Dit Hus - HomePort

Informationsdag
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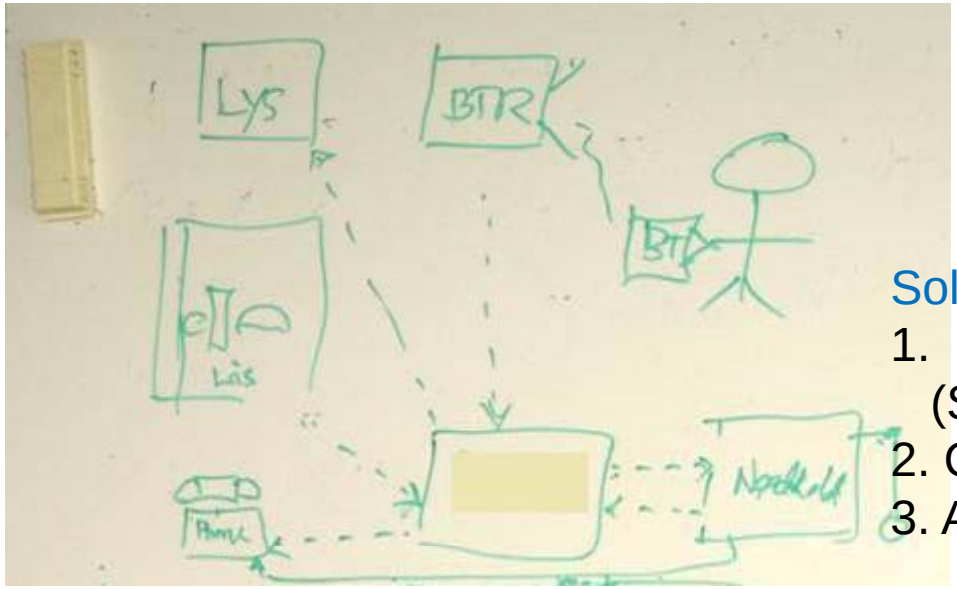
Agenda

1. Project vision /Anders P Ravn
2. Collaboration examples /Arne Skou
3. Homeport architecture /Jesper Rosenkilde
4. Homeport Demo & How to /Jesper Rosenkilde
5. Further collaboration - discussion /Arne Skou

Project facts (www.energybox.dk)

- Period: April 2009 – July 2012
- Budget: 10.6 mill.kr.
- Funding: 8 mill. kr. (2.6 mill. kr. for companies)
- Knowledge institution partners: AAU (CISS), AU/Alexandra Institute, CSI, IHA,
- Initial private partners: Develco, Seluxit, Servodan
- Additional partners: Zense Techology, Danfoss Heating, Saseco
- Also a number of networked partners

Motivation



- Everyone produces end-devices and control boxes.
- How can they operate together?

Solutions:

1. A single control box for all end-devices (Siemens, Honeywell, Samsung, ...)
2. Connect control boxes
3. An Interconnect box - Homeport

Issues in an Interconnect box:

- Who will invest in building such a box?
- Who shall buy it?
- Who defines its interfaces?
- Who maintains it?

Issues and Solutions

Who will invest in building such a box?

Only large companies can produce their own, so it must be a consortium. Innovation project among:

* End-device manufacturers (Velux, Hagen ..)
* Control device manufacturers (Danfoss, Servodan ..)
* Platform manufacturers (linksys, LIAB, Seluxit ..)
* Technology developers (zigbee,z-wave ..)

- Who shall buy it?

  It shall not be a ”metal” box. It is a protocol, i.e. software that can be run on any Linux (Windows) control box.
  Inexpensive in reproduction.

- Who defines its interfaces?

  Towards end-devices: Zigbee, Zwave, ...
  Essentially the manufacturers.
  Towards control boxes: XML, Internet, Emerging standards

Open Issues

- Who maintains it?
  - A user community?
- Keeping track of standards?
  - In the order of 70 home automation ”standards”
- Additional Features:
  - Event log
  - Leightweight access control

Project goals

- Implementation of a homeport prototype for co-existence of different end-devices and control boxes for energy optimization
- Validation of a number of scenarios and interoperabilities
- Collaboration with industrial partners
- Investigate business potential of a homeport
- Knowledge dissemination of project results

Project scope and method

- Focus is on interoperability and also energy optimization
- We extend the functionality through scenario implementations – typically over 6 months periods
- Approach
  - The industrial partners define the scenarios
  - The industrial partners provide products/hardware/functions
  - The university partners contribute with methods/protocols and prototypes of homeport interoperability

Project phases

- Analysis:
  - Selection of initial scenarios and system requirements
  - Definition of interface towards subsystems
- Prototype I
  - Development
  - New scenarios and system requirements
  - Evaluation and publications
- Prototype II
  - Development
  - New scenarios and system requirements
  - Evaluation and publications
- …
- Summary and dissemination

Collaboration examples

- Develco:
  - I/F between homeport and ZigBee standard controlling selected end-devices
  - Runs for autumn 2009/spring 2010/spring 2011
- Seluxit:
  - I/F between homeport and Z-Wave standard
  - Rule language
  - Transfer protocols
  - Configuration (internal/external)
  - Runs throughout the project
  - Possibly I/F to ’minbolig’.
- Servodan:
  - Communication with Servodan intelligent light controller
  - Runs for autumn 2009/spring 2010

Collaboration examples

- Zensehome:
  - Basic integration and energy measurements via Zensehome powerline products
  - Runs for spring 2010
- Danfoss (heating solutions):
  - Control of Z-Wave thermostat
  - Runs for 2010/11
  - Future: Parameter settings and Z-Wave evaluation
- LIAB:
  - Porting Homeport to LIAB’s platform
  - Homeport access to heating pump subsystem
  - Runs for 2011