AGNES

User-sensitive Home-based Systems for Successful Ageing in a Networked Society

Deliverable 1.3b – Project Slide Presentation

Version 1.0, November 30 2009

Objective:
Successful Ageing with Innovative ICT

- **Target users**
  - Elderly people, living alone, often with mild cognitive impairment, their family and other caring persons

- **Reduce isolation and loneliness**
  - Increased social interaction
  - Sensitive emotional support
  - More participation in shared activities
  - Practical support for daily needs
  - Enhanced feelings of security

- **Extend independent living in own home**
  - Alleviate, delay, even reverse psychological decline

- **Explore the new frontier of ageing research**
  - ICT and its possibilities for improving cognitive wellbeing in the elderly

Summary of Effort

- **Ten partners in 6 countries**
  - 3 user organisations (in Sweden, Greece, Spain)
  - 3 companies (in Germany, Austria, Italy)
  - 4 universities/research centres (in Sweden, Spain, Greece, Austria)

- **400+ person months over 36 months**
  - total cost: €3,6 million
  - AAL funding: €2,4 million

- **Start Date: September 2009**

AGNES partners

- Umeå University, Sweden
- UNED, Spain
- Can Controls, Germany
- Graz University of Technology, Austria
- AIT, Greece
- Modern Families, Austria
- KMOP, Greece
- ONDA Communication, Italy
- INGEMA, Spain
- Skellefteå Municipality, Sweden

The AGNES Vision

- **Wellness and active social participation go together**
  - Technology can increase social participation
  - Combating loneliness and mental deterioration

➢ A secure social network system for the older person

- **Elderly people retain implicit cognitive knowledge**
  - Interaction with technology should capitalise on this
  - Most current systems and devices rely on explicit knowledge for use

➢ Design/develop tangible interaction around the retained skills of older users

- **Family members need to be informed about elders' states and needs**
  - Can then respond in a timely and sensitive way
  - Contact/visit/involve as needed, not intrude

➢ Unobtrusive detection/communication of activities and states

- **All this demands user-led innovation for success**

Ballesteros, S., Reales, JM. (2004). Intact haptic priming in normal aging and Alzheimer's disease: evidence for dissociable memory systems. Neuropsychologia, 42, 1063–1070.

AGNES User-led innovation

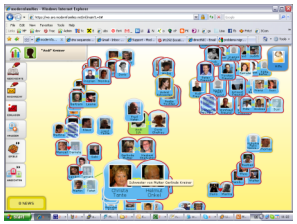
- **We don't know in advance what will work for older people & their families**
- **An evolutionary approach to design and implementation**
- **Users actively involved in design ad testing from the beginning**
  - Requirements, scenarios, suggestions, reactions
  - Iterative design prototypes - system and components
    - Allow older users to communicate requirements, preferences
    - Discussion objects, test use, selection, field trials
- **Creative tension with technical work**
  - Technologists want early specifications
  - User-led innovation **means** keeping design options open

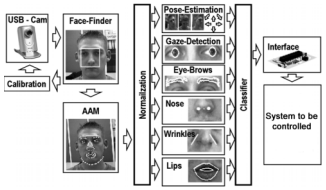
Waterworth, E L & Waterworth, J A (2006). The ELITE approach to designing IT for elderly. Gerontechnology, 5(2), 2006.

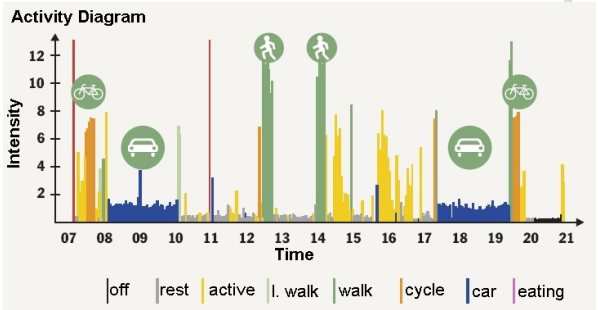
Work plan

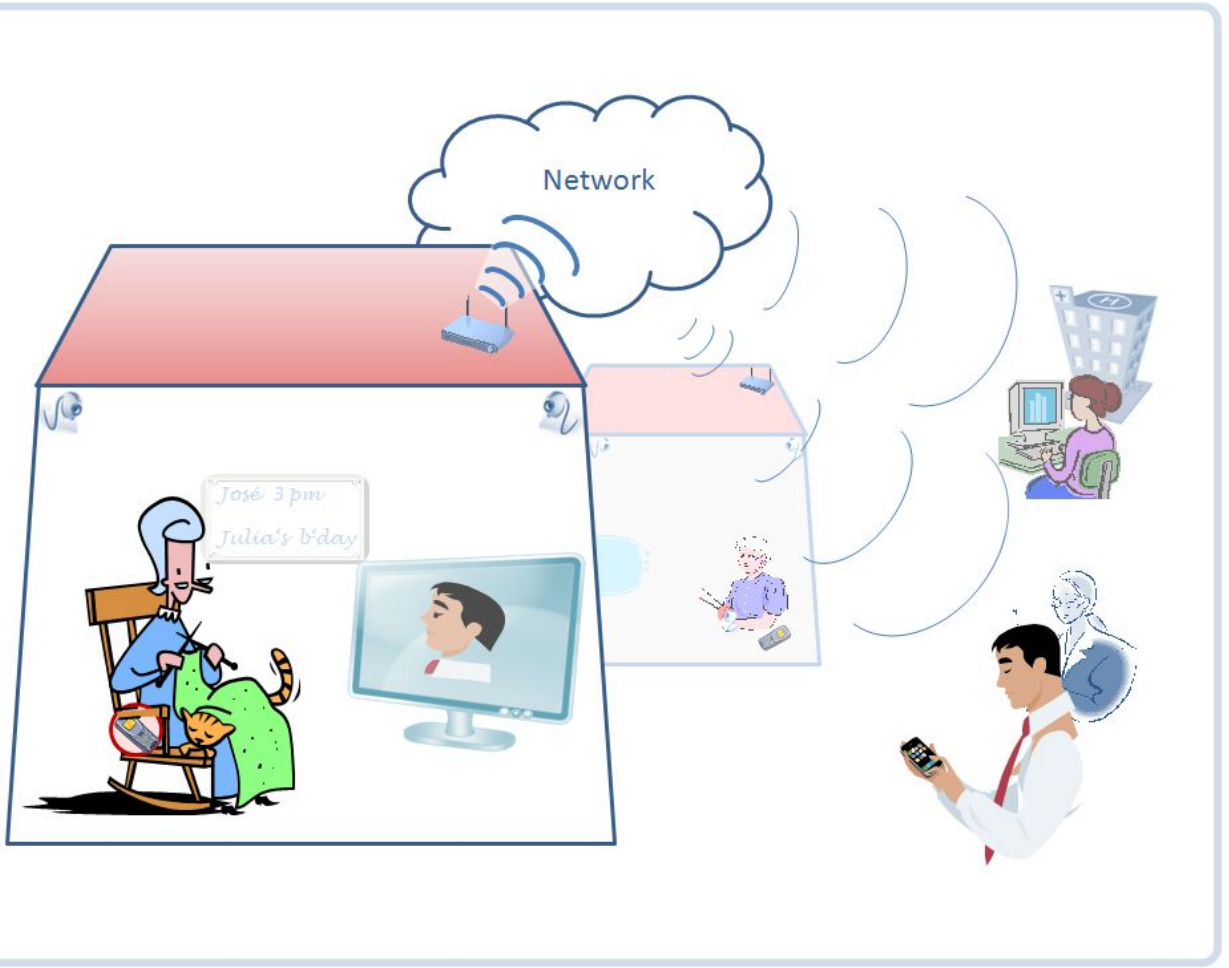
- **Incremental and modular design and implementation**
  - Involving users at every step in design and evaluation in use
    - Approach and components
    - Including field trials of 3 stages of prototype
- **Starts with a dedicated family social network**
  - Built around the old person and family
  - Can include non-active networkers (e.g. pets, babies)
- **Progressively add, test (and remove!) features:**
  - Detection of users' states and activities without intrusive sensors
  - Ambient devices for display and interaction
  - Tangible interaction objects for participation
- **Provide a platform for future modular applications**
  - Develop test applications (e.g. Games) that use platform
- **Investigate psychological and social impact**

A sketch of the elements of AGNES









Evaluating impact on users and their families

- **Investigating the psychological and social impact**
  - Before, during and after, with and without AGNES, across 3 cultures
  - Users, family and other caring persons
- **Select end users, calibrate wellness status at the start of trials**
  - indicator of changes in general health and cognitive functioning over time
- **Tests of specific cognitive abilities and mood states,** e.g.
  - Mini Mental State Examination tests five areas of cognitive function: orientation, registration, attention and calculation, recall, and language.
    - Versions are available for all relevant languages.
  - Self-Assessment-Manikins (SAM), devised by Lang (1980),
    - extensively tested in conjunction with the International Affective Picture System (CSEA, 1999)
    - graphical version can be used across different language speakers
- **Interviews, both structured and unstructured,**
  - with elderly users, family and other caring persons
    - including social and practical aspects

Commercialisation aspects

- **ONDA Communication, ModernFamilies, CanControls**
  - Plus user organisations and other partners
- **During AGNES, we will:**
  - Develop a commercial dissemination plan
  - Conduct specific assessment of market values
  - Aim towards cheap technology for mass deployment
  - Develop a specific product roadmap
- **Market opportunities include:**
  - Stimulation of bandwidth requirements
  - Devices for state/activity detection, ambient/tangible interaction
  - Services, especially in social contexts
- **Telecoms, equipment, device and service suppliers**

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