



# JOINT IED DEFEAT ORGANIZATION NEWS STORY



ATTACK THE NETWORK — DEFEAT THE DEVICE — TRAIN THE FORCE

## JIEDDO's Robotics Counter-IED Challenge to address capability gaps

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JIEDDO News Service

WASHINGTON, D.C. — The Joint IED Defeat Organization will hold its first challenge-based acquisitions event June 20-29 at Fort Benning, Ga., involving robotics and sensors to seek solutions aimed to help the warfighter on the battlefield.

“We are looking for ways to improve speed and freedom of maneuverability in the counter-IED environment,” said Matt Way, a JIEDDO program integrator. “Robotics can provide standoff from explosions or clearing operations and reduce exposure to the warfighter.”

The 2012 Robotics Rodeo is the venue for the Counter-IED Challenge and is a way to harness the potential of the research and development community to meet a dynamic, complex and adaptive threat.

“We must energize the robotics industry in support of the warfighter,” said Way.

Improvised explosive devices remain a growing threat to troops patrolling on foot. Each day, a soldier on foot patrol — dismounted, in military terms — walks an average of six-to-eight hours on a patrol and is forced to search for IEDs with metal detectors, probes, bomb-sniffing dogs and other tools. The problem here is proximity — many of these proven systems provide minimum standoff, which is distance away from the threat. This makes the warfighter more exposed to injury.

Robotics, on the other hand, can provide greater standoff between the soldier and the IED. This keeps the soldier out of harm's way by allowing the robot to detect and disable the threat.

“We are looking to push robotics into supporting more dismounted roles,” said Way. “We want to know if current robotic technology can provide effective counter-IED enablers without being too much of a burden or distraction to a dismounted patrol.”

JIEDDO is looking for robotics to fill three specific capability gaps through participation in the rodeo. It is seeking systems that can disable IED delivery systems in multiple environments, mitigate effects of IED attacks on both dismounted and mounted troops and detect IEDs from a safe distance.

A robot that excels in the competition “does not have to fulfill all three capability gaps to get JIEDDO's attention; it just has to provide capability that improves freedom of maneuver beyond current hand-held systems” said Way.

## 2012 ROBOTICS RODEO

The 2012 Robotics Rodeo is a partnership among JIEDDO; the Maneuver Battle Lab; the U.S. Army Research, Development and Engineering Command; the U.S. Army Tank Automotive Research, Development and Engineering Center; and the Army Capabilities Integration Center.

The rodeo is a networking opportunity for defense, homeland security, academia and industry communities. There are three ways to participate: operational vignettes, technical challenges and an extravaganza featuring vendor booths and freestyle demonstrations of technologies.

## CHALLENGE-BASED ACQUISITION

JIEDDO selected 35 vendors to compete in its C-IED Robotics Challenge during the rodeo. The four challenge categories are endurance, reconnaissance, detect and disrupt.

“This allows industry to learn about JIEDDO’s capability gaps through physical challenges versus a PowerPoint slide,” said Way.

The endurance challenge measures speed and endurance of mounted and dismounted support robots over an unpaved road. The reconnaissance challenge measures sensor acuity, platform mobility and spatial accuracy required to locate objects in a tactical environment. The detect challenge involves locating IED triggers in a tactical environment without activating them to see which sensors and technologies can be adopted to platforms that support dismounted operations. The disrupt challenge is where the robot has to disable the operation of IED triggers in a tactical environment.

Challenges are not intended to represent a comprehensive exam or test of any kind, rather showcase technology strengths worthy of JIEDDO’s attention.

Each challenge “looks at payloads and prime robotic movers, and gives participants a chance to distinguish themselves” from the competition, Way said.

The challenges’ course is a dirt road, navigable by a standard sport utility vehicle and meant to resemble the terrain of Afghanistan and Iraq.

## METRICS

The nine-day event is an opportunity to develop benchmark metrics for small robotics and identify key vendor performance, said Way.

It is important to develop metrics for small robotics because “we want to understand their true performance and suitability limitations,” he said.

Mobility is the ease in which a robot can go over rocky, varied terrain. Suitability pertains to the operator and includes factors such as how easy it is to control and a soldier's ability to carry it long distances.

Two basic metrics will be used for all four challenges. The first is the time it takes to complete the challenge. The other is the number of threats detected and disrupted.

"We purposely made the metrics simple and quantifiable," said Way. "This makes it an easily repeatable event so vendors can continue to compete in future JIEDDO challenges on a level playing field."

Top performers in each category will be recognized during the week, he said.

## RAPID ACQUISITIONS

JIEDDO has the unique ability to rapidly procure new capabilities for the warfighter. It is constantly seeking the most promising counter-IED solutions in the areas of pre-detonation, counter-threat networks, detection, counter-devices, homemade explosives, information integration and fusion, and weapons technical intelligence.

Thirteen of JIEDDO's system integrators and acquisitions personnel will be on site all nine days of the competition. Their intent is to find current state-of-the-art technology through each of the challenges' results for possible applicability on the battlefield.

JIEDDO is looking for systems that "can be applied to current programs, such as the fight in Afghanistan, or future needs," said Way.

As the competition grows closer, vendors are letting Way and his colleagues know of their excitement.

"They are eager for a competitive opportunity in the field. It beats hearing yet another capabilities gap presentation," he said.

JIEDDO leads Department of Defense actions to rapidly provide counter-IED capabilities in support of combatant commanders, and its singular focus is the present and future defeat of the IED as a weapon of strategic influence.

For information about the Robotics Rodeo, go to <https://www.jieddo.dod.mil/roboe.aspx>.