Towards a software architecture for device management in instrumented environments
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**Research goals**
- Building instrumented environments in several scales (desk-, room-, and building-level)
- User should not be forced to wear specialized hardware to use the environment
- Prototyping flexible user interfaces for our instrumented environments
- Creating new interaction metaphors

**Focus of my thesis**
- Providing software infrastructure for uniform access to devices
- Dynamic plugging of devices and services

**Integration**

**Benefits**
- Uniform access to devices with similar functionality
- Dynamic plugging of devices and applications in the overall system
- Rapid prototyping

**Full Architecture**

**Integration**
- Device management facility plugged to a bigger system

**Collaboration**
- System contains central data pool
- Connection to other projects with similar goals at the same chair

**Data Pool**
- Data storage facility
- Stores information, requests and answers from connected components

**Discussion issues**
- Centralized design as bottleneck
- Reliable recognition of device disconnection
- Ressource management
- Inclusion of future devices
- Dealing with virtual devices

**Device Modelling**

- No hierarchical device model
- Device properties designed as remotely accessible APIs
- Device described as list of its features

**Communication**

- Central server, accessible both for applications and devices
- Matchmaker functionality (Yellow Page Service)

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