Interoperable Platform solutions for eHealth and Quality of Life services and applications

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Outline

• What is a platform and why we might need one?
• European Platform attempts
• Complete ecosystem of devices and applications
What is a platform?

A flat raised area or structure!

- Something stable on top of which other things can reside
- In ICT: HW versus SW platform
- SW platform: usually your operating system
- SW platform: usually in contrast to applications that run on top of it
Why a platform?

- **Specific applications** for distinct use cases
- But most elderly needs more than one single AAL solution, and in the worst case:
  - Sensors have to be installed twice, thrice or even more often (same holds for other kinds of AAL components)
  - **Software and Hardware is not interoperable**
- provide **more general solutions** for enabling an ecosystem of interoperable hardware and software products
- the time to market of vertical solutions is lower
- the benefits of the ecosystem generated by a platform is higher
Why a platform?

- Learn from the development of the PC market since early 80s
- enabling technologies
  - standard interfaces at HW level
  - few popular operating systems
- adopted widely
- lead to mass markets and a full ecosystem of artefacts
- Can we consider a platform as an infrastructure?

As an infrastructure whose costs are spread over a multiplicity of stakeholders (and domains)‽!
The self-served society: not been viewed in isolation

- Energy efficiency
- Home automation
- Social networking

AAL

ICT for health (eHealth)
Continua Health Alliance

Interfaces & Standards

Personal Device
- Thermometer
- Pulse Oximeter
- Pulse / Blood Pressure
- Weight Scale
- Glucose Meter
- Cardio / Strength
- Independent Living Activity
- Peak Flow
- Adherence Monitor
- Physical Activity
- Insulin Pump

Aggregation Manager

Local Area Network (LAN) Interface

Telehealth Service Center

Wide Area Network (WAN) Interface

W3C

Health Record Network (HRN) Interface

EHR

PHR

ISO

IEEE

ZigBee

Bluetooth

Personal Area Network (PAN) Interface
universAAL

* Duration: 48 months
* Start: February 2010
* Budget: 13.9 M€
* EU Funding: 10.5 M€

universAAL - UNIVERsal open platform and reference Specification for Ambient Assisted Living
“One way to **build** them all, One way to **bind** them”

- Instead of each AAL service being built from scratch for specific needs establish a single “standard” way to build AAL applications
- Make it easy for different vendors to create & sell different components: through a process of binding they can be incorporated in multiple AAL services
Distributed Architecture

Distributed Multipart Applications

Middleware

OSGi
Electrolux/.Net
Siemens/OSGi
Android™
Other

IPNIas
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Main technical result: universAAL platform

Runtime support

**AAL Platform Services**
- Alarms, Fall detection, Message board, Personal Health, Record Adapter, +++

**Generic Platform Services**
- Context awareness, Security, Personalisation support, Accessibility support, +++

**Execution Environment**
- Common API

**Execution Environment**
- OS + hardware specific
  - Ericsson
  - Android
  - HP Windows
  - Nokia Symbian
  - IBM Linux
  - +++

Development support

- Developer depot
- Developer tools
- Reference architecture
- Guidelines

Community support

- uStore
- Example AAL services
- Training
- Roadmap
ReAAL The EU CIP ICT PSP Project…
piloting in the domain of active and
Independent living with 7000 users in real life

Project full name: make it ReAAL

Funded under: CIP-ICT-PSP.2012.3.2 – Towards open and
personalised solutions for active and independent living

Contract type: Pilot Type B        Grant Agreement no: 325189
Start date: 16-Jan-2013          Duration: 36 Months
Total budget: 10,976,954 €       EC contribution: 4,994,000 €
ReAAL promise

„Promote standards, guidelines and open platforms for interoperable solutions in the domain of active and independent living“

„...demonstrate by 2015 and ICT ecosystem that uses them in pilot sites involving at least 5000 users in the least five countries“

→ „critical mass“ approach
ReAAL Way

• Deploy within 36 months several applications in the field of active and independent living on top of the universAAL platform in several pilot sites involving ca. 7000 users in 8 countries

→ As result of the FP7 project universAAL (www.universaal.org), in this field the universAAL platform is the most prominent candidate platform

• Within ReAAL, partners of the universAAL project will set up a full exploitation environment that consists of uStore, Development Depot and runtime platform components
The Hierarchical Approach
Lifecycle

Business Cases

Assisted Person

AAL Space

Online Shop

AAL Service Provider

Developer Site

AAL Application

AAL Service

Development Tools

AAL Application Developer

IPNlas

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Objective

TICE. Healthy activities will be realized through implementation of a central platform focused in the creation of an ecosystem of health oriented applications.
The main result of the project is an innovative ICT platform that will enable rapid development and integration of a wide range of new ICT systems for Health and Quality of Life.
Technology Transfer

Bridging the gap between Invention & Innovation