Non-technical standardisation issues in smart houses

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Smart Homes’ activities and working areas

- Dutch expert centre, 13 empl., non-profit
- Develop and collect expertise via national and international research projects and evaluation of projects of third parties:
  - 4 European projects (3 IP’s + 1 CIP) in the areas of ambient assisted living + robotics, telecare and telemedicine;
  - Several national projects
- Dissemination to professionals and consumers via visits to the Smartest House of the Netherlands, exhibition, congresses and education;
- Consultation to smart housing projects of third parties, mainly in the AAL area.
Current “Ageing well at home” applications

1. House off
2. Smoke- & gasalarm
3. Digital thermostat
4. Home Control Box
5. Triple Play
6. Night status
7. Videophone
8. Videoconference
9. Comm site
10. Pers, safety alarm
11. Electronic door lock
Universele Control Hub architecture (I2home)
Non-technical standardisation?

• Standardisation of user needs?
• Standardisation of technical design / basic electrotechnical infrastructure?
• Standardisation of installation?
• Standardisation of usability?
• Standardisation of evaluation methodologies?
• Standardisation of privacy?
Take old bed to the new house...
Buttons above the bed ....
NETCARTY (IP, FP6, 2007-2010)

• Strong user involvement (design process)
Three possibilities for lamp on the ceiling, but not the right one ....
Two bed cords: one for active alarm, one for switch on/off the light...
Simple technology
Remote control for lighting, heating, TV, screens
A need for standardised evaluation methodology in AAL projects

- Many AAL projects running: a great variety in evaluation protocols, etc.;
- Difficult to prove evidence, to find justification for exploitation, to find business case;
- Consensus on number of end users, duration of trials, set-up, guidance, payment, etc.
Privacy protection

EU Data Protection Directive

HGW

Privacy agreement

Privacy

Smart Houses

Personal Data

Service providers

External Server

Smart Homes
Prototype for privacy protection
(NETCARIETY, Ikerlan)

Privacy application
Smart Home

JVM
(Java Virtual Machine)

{Data Protection Preferences}
Preferences Editor

Policy Reference File

Privacy Policy Editor

P3P Framework

Smart Homes

APPEL language
Conclusions

• There are many technical interoperability and standardisation issues to be solved, but
• there is also a big number of non-technical issues, that at least need harmonisation:
  – Basic user needs
  – Basic layout
  – Basic usability
  – Basic evaluation methodology
  – Basic privacy rules