

Willow Garage introduces affordable, programmable robot - TurtleBot

April 6 2011, by Bob Yirka



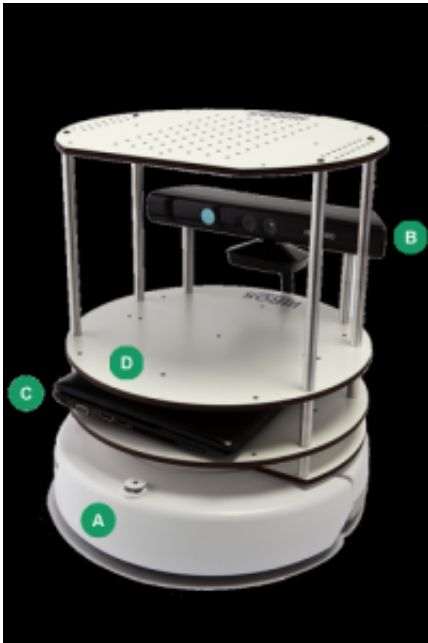
(PhysOrg.com) -- Willow Garage, the Menlo Park, California-based consortium of robotics experts, founded by Scott Hassan in 2006 to create or develop hardware and open source software for the advancement of robotics, has announced the release of TurtleBot; a small home use robot for either amusement/entertainment purposes, or for those inclined, to build open source applications to add to the functionality of the new robot.

The idea behind TurtleBot, is to give novice robotics enthusiasts a base upon which to build. Traditionally, those that like to tinker with robots

have had to start from scratch every time they wanted to build something; the TurtleBot does away with that concept by supplying users with a base upon which they can build, as the TurtleBot comes fully functional. Out of the box it can map your house with its 3-D vision, bring you food, take 360 degree panorama pictures and follow you around etc. But it also comes with the [Robot Operating System](#) (ROS) and associated toolkit, so that if users wish to add or change functionality, they are free to do so, and because its open source, anything they create can be shared with friends or those involved in online robotics communities.

Another objective of the TurtleBot team was to show that such a device could be put on the market for a reasonable price; in this case \$500, for a very basic unit, and \$1200 for the fully loaded version. Far below what robot enthusiasts have come to expect to pay.

The TurtleBot team was able to meet their objective by using virtually off the shelf components. It uses Microsoft's Connect for sensing, an iRobot Create base, a 3000 mAh battery pack, an Asus 1215N laptop and a stock gyro to help the little guy keep its balance. The TurtleBot looks like a kitchen footstool on wheels but is perfectly capable of navigating around your house with relative ease.



TurtleBot: A Mobile Base and Power Board, B 3D Sensor, C Computing :: ASUS 1215N, D TurtleBot Hardware.

While the team at [Willow Garage](#) would most certainly like to make some money off their new [robot](#), they appear to be more concerned with advancing the science of robotics, exemplified by the use of open-source programming tools and low-cost existing hardware.

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