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Press Release

With openEase: robots learn from other robots

Demonstration at CeBIT 2017, 22-24 March 2017, Hall 8, Stand E01

Autonomous service robots must fulfill high standards: They are to perform complex tasks in changing environments and work safely and reliably with humans. The corresponding programming is very complex, because it has to consider all contingencies, such as external influences, human reactions, etc.

For this reason the researchers of the Institute for Artificial Intelligence of the University of Bremen with Professor Michael Beetz have been pursuing the goal to making robots "adaptive" for several years. But instead of the lesser efficient teaching by a human "teacher", they promote that robots learn from each other.

People can find information in knowledge databases such as wikiHow or Wikipedia. Corresponding to this, the vision of the Bremen scientists is that robots worldwide should store their decisions, movements and action sequences via the Internet in a vast knowledge database to make them available to other robots. The information stored includes when and why a robot acted, how and how successful the action was executed, and which decisions the robot made. This allows other robots to reach their objectives more quickly.

The idea sounds simple and plausible - but how to code and store the information about what other robots have done? With the knowledge database openEASE, the researchers from Bremen have come a great deal closer to their vision. The creation of suitable knowledge structures, in order to store complex movements and actions, required great effort. Also, the fact that this information can be used regardless of the type of the "learning" robot is testimony to the high quality of research at the Institute of Prof. Beetz in Bremen.

openEASE will be presented at CeBIT 2017.

It is shown how robots can learn from another robot to perform everyday tasks, e.g. in the kitchen, preparing food or cleaning.

But not only robots can learn from other robots through openEASE, but also scientists have the opportunity to analyse the individual processes and decisions of robots. Since openEASE is available free of charge as an "open tool", experience in the field of research can be gathered and innovations in robotics can be transferred much more quickly from the field of science to technical applications.

More information: <http://www.open-ease.org>

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