Compensating for Eyesight with Mobile Technology
Motivation

- Medication services can increase the quality of lives by ensuring correct medication.
- Independency of the elderly can be supported by empowering them in everyday routines related to medication.
- Wrong dosages and forgetting to take one’s medicine have been proved to be surprisingly common especially with the elderly.
Goal

- Improving the quality of life by providing mobile service access for the visually impaired elderly using services related to
  - medication and medicine related information and services, and
  - health monitoring and diet information

- By the means of TOUCH and AUDIO through
  - mobile phones
  - digital service access through NFC tags

- Also tracking of misplaced objects using indoor localisation techniques
## Consortium

<table>
<thead>
<tr>
<th></th>
<th>Finland</th>
<th>Spain</th>
<th>Greece</th>
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<tbody>
<tr>
<td>RESEARCH/ACADEMIC</td>
<td>VTT</td>
<td>TECNALIA-RBTK</td>
<td>NCSR Demokritos</td>
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<td>BUSINESS PARTNER</td>
<td>Pharmacy Caritas Foundation</td>
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<td>END-USER ORGANIZATION</td>
<td>FFVI</td>
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<td>ONCE</td>
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<td>LARGE COMPANY</td>
<td>NOKIA</td>
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Consortium changes

- End-user organisation ONCE from Spain withdraw from the project due to problems in funding negotiations
- Large company Nokia from Finland withdraw from the project due to their internal reasons. They reorganized their NFC development.
  → All partners have accepted the changes
  → Mr. Timo Tokkonen from Nokia has continued to be an technical advisor for the project.
  → SSI in Spain has replaced ONCE as a end user organization in Spain.
Funding situation

- Due to early drop-out of two partners, total budget smaller than initially requested
- No major delays in receiving funding
- One partner with very small budget has not yet requested funding. However, progress reports to national funding organization has been made.
- Some partners have some underspending, mainly because of technical reasons (need of waiting technology components, some technology components are still not available)
Finnish trial: Service concept

1. Pharmacist stores medication information into tag when requested

2. Pharmacist attaches an NFC tag into medication package

3. At home, user touches NFC reader with medication package to hear instructions
Approach

Touch-based interaction for service access

Indoor User Localisation and Tracking of Misplaced Objects

Analysis and validation

Planning and requirements

Basic strategy

Rough concept

Detailed concept

Field trials

Multichannel UI design

HearMeFeelMe
Schedule and activities

- Current start date 7th of July 2009 and end date 6th July 2011.
  - Extension requested (without additional funding) until the end of year 2011
  - Primary reason for extension request is the unavailability of mobile NFC devices
- The project consists of three main phases:
  1. Scenario specification
  2. Iterative development and trials
  3. Evaluation and analysis.
- 1st phase is finished
- 2nd and 3rd phases are still ongoing
  - Four experimental setups have been created
  - One has been evaluated
  - Field trials are in progress
### Deliverables

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<tr>
<td>D1.1. Service needs and requirements about touch-based interaction M7</td>
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<td>D1.4. Security issues, techniques and technologies M16</td>
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<td>D2.1. Indoor localisation techniques &amp; technologies M12</td>
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<td>D2.2. Object mapping &amp; tracking in indoor environment M14</td>
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<td>D3.1. Design space for different interaction modalities for vision impaired M6</td>
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<td>D3.2. Design principles to the UI components of the service pilot(s) M18</td>
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<td>D4.1. Service scenarios M10 &amp; M24</td>
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<td>D5.1 Project website M4 and continuously updating</td>
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<td>D5.2 Yearly dissemination report (1st year) M12</td>
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<td>D5.4 Exploitation plan version 1 M12</td>
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<tr>
<td>D6.1. Project management infrastructure M3</td>
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Dissemination activities

- Web pages have been up and running
- Demonstrations at AAL Forum, Odense
- National seminars and fairs, e.g.
  - Hyvä Ikä seminar in Finland
  - AVANTE fair in Spain
- Seven scientific publications accepted for publication
  - Publications co-authored by partners from different countries submitted and in-progress
More information...

- Web site: [www.hearmefeelme.org](http://www.hearmefeelme.org)

- Project contacts:
  - Minna Isomursu (VTT), minna.isomursu@vtt.fi
  - WP1: Touch-based interaction for service access, Igone Idigoras Leibar (Tecnalia), igone.idigoras@tecnalia.com
  - WP2: Indoor User Localisation and Tracking of Misplaced Objects, Stelios Thomopoulos (NCSR Demokritos), scat@iit.demokritos.gr
  - WP3: Multichannel UI design (VTT), minna.isomursu@vtt.fi