



Behaviour pattern based assistant for Early Detection and Management of Neurodegenerative Diseases

What is BEDMOND?

> BEDMOND is a European R&D project, co-funded by the AAL Programme.

> The objective of the project is to develop an ICT-based system for an early detection of Alzheimer's disease and other neurodegenerative diseases, specifically designed for elderly people while living at home.

Who are the target users of the BEDMOND system?

- > Elderly people oversensitive to MCI.
- > Health Care professionals.



How does it work?

> The BEDMOND system tracks the daily activities of elderly people, providing data and information of various kinds relevant for the diagnosis process.

> The gathered data is taken from a home sensors network and is continuously processed by a rule-based engine. This engine evaluates daily activities based on patterns configured on the basis of a wide range of medical knowledge. This pre-processed, integrated information is presented periodically to a medical expert who determines whether detected user behavior changes may indicate the beginning of a cognitive decline or just a casual deviation.

> After the detection of a significant change in behavior, standard clinical exams are carried out to further evaluate the possible beginning of a disease. During medical treatment the physician will continue to use the BEDMOND system to further monitor the patient and the effectiveness of the treatment under course.

Benefits

- > Early diagnosis of neurodegenerative diseases in elderly people and beginning of treatment at an early stage.
- > Continuous monitoring of the user evolution during the treatment.
- > Creation of additional medical knowledge of the evolution of neurodegenerative diseases.
- > More autonomy for elderly people who may live longer at home; increase of their quality of life.
- > For the public: reduced costs for health care systems with the treatment of neurodegenerative diseases.

Applied technologies and standards

> Technology:

- . Multi-sensor network at home.
- . Communication and computation appliance (Settop Box).
- . Application and System Software developed by the BEDMOND project partners.

> Standards:

- . ISO/IEC 24752 Universal Remote Consoles.
- . CEA-2018 Task Model Description.
- . ISO/IEEE 11073 Health informatics.
- . ISO 9241 Ergonomics of Human System Interaction.
- . OSGI (Open Service Gateway Initiative) specification.
- . EN 50134 Social alarm systems.



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