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Huntsville Center sponsors robotics challenge

HUNTSVILLE, Ala. – The rugged terrain of the American West provided a backdrop for a showdown August 7-14 as competitors met at Camp Guernsey, about 100 miles north of Cheyenne in southeastern Wyoming for a contest aimed at finding the best robotics solution for tasks associated with clearing ranges.

The U.S. Army Engineering and Support Center, Huntsville, the Air Force Research Laboratory Robotics Research Group, and Joint Ground Robotics Enterprise, Office of the Secretary of Defense for Acquisition Technology and Logistics sponsored the program and sent senior representatives to judge the competition.

The robotics used aren't sleek and lightweight like combat drones or humanoid like futuristic movie robots. They are modified pieces of construction and farm equipment equipped with ruggedized electronic systems.

The competition was divided into four categories testing the entrants' ability to automate the tasks of vegetation clearance, surface debris clearance, geophysical mapping and sub-surface clearance.

The overall winner, team UXOD, took first place in geophysical mapping and accumulated enough points in other categories to edge out the competition for an overall prize of \$1.25 million. The team was comprised of Kairos Autonomi, Zonge International, Autonomous Solutions, Science Applications International Corporation, VKR, WM Robots and John Deere.

Team D4C, a grouping of ECC, QinetiQ North America and Bobcat, won the vegetation clearance and surface clearance categories, taking home a prize of \$500,000.

There was no winner in the sub-surface clearance competition.

Range clearance operations are manpower intensive, time consuming, dangerous and expensive, said Plyler McManus, chief of Ordnance and Explosives Design Center, at Huntsville Center.

The goal of using robotics is to automate as many of the tasks as possible making the necessary work safer and less costly.

Ideally, 25 percent of the work performed by the machines would be autonomous, like running patterns across a field, with the rest of the work remote-controlled.

“This pulls together all of the technologies,” said Robert Maline, director of the Joint Ground Robotics Enterprise. “It is a great cooperative effort for us to work with the Corps and the Air Force.”

Public law authorizes cash prizes for this type of competition and technology development. The alternative would be a longer, more costly approach, establishing a research and development program that can transition into a

development and acquisition program. The intent is for the competition to result in viable systems that can be procured and placed into service.

The ultimate aim of clearing ranges is to return millions of acres currently encumbered with spent training rounds and debris to productive use. Huntsville Center has planned a separate acquisition for robotic clearance services with a projected award in the second quarter of fiscal year 2012.

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