

Lockheed's Robotic Trucks Pass Real-World Military Convoy Test

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Posted 12 Feb 2014 | 17:01 GMT

A few weeks ago, we posted about the U.S. Army's plan to [replace thousands of soldiers with robots](http://spectrum.ieee.org/automaton/robotics/military-robots/army-considers-replacing-thousands-of-soldiers-with-robots) (<http://spectrum.ieee.org/automaton/robotics/military-robots/army-considers-replacing-thousands-of-soldiers-with-robots>) as a way to increase efficiency by reducing the ratio of support personnel to combat troops. By cutting the size of a brigade by a quarter and filling the gap with robots specialized in logistics, the Army hopes to become safer, more versatile, and cheaper all at the same time. To be clear, this isn't about replacing front line soldiers with armed robots: it's about, say, replacing humans who drive supply trucks with robotic supply trucks that drive themselves, and Lockheed Martin has successfully demonstrated a working system that can retrofit human-driven military vehicles for autonomous operation.



The goal of the Army and Marine Corps' Autonomous Mobility Appliqué System (AMAS) program is to take active military vehicles and "roboticize" them to the extent that they can operate fully autonomously in both urban and rural environments. Lockheed took part in a Capabilities Advancement Demonstration (CAD) late last month, and it's looking pretty good:

A few things to note about this video: the trucks are autonomous; the Humvees are not. The trucks are negotiating dirt roads at speed in a convoy such that for the trucks in the back, there's a bunch of dust in the air, which makes the autonomous navigation more impressive (LIDAR doesn't like to deal with particles in the air), especially at dusk. They seem to have no problem being passed by manned vehicles, and they're notably aggressive in tight urban environments.

What's most important about this system is that Lockheed isn't making autonomous vehicles: they're making vehicles autonomous. The system that they've come up with includes a high performance LIDAR sensor, some GPS sensors, and possibly some other sensors that Lockheed isn't talking about (like radars and cameras). And then there's a bunch of fancy software, and some sort of vehicle integration package that allows the system to be dropped into "virtually any military vehicle."

The Army says that they were "very pleased with the results of the demonstration," but made no comment as to when a system like this might actually be put to work in the field. As with all autonomous vehicle systems, there's a trust barrier that must be overcome, but at least with the military, the amount of legal mud that they're going to have to slog through is (we'd like to think) relatively minimal, at least compared to what the civilian sector is continually struggling with.

Via [[Lockheed](http://www.lockheedmartin.com/us/news/press-releases/2014/january/mfc-013014-us-army-lm-complete-advanced-autonomous.html) (<http://www.lockheedmartin.com/us/news/press-releases/2014/january/mfc-013014-us-army-lm-complete-advanced-autonomous.html>)]