The Impact of the Core Product in Δ-Modelling

Master Project Proposal

Motivation and Context

A *software product line* is a set of systems with well-defined commonalities and variabilities developed by managed reuse. The products of a software product line can be described by a feature model where features denote product characteristics. Δ-Modelling [1] captures feature-based variability in design and implementation by a core product and a set of product-Δs specifying modifications of the core to incorporate product features. The core product can be any product for a valid feature configuration. However, the choice of the core product influences the development of the product-Δs required to represent all products of the product line.

Project Goals

The goal of this master thesis project is to analyze the impact of the core product for the design and implementation of a product line by Δ-modelling. This comprises the following tasks:

- Perform case studies for Δ-modelling of example product lines with all possible choices of the core product in design and implementation
- From the experiences gained in the case study, analyze the impact of the core product to the product-Δs necessary to represent the products of the product line
- Develop general guidelines how a core product should be chosen for a good representation of the product line by product-Δs

Prerequistes

Programming Experience, Knowledge in Software Engineering and Product Line Engineering ("DAT165 Software product line engineering")

Contact

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Literature

[1] I. Schaefer, A. Worret, and A. Poetzsch-Heffter. A model-based framework for automated product derivation. In *Workshop on Model-based Approaches in Product Line Engineering (MAPLE)*, 2009.