

Social isolation is a major cause of reduced health and happiness in the elderly

# **Alone@Home\_KIT**

## **Alone at Home but Keeping in Touch**

### **Aims**

- Preventing social isolation and loneliness in the elderly living alone
- Achieving a persistent sense of the presence of chosen others
- Being sensitive and adaptive to the state and needs of the older person

# General Approach

- Keeping in touch through "being with" others
  - ambient communication from around the home
  - supporting shared experiences and activities
  - sense of persistent co-presence with specific others
  - personalised information presentation
- Non-intrusive personal monitoring
  - understanding position, posture, emotional state
- Adaptive communication and interaction
  - Natural interaction by speech and gesture
  - Sensitivity to mood, location, and other aspects of state
- Specific support for significant, remote persons
- Reliable end-to-end communications

# Key research topics

- User needs focus, including psychology of ageing
  - User-centred design approach and testing
  - Tailored to communication, social activity and entertainment needs
- Detection of user states
  - Speech analysis, facial expression
  - Person tracking, posture detection
- Adaptive interaction and communication
  - Speech understanding and synthesis
  - Natural language dialogues
  - Simulation of specific others including synthesised speech
- Interaction devices and approaches
  - Ambient communication and activity support
  - System personas adapted to individual
  - Interfaces designed for other participants

# Current partners

- ***Umeå University, Sweden***
  - Project coordination, interaction design and testing
- ***Fraunhofer Gesellschaft, Germany***
  - Emotion detection and analysis, user data profiling
- ***CanControls, Germany***
  - Location, posture, facial feature detection and analysis
- ***Athens Information Technology, Greece***
  - Ambient intelligence, dialogue control
- ***Universidad Nacional de Educación a Distancia, Spain***
  - Psychology of ageing, user requirements, intervention testing

# Partners needed

- Telecommunications company
  - Communications requirements analysis
  - Design and provision of end-to-end solutions
- System component maker and integrator
  - Integrating components, product prototyping
  - Exploitation and commercialisation
- Speech analysis, recognition and synthesis experts
- And perhaps others ...
  
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