SCHAFT team tops scores at DARPA Robotics Challenge

23 December 2013, by Nancy Owano

(Phys.org) —For those wondering who of 16 competing teams would walk away as top performers in the two-day DARPA Robotics Challenge in Florida over the weekend, the suspense is over. SCHAFT, a Japanese company newly acquired by Google, won the most points, 27 out of a possible 32. SCHAFT outscored some formidable big-name contenders such as MIT, Carnegie Mellon, and NASA. IHMC Robotics placed second. Third place went to Tartan Rescue, from Carnegie Mellon University, and fourth place was awarded to a team from the Massachusetts Institute of Technology. The fifth-place went to RoboSimian, designed by NASA's Jet Propulsion Laboratory.

All in all, there were eight top scorers. Team TRACLabs, WRECS (Worcester Polytechnic Institute) and Team TROOPER (Lockheed Martin) were the next three. The eight teams now have the opportunity to continue their work with the help of Defense Advanced Research Projects Agency (DARPA) funding and are to compete in the finals event where one team will net the $2 million prize at the end of 2014. The Finals will require robots to attempt a circuit of consecutive physical tasks with degraded communications between the robots and their operators.

DARPA said that the 16 teams at this year's challenge in Miami represented a mix of government, academic and commercial backgrounds. They were not only from the United States, but also from South Korea and Japan. SCHAFT's high scores were impressive as the DARPA Robotics Challenge (DRC), established to advance state of the art in humanoid robot competition, is considered as a baseline on the current state of robotics. The event is a marker for assessing the evolution of robots in hazardous first-responder environments, a demonstration of what is so far possible in pushing technologies closer to the point where robots will help out in a range of rescue tasks quickly, efficiently and with minimal human interaction.

The robots in the latest challenge had to complete eight tasks including climbing up-and-down a ladder, and removing obstacles and debris. Narito Suzuki, COO at SCHAFT, in a video showing the entry, pointed out their bipedal robot's strength and stability in navigating its way around.

The company has its roots in the University of Tokyo's JSK Laboratory. Interestingly, earlier this year *IEEE Spectrum* called attention to SCHAFT as a Japanese startup that had announced a breakthrough in motor technology that may bypass the limitations of existing systems. The April article said the company had developed a kind of actuator that may make robotic muscles much stronger.

IEEE Spectrum also remarked that the DARPA challenge "will be a great opportunity for SCHAFT to show off its innovative motors. A good performance at the competition would compel the next generation of humanoid robots, in Japan and elsewhere, to adopt the technology."

More information:
www.theroboticschallenge.org/

APA citation: SCHAFT team tops scores at DARPA Robotics Challenge (2013, December 23) retrieved 28 September 2020 from https://phys.org/news/2013-12-schaft-team-tops-scores-darpa.html