
Fraunhofer FIT as a Partner for Ambient Assisted Living for the Ageing Society

Expression of Interest in the Development of Intelligent User-Interfaces for the Ageing Society

The Fraunhofer Association

German non-profit organisation for applied research for industry, the service sector and public enterprises

Worldwide

- 80 research units in Europe, USA and Asia

In Germany:

- 57 Fraunhofer Institutes at 40 different locations
- 13000 employees, predominantly scientists and engineers
- Annual budget of about 1 billion Euros
- About 900 million from contract research



**Joseph von
Fraunhofer
(1787 - 1826)**

The Fraunhofer Institute for Applied Information Technology (FIT)

Four Core Research Groups

- Cooperative Systems, Information in Context, Life Sciences, Process Management

The *Information in Context* Group

- Nomadic information systems
- Knowledge Management
- Personalized eLearning
- User-oriented software engineering

Facilities and Platforms

- eLearning suite
- Contextualization platform
- Usability Lab

Partner in many European research projects
Highly networked with research and industry



Competencies in Context-Aware Systems¹

Development of User-Adaptive and Context-Aware Systems

- Research prototypes of User-Adaptive Systems, like museum guides (HIPS, LISTEN), city guides (Crumpet), and exhibition guides (SAiMotion)
- Development of a Context-Management System (CXMS, Advertisement Board)
- Mobile eLearning solutions (RAFT), eLearning solutions for deaf adults (AILB)

Research in Multi-Modal Interaction

- Research in integration of different modalities for in-/output and sensor-fusion
- Prototype of a multi-modal supporting system for warehousemen (MICA)

Research in new Interaction Metaphors

- Interaction by movement (LISTEN, MICA)
- Audio-augmented reality (LISTEN, Melodic Walkabout)

Usability Research and Usability Lab@FIT

¹For details on the projects please refer to http://www.fit.fraunhofer.de/projekte/index_en.xml#p1



Research partner in the senSAVE®-Project¹

- Funded by the Fraunhofer Association
- R&D for real-time vital monitoring based on a novel intelligent sensor network

Main Objectives

- Support patients with increased risk for severe cardiovascular disease in their daily life
- Increase their autonomy and mobility
- Improve quality of life
- Prevent emergencies



FIT - Workpackage leader for Context-Sensitive Multi-Modal Interaction

- Development of mobile solutions as well as stationary at home
- User-Centered System Development in close co-operation with real users

¹www.sensave.fraunhofer.de

Research focus for AAL

Research for User-Adaptive Interaction tailored to the specific needs of elderly users

- Enable natural interaction
- Ensure usability considering specific haptic and cognitive capabilities
- Increase the accessibility of information systems

Smart integration of sensors

- Recognizing the user interaction
- Sensing the situation
- Observing the context of the interaction

Integration of Context-Awareness for enhanced Human-Computer Interaction



User-Centred System Development

Contacts and Web-Sources

Prof. Dr. Reinhard Oppermann

- Head of the department Information in Context (ICON) at FIT
- Email: Reinhard.Oppermann@fit.fraunhofer.de
- Phone: +49 (0) 2241 / 14 - 2703 Fax: +49 (0) 2241 / 14 - 42703

Dipl.-Inform. Andreas Lorenz

- Phone: +49 (0) 2241 / 14 - 2971
- Email: Andreas.Lorenz@fit.fraunhofer.de

The Mobile Knowledge Research Group at Fraunhofer FIT

- http://www.fit.fraunhofer.de/gebiete/index_en.xml#Mobile%20Knowledge
- Projects: http://www.fit.fraunhofer.de/projekte/index_en.xml#p1

The senSAVE-Project

- <http://www.sensave.fraunhofer.de>
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