# Robotics Developer Studio 4

# A Platform for Developing Robotic Applications

## **Making Robotics Easier**

Microsoft<sup>®</sup> Robotics Developer Studio 4 (Microsoft RDS) is a Windows<sup>®</sup>-based environment for academic, hobbyist, and commercial developers to help them easily create robotic applications across a wide variety of hardware.

Microsoft RDS includes a lightweight asynchronous services-oriented runtime, a set of visual authoring and simulation tools, as well as templates, tutorials, and sample code to help you get started.

To learn more about Microsoft Robotics Developer Studio 4, visit:

http://www.microsoft.com/robotics





Sample apartment VSE simulation environment



Kinect Sensor on a Simulated Robot

#### Updated Visual Development Tools

- Drag-and-drop application development
- C# code generation
- NET Framework 4, XNA® 4.0 and Visual Studio® 2010 support

#### Services for Kinect

- Kinect hardware support through Kinect SDK
- Kinect Entity in Simulation
- Depth Image Viewer

#### Silverlight CCR Services

Concurrency support in Silverlight<sup>®</sup> 4.0

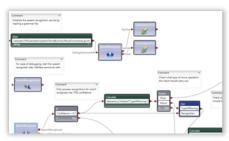
Visual Simulation Environment (VSE)

- Floorplan editor & Supports .x, .obj & .dae file formats CCR and DSS Runtime
- Concurrency / Coordination Runtime and lightweight stateoriented Decentralized Software Services framework

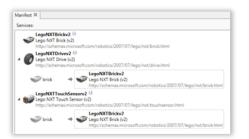
#### Services for Reference Platform robots

 Simulated Reference Platform
Implemented by a number of robot manufacturers, including Parallax Inc.'s upcoming "Eddie" robot

Services for Simulating a Kinect™ Sensor



Applications in VPL are easy as connecting blocks



Easy configuration with the DSS Manifest Editor

### End-to-end Robotics Development Environment

Microsoft RDS provides a wide range of support to help make it easy to develop robot applications.

- Interact with robots using Windows or Web-based user interfaces. You can remotely monitor and control a robot using HTML and JavaScript across the Web.
- Visual Programming Language (VPL) enables you to program using dragand-drop.
- Reference Platform design defines a minimum set of components and associated software services that will allow a user to begin using RDS with relatively little effort.
- 3D physics-based Visual Simulation Environment (VSE) allows you to create applications without hardware.
- Use up to **four** Kinect hardware sensors via the Kinect for Windows SDK.
- Build commercial robots on Microsoft RDS

© 2012 Microsoft Corporation. All rights reserved. Microsoft, Kinect, Visual Studio, Windows and XNA are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. This data sheet is for informational purposes only. MICROSOFT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, IN THIS SUMMARY. Document Published: March 2012