Technische Universität München
Chair for Network Architectures and Services
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MsC research project
internship José Valerio

Knowledge-Plane Mechanisms for Home-automation
by the example of location-based services

motivation

Imagine a network that does configuration, healing, optimization, management and protection autonomously given high level tasks: You do not have to spend time on those issues while having them very well accomplished.

We are currently doing research in how to get closer to that vision at Munich.

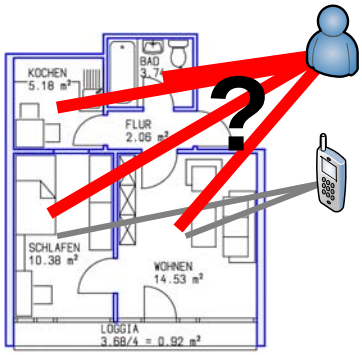
One important aspect thereby is location: Location of devices as well as location of people inside a home environment. We must know where a certain device or user is to provide location based service.

A scenario here might be a user changing the room while watching the news: An intelligent environment might identify the possible displays available to show the information nearby the user. Another scenario might be a person getting a voice call that will be signalled at a device nearby the called.

outline

In this internship we want to create a service that is able to tell us the location of devices and users.

We expect this information to be collected from sensors inside our environment (like motion detection, Bluetooth proximity etc.). As we do not have such a measurement infrastructure yet, the input should be simulated for the implementation.



For our intelligent network we need subsidiary services to collect the information, to save it as well as to process it.

The components should be implemented using existing technology.

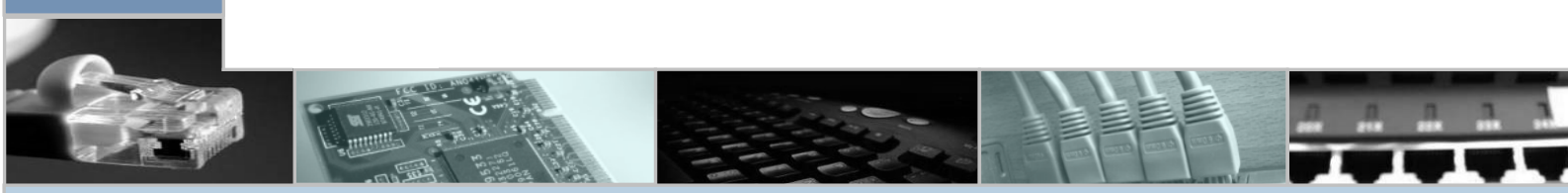
The technology chosen should be evaluated in terms of usability for realizing a solution to the given problem. Advantages and disadvantages should be pointed out.
The necessary components to perform localisation should be implemented and documented.

preconditions

Programming skills (Java), joy to work cooperatively in a team of motivated scientists and students.

keywords

Knowledge Plane, Location based service.



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