Abstract

The application of the cloud computing concept to robots is called Cloud Robotics. It is a
concept that utilizes the services of the cloud so that robots can have learning abilities. Since applications for Cloud Robotics have to be developed in a platform, majority of the cloud application developers choose ROS for it. Robot Operating System (ROS) is an open source middleware that has a collection of inter-programming language headers to allow the sharing of data between independent programs. ROS provides a graph-like structure for cloud robotics. A new library for ROS that is a pure Java implementation, called rosjava, allows Android applications to be developed for robots. Since Android has a booming market and billion users, it would be a huge leap in the field of Cloud Robotics.

References

- Aaron Staranowicz, Gian Luca Mariottini, "A survey and comparison of commercial & open-source robotic simulator software.
- Ayssam Elkady and Tarek Sobh, "Robotics Middleware: A comprehensive literature survey and attribute-based bibliography.
- Jit Ray Choudhary, "ROS: Robot Operating System."
- Jonathan Bohren, "Introduction to ROS distribution, build system and infrastructure.
- Jürgen Hess, Felix Endres, Armin Hornung, Bastian Steder, and Jürgen Storm, "ROS: Open Source Robot Operating system."
- Priyanki Jayantilal Vashi, "Cloud Robotics: An emerging research discipline.
- Victor Chang, Robert John Walters, Gary Wills, "Review of Cloud Computing and Existing Frameworks for Cloud Adoption."
- Zhihui Du, Weiqiang Yang, Yinong Chen, Xin Sun, Xiaoying Wang, Chen Xu, "Design of a Robot Cloud Center."

**Index Terms**

Computer Science  
Cloud Robotics

**Keywords**

Cloud Computing (cc)  Cloud Robotics (cr)  Personal Robot (pr) 2  Robot Operating System (ros)