

Miraculous-Life for Independent Elderly Living

Innovation for smart living



A robot that is 'human' enough to communicate with could be a great support partner for older people. But is it possible? To find that out, the European Commission launched the project “Miraculous-Life for Elderly Independent Living”. Its main aim is to develop and test a so called Virtual Support Partner, which attends to the daily activities and safety needs of the elderly citizens (65+) in their everyday lives.

Nine companies and research organisations from five European countries will develop and test the technology, in a consortium headed by the Austrian Institute of Technology (AIT). At the heart of their work is an avatar interface: a digital persona that older people can connect with. When integrated in a robot, this promises to make daily life a lot easier for senior citizens. The consortium brings together a wide range of researchers including academia as well as established technology vendors, innovative SMEs, and end-user organizations.

Avatar-based interface

A crucial asset of the Virtual Support Partner (VSP) will be its capacity for behavioural and emotional understanding. Thanks to its Avatar-based interface, the VSP is able to fuse facial expressions, intonation, gestures and other contextual information of the user's environment, to provide empathic responses and services. As such, it provides ICT services to support daily activities, in a human-like way. This in turn stimulates and motivates older people to stay active. In the longer term, the system will provide practical, psychological and social benefits enabling and motivating the elderly to remain active at home and thus prolonging their independence and improving their wellbeing.

“Based on the recognition of the emotional state of the user and the interpretation of their behaviour in the environmental context, we will develop and evaluate a new dialogue system which is using realistic 3D rendering of human-like avatars and which is emotionally responsive”, says Andreas Hochgatterer, project leader from the AIT Austrian Institute of Technology.

To find out if the concept lives up to its promises, up to 100 elderly people in two test-bed locations in Switzerland and the Netherlands will try out the system over a six-month period.

The Miraculous-Life project is co-funded by the European Commission under the 7th Framework Programme. Partners involved in the project:

- AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH (Austria)
- UNIVERSITY OF GENEVA (Switzerland)
- UNIVERSITY OF CYPRUS (Cyprus)
- ORBIS MEDISCH EN ZORGCONCERN (Netherlands)
- FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (Germany)
- NOLDUS INFORMATION TECHNOLOGY BV (Netherlands)
- CITARD SERVICES LTD (Cyprus)
- ZOOBE MESSAGE ENTERTAINMENT GMBH (Germany)
- MAISON DE RETRAITE DU PETIT-SACONNEX (Switzerland)

For further information see: www.miraculous-life.eu