SIEMENS

Corporate Technology

W3C Model-Based UI XG Use Case

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Use Case

Smart Home Example - Network and Device Properties

- A smart home network includes, among others, a
  - security system
  - washer/dryer combo
  - room fan
- Each device provides a resource description
- The washer/dryer combo provides additional meta information to involve devices in the network which can support the reduction of humidity in the laundry room if the dryer program is running

Use Case

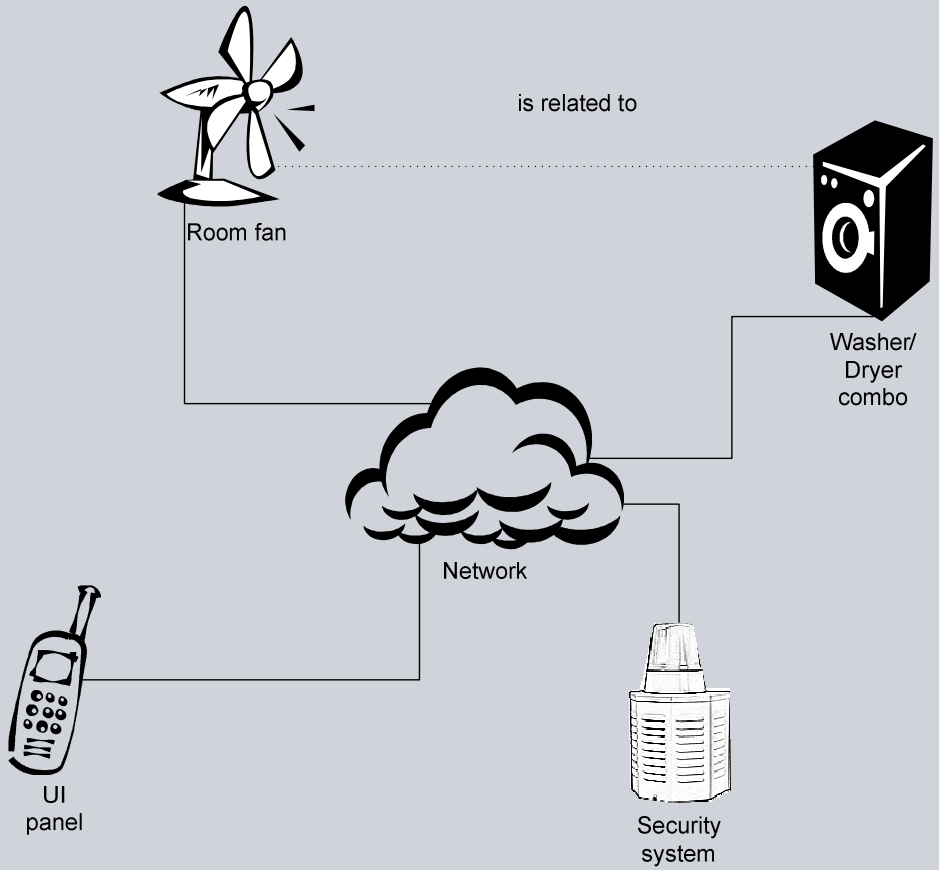
Smart Home Example - Monitoring and Controlling

- The devices in the network can be controlled and monitored by a UI application software (in the following called as UI panel) which may run on PCs, on mobile devices, within web browsers, etc.

- A user wants to start a wash and dry program by using the UI panel on his/her mobile phone

Use Case

Smart Home Example - Network Architecture



Use Case

Smart Home Example - UI Panel in Action

1. UI panel application lists all devices which are active in the network
   - user chooses the washer/dryer combo

2. Panel displays the required parameters which have to be entered (kind of wash program, wash temperature, etc.)
   - based on the resource description the UI panel identifies the room fan as a supportive humidity reducer
   - consequently, fan parameters are additionally displayed as option to activate the room fan if the dryer program starts

3. After the program is started by the user the status of all active devices is monitored

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General Requirement

Modeling a UI panel application for monitoring and controlling a dynamic network of heterogeneous embedded system devices

The UI panel should …

- … be applicable to different system environments
  - platform / browser independent
- … create semantic mashups
  - e.g. combining washer/dryer combo and room fan
- … create (semi-)automations
  - e.g. start room fan if dryer program is started
- … identify dependencies
  - e.g. fireplace can be only used if room fan is working