OUTCOMES WP3. User's requirements and context analysis. Usability Study

The usability study was one of the key aspects of WP3. Two main activities summarises the work done in this field: (1) the usability test according to ISO 9241-9 and (2) the evaluation of the usability of the second prototype according to SIMPLIT methodology.

Usability test according to ISO9241-9.

This test was used to select the best hardware option to implement the ELISA system. To do so the test was performed by 30 older persons (15 in Germany and other 15 in Spain, 23 women and 7 men), with an average age of 65.7 years (from 57 to 91 years old). The participants involved in this test included all main typologies of users.

The key data used for the selection and classification of the different devices were the users' preference and the number of errors. From the results of this test can be said that that **bigger devices are preferred to small devices** and **the number of errors is related to the perception of the users**. Older persons preferred the bigger devices producing less errors, from the devices tested (Samsung 10, Samsung 7, Sony P and Sony S), Samsung 10 was the one with offered best results. This one was selected to perform the development of the ELISA system.

See link section for more information on the results and methodology used..

SIMPLIT assessment

The main objective of this study is identifying if Elisa is intuitive, easy to use and usable for the elderly people. The methodology we used for achieving this objective is **SIMPLIT**[1]. This method consists of explaining to the user the total number of tasks to be developed during the test detailing and enumerating them.

The results of this test showed a quite positive value of usability from the user presepctive. The SIMPLIT methodology gives a combined score of effectiveness and efficiency from 0% (minimum simplicity of use) to 100% (maximum effectiveness and efficiency of use). The combined tasks analysed of the 2nd prototype of the ELISA system has scored a global value of 99.5%. A 100% was not achieved because the difficulties to perform T5 search an article.

This methodology allowed to identify positive aspects of Elisa to be emphasized:

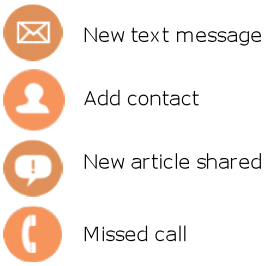
- Easy to use

[1] The SIMPLIT methodology was presented in the 2012 World Conference of the International Society for Gerontechnology (Eindhoven, the Netherlands). In this conference was presented the paper "SIMPLIT: Ensuring technology usability for the elderly".

- Easy to understand
- Quick to perform
- Convenient because it offers many features in a single interface
- Font size suitable

As well as some improvement aspects to be addressed:

- To be able to enlarge the font size in external applications of ELISA (Gmail, Skype ...)
- To increase the visibility of icons such as SEND (Send a message), EXIT (Exit to the application) and HANG UP (Hang up a call) in external applications such as Gmail and Skype.
- To locate searching functionality in the action menu.
- To give the user the option to customise Elisa according to his/her needs and level of knowledge.
- Some icons may produce some confusion. For example, when people read "new text message" they believe they can send an email pressing on the icon.



- The keyboard should appear whenever is required to introduce text data.
- The EXIT button of Elisa should have and associated confirmation message, “Do you really want to exit the system?”
- Transitions between parts and items should be highlighted.
- To have the possibility to answer a message from a friend from the message itself.
- It would be interesting to have a free search functionality for internet, not only for the ELISA system.
- To improve help option. The video bar is too blurred and the users are not conscious that they are looking a video instead of the real ELISA system.

See link section for more information on SIMPLIT methodology..

Links:

SIMPLIT methodology

http://www.simplit.es/index.php/en.html

Paper : Evaluating Touchscreen Interfaces of Tablet Computers for Elderly People

http://dl.mensch-und-computer.de:8080/handle/123456789/3007