Problem

Like in conventional software engineering, also in model-driven engineering the development of complex software systems requires support for parallel working by multiple modelers in terms of version control systems (VCS). Conventional VCS cannot handle the rich semantics of models and suffer from three main deficiencies:

- erroneous conflict detection
- less supportive conflict resolution
- no flexibility with respect to domain-specific modeling languages (DSMLs) and associated tools

Solution

Adaptable Versioning Framework

The generic framework is modeling language independent and provides extension points for defining language specific characteristics [1].

Precise Conflict Detection

To avoid the detection of false-positives, language specific refactoring patterns can be defined by end users utilizing the example driven operation recorder [2].

Smart Conflict Resolution

The Conflict Resolution Reasoner is a learning-based extension to conventional VCS and provides decision support for common merge problems [3].

References