TU Clausthal

Einladung zum Informatik-Kolloquium

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Scenario Based Development of Domain Specific Languages

The use of domain-specific languages (DSLs) has increased manifold for problem-solving in specific domain areas as they allow for a wider variety of expressions within their domain. Modeling using DSLs has shown high increases in productivity after accounting for the time and cost expended in developing them, making them a suitable target for improvement in order to reap higher rewards. The currently used approach for domain modeling involves the creation of an ontology which is then used to describe the domain model. This ontology encapsulates all domain knowledge and can be cumbersome to create, requiring external sources of information and assistance from a domain expert.

This presentation aims to present a novel framework for scenario-based development of DSLs, called the Domain-Specific Scenario (DoSS) framework. This framework proposes the use of scenarios in natural language, which are currently used in requirements engineering and testing, as the basis for developing the domain model iteratively. An example of the use of this approach is provided by developing a domain model for the newly introduced Aviation Scenario Definition Language, and comparing their initial model with one obtained using DoSS. The Aviation Scenario Definition Language (ASDL) has been proposed as a domain-specific language providing a well-structured definition language to specify departure, enroute, re-route, and landing scenarios

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