

Collaborative Model-Driven Software Engineering

An overview

Current software engineering practices rely on highly heterogeneous and distributed teams, required to work together to deliver the software system correctly and efficiently. Such groupwork dynamics are enabled by Collaborative Software Engineering (CoSE).

Additionally, the inherent complexity of nowadays software systems is often addressed by embracing the principles of Model-Driven Software Engineering (MDSE).

Collaborative MDSE is a combination of Collaborative and Model-Driven Software Engineering.

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- Collaboration,
- Model management,
- Communication.

Each of these dimensions provide tools and techniques for tackling a particular class of challenges.

Collaboration is concerned with the groupwork dynamics between the stakeholders of the software engineering lifecycle. Version control systems and real-time collaboration environments are among its typical features.

Model management provides means for creating and manipulating models, such as frameworks for defining domain-specific languages (DSLs) and various model editors.

Communication augments the (programming and modeling) languages employed in the software engineering lifecycle by allowing the stakeholders to express their ideas in a natural, human language. Chat applications, annotations in the software models, and even commit messages in the version control system, can be considered as means of communication.

