DARPA's Virtual Robotic Challenge

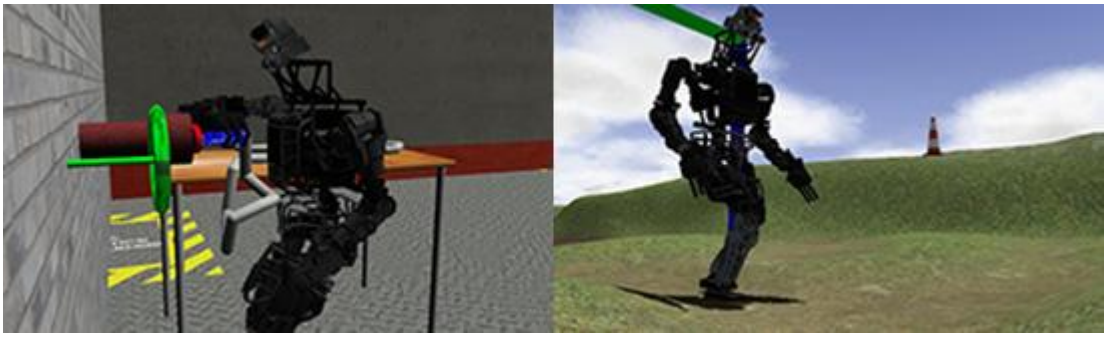
Kyle Maxey posted on July 01, 2013 | Comment

Last week DARPA announced the winners of its Virtual Robotic Challenge (VRC). The aim of the VRC was to test "software teams' abilities in robot perception, manipulation and locomotion in a virtual environment through simulation of a robot."

The VRC represents the first stage of a 3 part competition, the DARPA Robotics Challenge whose goal is the generation ground breaking research and development so that robots can perform the most hazardous activities in future disaster response operations.

Of the 126 teams that originally signed up for the competition, 26 were qualified for the VRC. Over the course of 5 days teams were asked to create software that would guide a virtual

ATLAS robot through three separate challenges within a virtual environment. The three challenges, which included and driving course, a simulation of walking over varied terrains, and a mechanical operations challenge, were all judged based on time of completion, amount of data exchanged between operator and robot, and task completion amount.



The nine teams which scored highest across the entire five days of simulation were:

1. Team IHMC, Institute for Human and Machine Cognition, Pensacola, Fla. (52 points)

2. WPI Robotics Engineering C Squad (WRECS), Worcester Polytechnic Institute, Worcester, Mass. (39 points)

3. MIT, Massachusetts Institute of Technology, Cambridge, Mass. (34 points)

4. Team TRACLabs, TRACLabs, Inc., Webster, Texas (30 points)

5. JPL / UCSB / Caltech, Jet Propulsion Laboratory, Pasadena, Calif. (29 points)

6. TORC, TORC / TU Darmstadt / Virginia Tech, Blacksburg, Va. (27 points)

7. Team K, Japan (25 points)

8. TROOPER, Lockheed Martin, Cherry Hill, N.J. (24 points)

9. Case Western University, Cleveland, Ohio (23 points)

Of the winning teams the top six were granted further funding by DARPA and were also given an ATLAS robot to continue developing software and capabilities for the larger DRC competition which will take place in December of this year.

The development of the VRC and simulation software that was home to the competition could spell good things for the robotics industry as a whole says Gill Pratt DARPA's DRC program manager. "The Virtual Robotics Challenge itself was also a great technical accomplishment, as we have now tested and provided an open-source simulation platform that has the potential to catalyze the robotics and electro-mechanical systems industries by lowering costs to create low-volume, highly complex systems."

Watch an Overview of the DARPA Robotics Challenge

Images and Video Courtesy of DARPA

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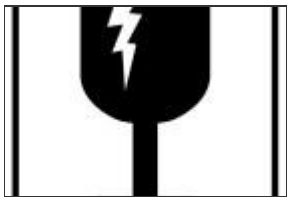

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