Kolloquium zur Masterarbeit

Modelling Software Developer Behaviour with BDI Agents

Sarah Diedrich, TU Clausthal

Software process simulations can be used to simulate parts of the software development process as well as the evolution of whole software projects. They can be useful for a wide range of applications from supporting management decisions and helping with planning projects to improving software processes and technologies. Training simulations and other educational applications can benefit from them as well.

There are already a number of simulation models available using a variety of different techniques, multi-agent system being among the most recent ones. Many of them use data mining to gather information from real-world software projects which can then be used as input parameters. The models explore various different parts of the software process. In a recent approach, agents try to improve the maintainability of a project by using different kinds of refactorings. However, for a detailed model that allows for more precise results more information about the behaviour of the developers is needed.

This thesis describes the development of BDI agents that can take the role of software developers in a simulation environment. They imitate the way developers work on a project, for example by adding new features or fixing bugs, using the mined data of a software project. The goal is to find a more detailed way of simulating the behaviour of the developers by using the advantages of the BDI approach.

Donnerstag, den 23. August 2018, 10:00 Uhr, Seminarraum 210, IfI (D8), Am Regenbogen.