

EINLADUNG

Zeit: 27.06.2007, 10 Uhr

Ort: 5052, Ahornstr. 55

Referent: Dipl.-Inform. Ulrich Norbistrath

Titel: Configuring eHome Systems

Abstract:

New developments in and decreasing costs of electronic appliances enable the realization of pervasive systems in our daily environment. In the presented work, I focus on eHome systems. The price of individual development and adaption of the software comprising these systems is a major obstacle preventing their large-scale adoption.

As software engineers, we are particularly interested in simplifying the software development process, when implementing a service for a specific home environment. The vision concerns the following: If software for eHomes could be reused, and its adaptation and configuration be automated, one of the price barriers on home automation for the mass-market would be broken. The key point of this work is the dissolution of the software development process for eHome systems.

In my work, I introduce an approach built upon functionality composition for automatic service configuration in different environments. The repetitive development process is transformed into a single development process followed by a repetitive configuration process. This configuration process is supported by the proposed tool suite, the eHomeConfigurator. The result is a deployable configuration graph capable of describing dependencies and contexts of components in the eHome field. The tool suite is used to configure and deploy various services in different home environments.

Compared to the classical development process, the effort for setting up eHome systems is reduced significantly.