

Editorial

The aim of this newsletter is to inform scientists, industry as well as older people in general about the achievements reached within the HERMES project. The newsletter appears approximately two times per year. As HERMES is finished by the end of March 2011 this is the last project newsletter.

In this newsletter:

- HERMES and VitalMind organized the “Workshop on cognitive support technology for older people”
- HERMES Ethical Meeting
- The User Interface of the second HERMES Prototype
- Second User Trials for the final HERMES Prototype

Please do forward this newsletter to people that might be interested in the project! For more information on the project, take a look at the project website at <http://www.fp7-hermes.eu>.

Kind regards and enjoy reading!

Sebastian Probst

On behalf of the HERMES Consortium



HERMES and VitalMind organised the “Workshop on cognitive support technology for older people”

The EU funded projects HERMES and VitalMind organised a workshop in London on December 15th 2010 about cognitive support technology for seniors. The aim was to share best practice and to advance, promote and spread assisting technology research for older people.

Whilst many older people have no substantial health problems, the majority tend to have mild but progressive deterioration in their cognitive abilities. However, a growing body of scientific research indicates that cognitive training and stimulating activities can maintain cognitive function in older people for a longer period of time, helping them remain cognitively healthy.

In this workshop the state of the art of accordant technology for seniors was explored by describing which work several research groups have done and are currently doing in the area of cognitive training and assisting technologies. Subsequently there were interesting discussions about how technology can help the elderly people to preserve their quality of life. Furthermore the second HERMES prototype was presented successfully to an interested audience of AAL experts.

HERMES Ethical Meeting

During the conduction of the second user trials a meeting with the Ethical advisors Marjo Rauhala and Antonio Casado da Roca took place in San Sebastian on March 2011.

The HERMES consortium presented the setup of the evaluation and demonstrated the whole procedure of the testing to the advisors. Therefore the second HERMES prototype was introduced to them and all the questionnaires have been filled prototypical. Furthermore, the

advisors checked the used Informed Consent and controlled the mechanisms of data protection.

CURE, INGEMA, and the HERMES ethical advisors will cooperate in questions of ethical issues beyond the end of the project in order to consider ethical aspects in a more structured way.

The User Interface of the second HERMES Prototype

With the finalization of the critical HERMES application *MyPast* the final integrated prototype is now complete. *MyPast* allows retrieving audio and video of events that happened in the past (see picture below).



With a simple filter concept the user can look for specific events in order to refresh his memory. The first possibility is to filter the recorded videos by specific persons who had visited the user by just selecting the visitor by face (see picture below).



Besides this, it is possible to search for specific keywords that match the transcribed words that have been extracted out of the spoken conversations. It is also possible to confine date and time by indicating specific days of the week, desired hours of the day and specific months (see picture below).



The new design of *MyPast* allows interacting with the application on one hierarchical level, which simplifies interaction techniques and reduces cognitive load. Additional windows that need to be shown from time to time like for specifying the filters or for watching the videos are presented in overlays. The overall interface is simplistic for a maximum of overview. There is the timeline where the recorded videos are placed in a chronological way and below there are the three buttons of the filters.

Second User Trials for the final HERMES Prototype

After the reengineering of the prototype based on the results of the first user trials, it was tested during the final user trials, with a focus on three different aspects of the system:

- The overall HERMES concept for the cognitive support (Technology acceptance, Effectiveness of memory support) based on scenarios
- Usability and user experience of the user interfaces (Complexity, Learnability, Information visualisation)
- Perceived performance of the underlying components through the users (Accuracy and Relevance) with regard to the usage scenarios

For the concept evaluation we compared HERMES with the SOPRANO project where the member of the consortium INGEMA is involved as well. The concepts were presented in form of scenarios to the users. For the user experience evaluation all user interface components (*MyPast* and *Calendar* applications and the *Cognitive Games* on the home-based touch screen terminal, the *Mobile* applications on a PDA) were included in order to receive holistic feedback. The performance evaluation concentrated on the perception of the performance of the face detection and filtering

and on the perceived quality of the transcribed audio files.

The final user trials were conducted in Austria and Spain with 20 persons for the concept evaluation, 16 persons for the user experience evaluation and 20 persons for the performance evaluation in each country in a lab setting started in December. In Spain additionally eight persons used a minimal HERMES system setup for two weeks in their home.

The analysis of all the collected data is on going. Up to now we can share the following insights:

- Generally the system was very well perceived. Only very few usability problems arose and users were interested in using the system.
- After using the system for a week or two at home, users performance with the system has increased considerably. This reflects the high learnability of HERMES.
- Questionnaires asking for the intention to use the system in the future were largely agreed with.
- While users performed well in using the system, for a real-life use they asked for a technical support and maintenance.

About the HERMES Project

“HERMES – Cognitive Care and Active Aging” is an international collaboration between six organizations in six countries, aimed at providing cognitive care to combat general cognitive decline induced by aging. The project is supported by the EU under Framework Programme 7 (Ref: 216709).

The project is conducted by the following six organizations:

1. CURE – Center for Usability Research and Engineering, Austria (Coordinator)
2. INGEMA Foundation, Spain
3. IBM Haifa Research Lab, Israel
4. University of Bradford, UK
5. Athens Information Technology, Greece
6. TXT e-Solutions, Italy

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