

Digital Single Market

Event Eindhoven, The Netherlands 16 January 2014

Robots Help Each Other in RoboEarth

Overloaded brain? Going around in circles? Lost? Even robots can suffer from that. Most robots can only perform the specific movement or task that they have been programmed to do. Very few robots have a cognitive function enabling them to learn from experience and those who do are usually pretty slow because of the complexity of the heavy computations needed for each task.

A public demonstration and information event is being organised by the [RoboEarth](#) [1] project for all interested stakeholders to inform of the advances in the Cloud-based wikipedia or "world wide web" for robots created by researchers over the last four years. The event takes place in the afternoon on 16th January 2014 at Eindhoven University of Technology. It is free, but registration is mandatory - please see <http://goo.gl/pezjRB> [2] .

The demo will show how knowledge gathered by one robot can be used by another to better fulfil its task. The demonstration will take place using up to 4 different robots collaborating and communicating in two purpose built hospital rooms at Eindhoven University of Technology and will be accompanied by presentations detailing the project, its relation to the relevant research groups, its results and the way industry and science can use them.

The RoboEarth project has created a cloud computing network and database repository for robots where they share and learn information about their environment and behaviours. It paves the way for rapid advances in machine cognition and behaviour and ultimately more subtle and sophisticated human-machine interaction. Also, the RoboEarth system can be used to divide a complex task into simpler subtasks that can be assigned to basic service robots in case a more advanced companion robot is temporarily unavailable. RoboEarth allows sharing and reuse of knowledge even between different types of robots.

RoboEarth's World-Wide-Web style database stores knowledge generated by humans - and robots - in a machine-readable format. Data stored in the RoboEarth knowledge base include software components, maps for navigation (e.g., object locations, world models), task knowledge (e.g., action recipes, manipulation strategies), and object recognition models (e.g., images, object models). It allows robots to offload their heavy computation to secure computing environments in the cloud with minimal configuration.

RoboEarth project was funded under the European Union Seventh Framework Programme FP7/2007-2013.

For further information on the event please see the information leaflet on <http://goo.gl/jjbHGO> [3]

Speaker

[4]

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Links

[1] <http://www.roboearth.org/>

[2] <http://goo.gl/pezjRB>

[3] <http://goo.gl/jjbHGO>

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