Technische Universität München
Lehrstuhl für Netzarchitekturen und Netzdienste
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Diplomarbeit 2009

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A Reliable Scalable Secure
Knowledge-Distribution Overlay

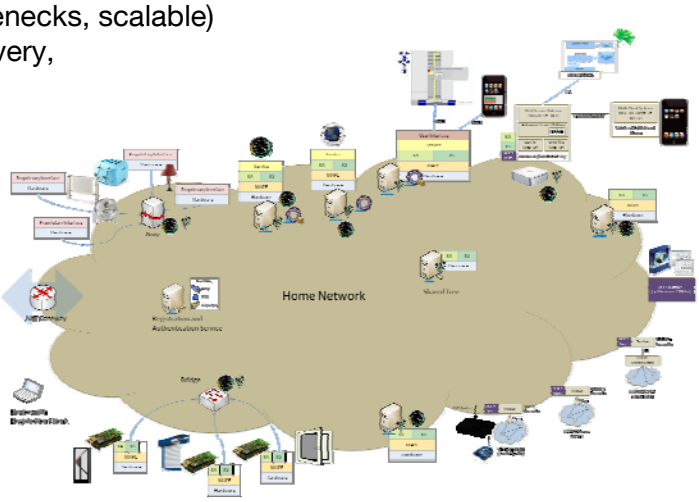
motivation

When we look at today's networks, we see that its devices do rarely cooperate. Decisions concerning the network and its components are taken at the edges of the network considering only a very limited information base.
In a previous Diplomarbeit the concept of a knowledge-driven middleware for the distribution of knowledge throughout the network as well as offering remote control functionality was examined.

work description

In this work the prototype should be transformed into an operative system.
Some Requirements to the system are:

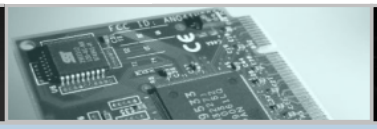
- Highly distributed (no bottlenecks, scalable)
- Reliable (redundancy, recovery, replication)
- Secure (authentication, authorization, secure data transfer)
- Resource efficient (to run on the heterogeneous base of devices)
- Self-
  - Organizing
  - Optimizing
  - Configuring
  - Healing
  - Protecting
  - Managing
- Modular (this also concerns to resource efficient)



In the first part of the work related systems (e.g. agent platforms, distributed middlewares) should be identified and presented. Differences to the approach proposed in this work should be pointed out.
The second part is the specification of the platform. Since the platform is the base for connected services and hardware control cycles especially the interfaces from and to the Knowledge Agents must be explained.
In the third phase the agents should be implemented and tested. The results of the tests should be presented in the evaluation chapter of the work.
Finally the work closes with a summary and a conclusion that also judges about the potential of the work done and possibly useful further work.

requirements

Joy to work in a bigger software development team, creativity, Java, knowledge in distributed systems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