Master Thesis "Model validation"-00062936

Description

Model validation is the process of evaluation of models against rules and constraints in order to ensure the quality of models. Significant parts of the software in Ericsson LTE radio base station are generated from models. Model validation is one important way to ensure quality of the products.

The work consists of literature studies (Model-based development, Model validation, Eclipse EMF Validation Framework, etc.) and familiarization with current model validations (general UML model validations provided in the tool and custom model validations developed by Ericsson) and the design rules at Ericsson. Based on this, analyze, propose and implement new model validation rules:
• Translate legacy formal validation rules into a new formalism
• Create new model validation rules from design rule documents
• Create new model validation rules (e.g. dependency management)
• Validation of Transformation Configurations
• Create Eclipse “Quick fixes” for violations of model validation rules

Qualifications

Good knowledge of Modeling, Eclipse plug-in development and Eclipse Modeling Framework is desirable as well as Java and C/C++. A basic understanding of mobile networks is helpful.

Size

30hp, This is a thesis work for one or two students of a Master of Science program.

Time frame

The study should be started in summer or fall 2012.

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