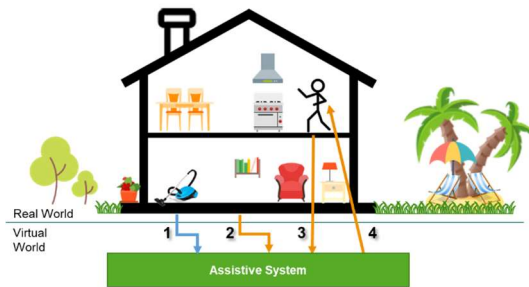


MASTERTHESIS

MODEL-DRIVEN SOFTWARE ENGINEERING OF ASSISTIVE SYSTEMS



Assistive Systems (1) provide situational support for human behaviour (2) at the time the person needs or asks for it (3) based on information from previously stored and real-time monitored structural context and behaviour data.

An interesting research area is to create an assistive system using *model-based and generative software engineering methods*.

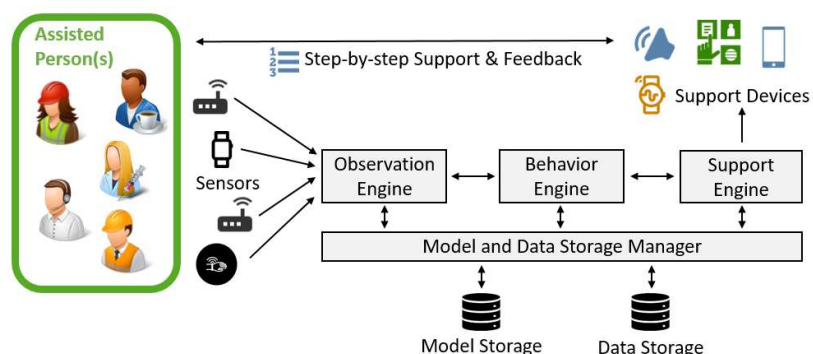
The aim of this thesis is to add relevant components in a generated information system to be able to provide assistance. The thesis will be evaluated using a dataset from a smart home environment.

Are you *interested* in this topic?

For *more information*, please contact us.

Contact

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Monitored behaviour using sensors and context information of assisted persons is handled in an *observation component* (observation engine). A component which handles behaviour (*behaviour engine*) searches for known behaviour in the storage, and has knowledge about possible next assistance steps. In case the assisted person asks for assistance, a *support component* (support engine) provides step-by-step support using support devices.

AREAS OF FOCUS

- Extend the MontiGem runtime environment for these assistive components to handle behavior
- Generate & implement assistive views for the assistive system
- Test it with activity recognition data from a given dataset
- Evaluate the implementation with simulated real data

DESIRABLE PRIOR KNOWLEDGE

- Basic knowledge about modeling, e.g., UML class diagrams
- Programming Experiences in Java

Task Definition

Prof. Dr.
Bernhard Rumpe
Software Engineering



Details

<http://www.se-rwth.de/theses/>