
COGKNOW: the System in Daily Life

Johannes de Boer

Novay
Brouwerijstraat 1
NL-7523XC Enschede
Johannes.deBoer@Novay.nl

Abstract

In this project people with dementia and their carers were asked to describe their problems in daily life. With their input integrated solutions for people with dementia were developed. The aim was to develop solutions that help ageing people with early dementia to experience greater autonomy and feelings of empowerment, and to enjoy an enhanced quality of life. This movie shows the solutions that were developed during the project.

Keywords

Dementia, COGKNOW, EU Project, Aged, Health Services Needs and Demand, Reminder Systems, Evaluation Studies, Community Dwelling, safety

ACM Classification Keywords

J.3 Life and Medical Sciences
B.m Hardware: Miscellaneous
D.m Software: Miscellaneous
H.5.m Information Interfaces and Presentation (I.7):
Miscellaneous

General Terms

Design, Experimentation, Human Factors

Aim of the Project

The challenging aim of our three-year STREP project, which commenced in September 2006, is to

Copyright is held by the author/owner(s).
CHI 2010, April 10–15, 2010, Atlanta, Georgia, USA.
ACM 978-1-60558-930-5/10/04.

breakthrough with research that addresses the needs of those with dementia, particularly those with mild dementia in Europe [1]. At about 2% of the elderly population, this comes to around 1,900,000 people. In order to achieve our aim, this means helping people navigate through their day. This entails cognitive reinforcement and may be expressed as the social objectives of our research for the needs of people with dementia, helping people to remember, maintain social contact, perform daily life activities and enhance their feelings of safety.

Needs of People with Dementia

There are few studies where people with dementia themselves describe their needs, but those carried out with old people indicate the most frequently identified unmet needs are in the areas of information (on treatment, care and support, appointments), memory problems, and communication and psychological distress. A key strength of our consortium lies in the strong participative involvement of world-class medical/clinical experts with significant track records in working closely with people with dementia, to relate these needs.

On the other hand, the aim of the project is to develop solutions that help ageing people with early dementia to experience greater autonomy and feelings of empowerment, and to enjoy an enhanced quality of life [1].

Real Life Solutions

While there is some research and development in cognitive prosthetics, there are very few relevant tools, solutions or technologies specifically for people with mild dementia. It is important to note that there exists

no one solution in the market or research laboratories that proffers a solution in line with the scientific and technological objectives set out by this consortium- objectives which have been developed from academic studies that involve users and carers. However, if we split the state of the art into the four areas of remotely configurable reminding functionality; communication and interaction functionality; supportive technology for performing daily life activities; and anomaly detection, then there are solutions and tools that address to a greater or lesser extent each one of these areas.

Navigation

An important aspect of the project was to help people outside of their own homes. Solutions for a Personal Digital Assistant (PDA) were developed to support people in community dwelling, the largest outside problem. Research was conducted to determine if auditory navigation [2] was the right solution, and if there were any safety problems [3] to be expected while using navigation systems.

COGKNOW

This video was produced on behalf of the European COGKNOW Project. More information about our solutions and research can be found on www.cogknow.eu.

Acknowledgements

We want to thank Geesje Bouwmeester for portraying the role of Maria in the movie. Also, we like to thank Janet de Boer-Bouwmeester for granting us access to here home (the filmed location.)

Citations

- [1] Castellot, R. COGKNOW: Final Report. Retrieved from <http://www.cogknow.eu/documents/public-deliverables> on January, 22nd 2010.
- [2] de Boer, J. (2008). Auditory navigation for persons with mild dementia. *MSc thesis*. Enschede: University of Twente / Telematica Instituut, 2008.
- [3] Hettinga, M., de Boer, J., Goldberg, E., & Moelaert, F. (2009). Navigation for People with Mild Dementia. *Studies in health technology and informatics*, 150, 428.