

Military robots bringing civilian jobs to region

By [Chad Halcom](#)

In areas of combat, military officials said they have an easy mnemonic for the set of duties they generally assign to robots: "dull, dirty or dangerous."

In Southeast Michigan, robots may soon serve a fourth function: development.

Robotic ground-vehicle projects will be responsible for at least 109 new local jobs in Southeast Michigan by next year and perhaps more than double that by the middle of the next decade, according to defense contractors and military officers at two robotics conferences held in Troy and Ann Arbor last week.

Col. James Braden, project manager of the **Robotics Systems Joint Project Office** at the **U.S. Army Tacom Life Cycle Management Command** in Warren, said his office has been hiring civilian employees such as engineers and designers since the Army relocated robotics from Alabama to Michigan last year.

The RSJPO had a staff of 36 people as of Friday and Braden said he hoped to reach the full staff of 66 by next year.

"We have one (civilian) employee who was convinced to transfer up here," Braden said.

"For the rest, we've been doing a bit of hiring and transferring from within TARDEC (Tank-Automotive Research Development and Engineering Center, in Warren), but we're also managing to hire some good people who came over from the automotive industry."

Formerly stationed in Huntsville, Ala., robotics transferred to Warren as part of a series of consolidations adopted by the federal Base Realignment and Closure commission in 2005-06.

The unit consists of Braden, a Marine, four Army officers and 61 civilian employees, many of whom will be new hires.

Also new to Southeast Michigan is the **Joint Center for Robotics**, established at TARDEC in October 2006 and overseeing research and development related to robotics projects. Jim Overholt, director of the JCR office, said the military's new focus on Michigan for robotics is prompting some defense contractor companies to follow suit.

Colleges and universities also are getting involved, Overholt said. TARDEC recently appropriated \$3.9 million to assist research projects at seven Michigan colleges, and the **University of Michigan** announced last week it is using a portion of that funding to establish the **Ground Robotics Research Center**, to be housed in the Herbert H. Dow building on UM's campus.

The school also is establishing a new master's degree program in robotics as part of its College of Engineering, and expects to create three or four new faculty positions to staff the new robotics center, said engineering Dean David Munson, Jr.

"The region has lost a good deal of manufacturing and blue-collar jobs, but Southeast Michigan still remains the capital of innovation in the world's auto industry," Munson said. "This is one of many ways to leverage that (talent)."

The **U.S. Department of Defense** has gone from using virtually no military ground robotics in the months immediately preceding the March 2003 deployment into Iraq to having 5,000 units deployed in Iraq and Afghanistan, Braden and Overholt said.

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It's possible that number could double by year's end, Overholt said.

About 1,700 robotic units thus far have been furnished by Bedford, Mass.-based **iRobot Corp.**, which is looking to establish a local office somewhere near Tacom in Warren.

"Our customer is there," said Nancy Smith, vice president of marketing for iRobot. "So it is important to be positioned to confer with and respond to them on a daily basis."

Also contemplating a Michigan location is Waltham, Mass.-based **Foster Miler Inc.**, a division of **QinetiQ North America** and makers of the Talon family of explosive-ordnance disposal robots, Braden and Overholt said.

In the past four years, TARDEC also has awarded several research and development contracts to Ann Arbor-based **Quantum Signal L.L.C.**, which makes image processing systems such as facial recognition software and also produces software systems to aid robots in direction and navigation.

Mitchell Rohde, COO of Quantum Signal, said military contracts comprise about 60 percent of his company's workload and revenue, with the remaining 40 percent having private commercial application.

The company expects to grow from its current 20 or so employees to about 30 by next fall and 40 by the end of 2009, Rohde said, with military robotics driving most of that new growth.

Through its Maryland subsidiary, **General Dynamics Robotic Systems**, Sterling Heights-based **General Dynamics Land Systems** also makes some robotic navigation systems, but Rohde said GDRS could only be loosely defined as a competitor.

"To be honest, the field is too much in its infancy right now for any of us to see it that way," he said.

Northrop Grumman Remotec, a robotics division of **Northrop Grumman Corp.** with offices in Troy, also has added a small local presence since the RSJPO relocated, Braden said. A separate division of Braden's office, the Joint Robotics Repair and Fielding office, is expected to add 20 employees soon to the Tacom complex in Warren.

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