

Military robots seen as lifesavers

May 19 2010, By VERENA SCHMITT-ROSCHMANN , Associated Press Writer



The robot vehicle Forbot of the German company Roboterwerk are presented during the Robotik ELROB 2010 show in Hammelburg, southern Germany, Tuesday, May 18, 2010. More than 47 scientist teams present during the show their newest robotic systems, which are use in the army. (AP Photo/Matthias Schrader)

(AP) -- On the outside, it looks like a normal SUV. But the prototype "autonomous robot car" - fitted with sensors and scanners, multifocal camera systems and powerful computers - might one day help avoid military fatalities from bombings and ambushes - or so its designers hope.

Researchers presented the so-called MuCar-3 at the European Land Robot Trial this week in Germany, where the world's innovators were pitching ideas to military evaluators from the United States, Europe and Japan.

The MuCar-3 can independently follow a lead car, as in a military convoy, and even stop or back up when the lead car does so. It is a step toward providing military commanders with a [robotic system](#) that will keep troops out of harm's way whenever possible.

But there are still a few problems to solve, according to the evaluators at the Robot Trial conference, being held near the central German city of Hammelburg.

"We have seen progress, but not as much as we have wished for," said Dirk Ellinger, director of armaments at the German Defense Ministry.

Around the world, armies already use about 10,000 different remote-controlled robot systems for surveillance, reconnaissance or bomb disposal - as seen in the Oscar-winning film "The Hurt Locker." Experts are still waiting for a breakthrough on ground robots to fulfill simple tasks without human guidance.

"For now, there are no solutions for autonomous or semiautonomous systems ready to go into serial production," Ellinger said.

Military commanders are not exactly waiting for something out of the movies - today's priorities don't require sending anything like a Star Wars-like R2 unit or Terminator robot into action, German Army Chief Werner Freers said.

"We are looking for pragmatic solutions that would make life easier for our soldiers in military missions," he said.

Freers said he'd like something that will help soldiers avoid danger, but also wants to spare troops routine tasks so they can concentrate on more important things - "not least of which would be fighting."

Convoy solutions - like the MuCar-3, developed by the military's academy, the University of the Bundeswehr in Munich - could free soldiers from having to move supplies, a stressful and dangerous job in countries like Iraq or Afghanistan.

"This is something we are able to do," said Henrik Christensen, director at Georgia Tech Center for Robotics.

But the Munich system is not perfect. It still needs a human-driven car to follow, and it still has someone in the driver's seat for emergencies, though that person need do nothing - as the man in the Hammelburg presentation demonstrated by holding up his hands.

"Maybe, this is not the end of wisdom," Freers said, suggesting the prototype would likely need improvements.

The same could be said about other vehicles at this year's Land Robot Trial. Many looked like things out of 1980s science fiction films, with eye-like cameras, multiple scanners and mechanical arms.

The German University of Siegen presented a robot that was supposed to follow a person, but the cumbersome multi-scanner, multi-camera vehicle kept beeping and stopping, causing its construction team distress.

"It has to be reliable," German armaments director Ellinger said later. "It is helpful as a substitute for human resources only if it is reliable."

Researchers are wrestling with the task of remodeling human senses so that robots can maneuver around obstacles like trees or puddles, but

remote-controlled systems are fairly trouble-free.

The MacroUSA & Force Products Group, Inc. of McClellan, California, demonstrated a tiny, durable [robot](#) that looked like a radio-controlled toy car but could also transmit video images.

The U.S. armed forces are using the device, which could help check out buildings in a war zone or even in school shootings, MacroUSA vice president Chris Vilter said. Vilter hopes European buyers will be interested in the unit, selling for euro27,000 (\$32,900).

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Citation: Military robots seen as lifesavers (2010, May 19) retrieved 23 April 2024 from <https://phys.org/news/2010-05-military-robots-lifesavers.html>

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