defined. Existing approaches differ strongly with respect to how visual modeling languages are specified.

Description

The project should practically explore existing visual language specification approaches, and develop a comparison framework which categorizes the approaches according to their distinguishing features, and allows to support decisions about which specification approach to use for a given purpose. Approaches to be examined cover the Eclipse Graphical Modeling Framework (GMF), Graphiti and Eugenia (both built upon GMF), MetaEdit+, MEMO-MML, Melanee, XModeler, and JetBrains MPS.

When executed as a bachelor-project, the focus will primarily be on exploring the different tools and creating a comprehensive overview over each approach. When executed as a master-project, scientific demands towards creating a comprehensive comparison framework will be more ambitious.

References

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Application

Please apply directly to the supervisor, and add a short motivation statement (~ 1 page) and your current credit point overview. If you have already formed a group of ≥ 3 persons, please also apply individually, but refer to your fellow group members in your mail.

Application deadline: 05.05.2017