

Space Robotics Challenge

In FY15, HRS is focusing on upgrading the existing R5 robot and building two additional units. HRS also initiated the SRC in FY15.

The SRC will be conducted in partnership with NASA's Centennial Challenges program. The challenge will have two components: a virtual challenge in simulation and a physical challenge with R5 and Robonaut 2 robots. NASA is currently working with the Open Source Robotics Foundation (OSRF) to develop tools needed for the virtual component of the challenge.

R5 is a bipedal humanoid robot designed to work in human engineered environments on surfaces. It is envisioned to deploy, checkout and maintain surface for a human Mars mission. Robonaut 2 is a humanoid robot designed to work in a microgravity environment, offloading tedious or hazardous work from astronauts and to serve as a human spacecraft caretaker during extended dwell periods where humans are not present. A Robonaut 2 is currently on the International Space Station developing tasks to save crew time.

Partnerships

Human Robotic Systems is led by NASA's Johnson Space Center, with many partnerships across the nation at other NASA centers and with numerous industry and academic partners through the National Robotics Initiative, including JSC and OSRF.

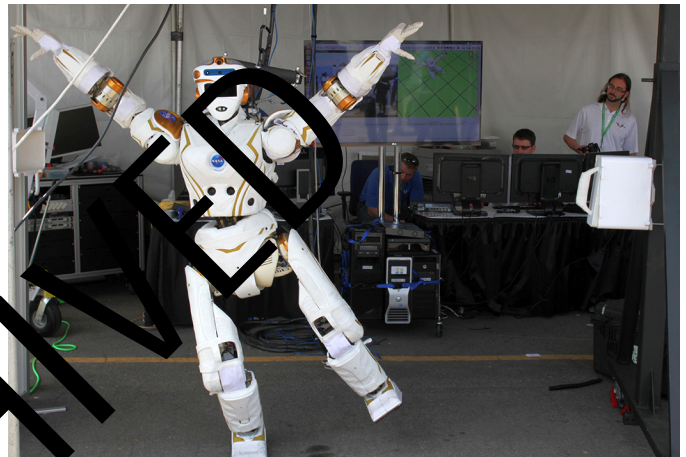


R5 public demonstration.

HRS resides within the Game Changing Development (GCD) Program. Projects under GCD investigate ideas and approaches that could solve significant technological problems and revolutionize future space endeavors. GCD projects develop technologies through component and subsystem testing on Earth to



R5 closing a valve.



R5 demonstrating improved balance.

prepare them for future use in space. GCD is part of NASA's Space Technology Mission Directorate.

For more information about HRS please visit http://www.nasa.gov/directorates/spacetech/game_changing_development/human-robotic-systems.html (public)

For more information about GCD, please visit <http://gameon.nasa.gov/>

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