

Automated Integration of Smart Gateways with DS2OS

Outline

Smart Spaces are spaces where you can control functionality of the environment via software. While this is a cool thing, it is challenging to connect the heterogeneous Smart Devices.

This is the topic of this thesis.

You will have a look at existing gateways such as Eclipse Smarthome and possibly create your own gateways to suitable protocols. The goal is to automatically discover devices and integrate them into the VSL by generating context models and translation logic.



Possible Structure

- Analysis
 - o Review on smart gateways, their communication patterns and data models.
 - o Review of protocol translation and model generation patterns
- Related work
 - o What do other projects do that answer related questions?
- Design
 - o Which components do you need?
 - o Security, dependability, scalability, ...
 - o Which are options for the design? Why are your choices good?
- Implementation
 - o Frameworks used, screenshots, etc.
- Evaluation
 - o How well does it work?
 - Metrics!

Requirements

Curiosity, Joy to work in a team, Knowledge in Java.

Ability to write good code (including unit tests and documentation).

Contact

If you are interested, please send an email briefly explaining why you think to be the right person for this thesis to:

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Image sources:

<http://www.eclipse.org/smarthome/>

