AMEISE
A Media Initiative for Software Engineering

In order to provide students the experience of managing a software development project without the financial and emotional sacrifices and stress involved in endangering customers and employees, an environment for simulating software development allowing for experimental learning is developed.

Project description
Problem statement

In spite of the theoretical knowledge students of Computer Science, Software Engineering, Information Systems or related fields such as Business Administration or Mathematics acquire throughout their curriculum, they are not sufficiently trained to cope with the challenges of the complexity involved in managing even a modest, multi-person software development project. Nevertheless, many graduates move quickly to positions where they have to resume responsibility for a development team.

Point of Departure

The Software Engineering Lab of Stuttgart University (Head: Prof. Ludewig) addressed this issue by developing the SESAM simulator. It serves as core engine around which AMEISE is built.

SESAM allows Students to direct software development projects by hiring personnel based on the candidates specific experience, assigning tasks, review progress and quality of work, and direct the project in such a way that a given multi-criterion goal (budget, time, comprehensiveness and quality of all deliverables) is optimised. The actions students perform to this end need finally to be interpreted and commented by an instructor.

AMEISE-Approach

AMEISE extends the scope of the SESAM-Simulator by wrapping it in a new environment allowing self-assessment and self-directed learning. Students have the chance to analyse the consequences of their actions themselves and to compare their project trajectory with decisions and results obtained by peers.

Further, the spectrum of problems to be solved is extended by simulations of variations of classical process models. With specific counselling tools, instructors can further vary the complexity of the problems to be solved. In fulfilling these requirements, the look and feel of the system is also adapted to be in line with human computer interfaces, students of the web-generation are used to.

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