

Press Release

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TACTILE FOCUSES ON SOCIAL INCLUSION OF THE ELDERLY

New European research project on supporting social inclusion and helping the elderly remain physically and mentally fit.

Vienna, Austria (AIT): The TACTILE project kick-off meeting was held at the AIT Austrian Institute of Technology in Vienna on 4 & 5 March 2019. The EU project is designed to foster the well-being of older adults living alone in their own homes, and to encourage an active lifestyle. An additional project focus lies on the prevention of dementia. The project is co-funded by the European AAL JP programme, national institutions and research grants in Austria (Austrian Research Promotion Agency, FFG), Switzerland and the Netherlands. The coordinating institution is CareCenter Software GmbH, an Austrian company specializing in software solutions for the social economy.

The challenge

Elderly people are frequently affected by a decline in their mental and physical abilities, potentially resulting in anxiety, frailty, loneliness and reclusiveness. They often live alone, spatially separated from their families and friends, and unable to meet or visit them on a regular basis. Studies have shown that the risk of developing dementia can be reduced by playing challenging games, interacting with other people and physical exercise. For that reason, TACTILE aims to provide a user-friendly, game-based solution that addresses these challenges through the medium of innovative mixed-reality software.

The solution

The solution will offer board games that can be played remotely with family or friends when wearing mixed-reality glasses. The users will be able to play with real game figures while seeing their opponent's virtual game figures on their own real game board. The tactile feedback as well as intuitive user interaction will enhance the usability of the system.

TACTILE will also train the physical health of elderly users via training sessions, with a virtual assistant blended into the real environment using the mixed-reality glasses. This assistant will explain the training exercises and accompany the user during each session.

AIT is contributing its extensive expertise in the fields of computer vision and machine learning (Center for Digital Safety & Security in the context of the Sensing & Vision Solutions research focus) as well as training exercise and virtual avatar development in the field of Active and Assisted Living (Center for Health & Bioresources, Biomedical Systems) to the project. Elisabeth Broneder, project coordinator at AIT: "In TACTILE we apply a novel mixed-reality technology to support the elderly, helping them maintain a healthy lifestyle by providing mental and physical training, and keeping them socially included by connecting them with family and friends, even if they are unable to visit on a regular basis."

A crucial element during all the phases of the project will be the involvement of end users within the group of elderly people living alone. Feedback from this group will be actively sought and considered in designing and developing the TACTILE solution. To ensure that the developed system meets user needs, the prototypes will be continuously enhanced and evaluated in cooperation with the end users over the course of 3 workshops as a means of gathering ongoing feedback from the end users during the development phase. During the last 6 months of the project, field trials will be held in Austria and the Netherlands where end users will test the system in their own homes, together with other elderly friends or relatives.

The partners

From an interdisciplinary perspective, the challenges of developing ICT technologies for dementia prevention, and to support independent living for those suffering from social exclusion, demand a holistic and interdisciplinary approach involving experts from the fields of computer science, software development, human-computer interaction, software architecture, UI design, sociology and dementia prevention. The project partners are CareCenter Software GmbH (project coordination & development, Austria), AIT Austrian Institute of Technology (research institute, Austria), CREAGY AG (UI and UxD design, Switzerland), GedächtnistrainingsAkademie (training academy, Austria), Mythronics (exploitation & development, The Netherlands) and Tante Louise (nursing home, The Netherlands).

Further information about TACTILE is available on the website of the project coordinator CareCenter Software GmbH: <https://www.carecenter.at/news/internationales-forschungsprojekt-tactile-gestartet> (German)

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