

Robots as platforms?

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An odd concept for anyone raised on the idea of robots as clunky metal machines or toys designed to make life easier or more fun, but a new EU-funded research project introduces the idea of robots as platforms to deliver smart, user-friendly robotic applications.

Society is undergoing dramatic demographic changes as the number of elderly and people requiring support in their daily life steadily increases. And while the digital revolution is offered as a cost-effective solution to help the health-care sector deal with its growing workload, digital illiteracy means many older citizens are effectively excluded from a vast array of electronic services and benefits.

'Socially [interactive robots](#) can help families and caregivers by physically assisting people and functioning as a companion,' according to the team of researchers behind the RAPP ('Robotic [applications](#) for delivering smart user empowering applications') project.

'Robots may also adopt the role of a friendly tutor for people who want to partake in the electronic feast and they don't know where to start,' they continue.

The three-year RAPP project will work on the computational and storage capabilities of robots and enable machine-learning operations, distributed data collection and processing, and knowledge-sharing among robots in order to provide applications adapted to individual needs.

RAPP will use an open-source software platform to help developers create better applications for different types of robots targeting people with different needs, capabilities and expectations, while at the same time respecting their privacy and autonomy. The emphasis will be on getting robots to understand and respond to the intentions and needs of people at risk of exclusion, especially the elderly.

The nearly EUR 2.5 million RAPP project, which began in December 2013, will thus provide the platform (infrastructure) for developers of [robotic applications](#) (RApps). The seven partners from five countries - Greece, France, United Kingdom, Spain and Poland - also plan to create a repository from which the robots can download RApps and upload useful monitoring information as needed.

The team, which includes pioneers in the fields of assistive robotics, machine learning and data analysis, motion planning and image recognition, software development and integration as well as social inclusion experts, will develop ways to improve knowledge transfer and re-use between humans and robots, and among other artificial systems. They plan to validate this approach by deploying appropriate pilot cases to demonstrate the use of robots for health and motion monitoring, and for assisting technologically illiterate people or people with mild memory loss.

Ultimately, the RAPP project is working to enable and promote the adoption of small home robots and service robots as both helpers and companions. And according to a statement, the consortium is committed to identifying 'the best ways to train and adapt robots to serve and assist people with special needs'.

More information: Project factsheet:

cordis.europa.eu/projects/rcn/111123_en.html

Provided by CORDIS

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