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## Global Wars: The new future US killing machines III

By: fromPortugal on: 25.02.2006 [07:02 ] (1034 reads)



*Engineers conducting show-and-tell with a 20-ton robot on the last day of two weeks of trials on Fort Gordon*

*The demonstration at Fort Gordon was a part of a much larger program of tests being conducted by the Robotics Technology Integration Team from the U.S. Army Tank Automotive Research and Development Engineer Center, General Dynamics Corporation and its sub-contractors.*

*The system in testing at Fort Gordon is the robotic follower program. This program seeks to develop robots that can conduct convoy operations. One of the vehicles is called the CAT - short for crew integration and automation test bed. It serves as the manned leader vehicle.*

*The other vehicle serves as an unmanned follower in a convoy.*

***The long-term objective is to create dedicated unmanned ground vehicles.***

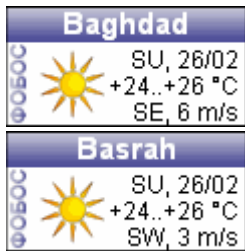
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### Army Testing Unmanned Stryker Convoys

by Larry Edmond

Fort Gordon GA (SPX) Feb 23, 2006 Engineers conducting show-and-tell with a 20-ton robot on the last day of two weeks of trials on Fort Gordon were cautiously optimistic. Karl Murphy, a software engineer from Robotic Research, said there was a new principle of



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Today

"Murphy's Law" at work on the test field Feb. 10.

"One of my professors reminded us that we have 'sight-ons' present whenever an experiment is being viewed," Murphy said. "The more 'sight-ons' you have, the greater is the potential for something to go wrong."

Tongue in cheek, he continued explaining that sight-on fields increase with the rank and reach of individuals viewing a test. With national, regional and local media rolling cameras, the "sight-on" field was very high that Friday.

The demonstration at Fort Gordon was a part of a much larger program of tests being conducted by the Robotics Technology Integration Team from the U.S. Army Tank Automotive Research and Development Engineer Center, General Dynamics Corporation and its sub-contractors.

Jeff Jaczkowski, TARDEC electrical engineer and manager for this Robotic Follower Advanced Technology Demonstrator project, explained what the testing was about and why Fort Gordon was chosen.

Pointing to the two Stryker Infantry Carrier vehicles idling behind him at their base camp on Range 37, Jaczkowski said these vehicles are part of a larger program set to bring vehicle electronics-vetronics technology integration and robotic systems to the force.

The system in testing at Fort Gordon is the robotic follower program. This program seeks to develop robots that can conduct convoy operations. One of the vehicles is called the CAT - short for crew integration and automation test bed. It serves as the manned leader vehicle.

The other vehicle serves as an unmanned follower in a convoy.

"We have done a circuit of testing that started in 2003," Jaczkowski said. "We have done a number of different environments, including Fort Bliss, Texas, that has a primarily sand/desert environment. We did Fort Knox, Ky., where there is more cross-country terrain. There was Fort Indiantown Gap and Letterkenny Army Depot in Pennsylvania.

"We are down here at Fort Gordon for the environment in the forested-type setting. We are focusing on road and long-haul convoy missions."

Jaczowski said Fort Gordon provides an ideal setting with a 10-kilometer loop that has a three-kilometer stretch of dirt road and the rest is paved. The long stretches of isolated roads allow the teams to put their test vehicles through a series of high-speed tests.

**"Yesterday we ran a 100-mile test where the lead vehicle was being driven manually and the robot was following,"** Jaczkowski said. "We did this successfully where the average speed was about 22 miles per hour. You may think that 22 miles per hour is not that fast when operational convoys are going 60 to 70 miles per hour. But you have to take into account that we did 68 right turns.

"You don't take right turns at 50 miles per hour, especially with a 20-ton robot."

On straight stretches, the vehicles routinely speed along at more than 40 mph, Jaczkowski said.

**Pointing to the bristling array of sensors on the vehicles, Jaczkowski said these vehicles incorporate second-generation ladar-laser radar, forward-looking infrared sensors, and advanced computers to handle autonomous navigation.**

For the autonomous follower, engineers are going beyond Global Positioning Systems to link terrain data from the lead vehicle back to the follower vehicle to augment data the follower vehicle gathers from on-board sensors.

"We have a major emphasis to create systems that can operate without GPS. We know that electronic interference can easily jam GPS in

a battle zone.

"The idea is to pass electronic bread crumbs from the manned lead vehicle back to the autonomous follower vehicle, and provide high-level proofing of the follower's path so the follower avoids areas that might impede or confuse its autonomous navigation system, while requiring only a minimum of human intervention and control from the lead vehicle," Jaczkowski said.

Jaczowski characterized all the testing so far as outstanding and gave high marks to the Fort Gordon Battle Lab and range control. "

Jaczowski is quick to point out that the testing that he is conducting is not about the relatively new Stryker vehicle.

"The Stryker is a fielded system, but the robotic convoy technology sensors that we have on these units are what we are putting through the research and development stage."

The demonstration conducted before the media Feb. 10 showed how adept the robot is in making decisions. The lead vehicle was manually driven along the road through an area where a gate was set, with the robot vehicle following about 100 meters behind.

After the lead vehicle passed, the engineers were planning to pull a cord releasing a gate to block the path. The follower vehicle should be able to detect the gate and plot a path around it before continuing, Jaczkowski said.

True to Murphy's Law and the sight-on rule, the chord attached to the spring release broke as engineer Karl Murphy tugged it to release the gate. Undaunted, Murphy reached down and tripped the release. The gate swung into the path of the following robot.

With only a few seconds to assess, the robot slowed, and veered around the gate. It then continued on its path, following the lead vehicle.

It was a slight glitch and only served to more graphically demonstrate how perceptive the robot is, Jaczkowski said.

In the future, Jaczkowski speculates the current efforts will lead to manned and unmanned convoys.

"There are two avenues that the Army is pursuing. The near-term objective is to automate the function of driving in a convoy vehicle."

Soldiers will remain in the vehicles for now, but by placing a vehicle on auto-pilot, the driver will be able to perform other duties or rest.

The long-term objective is to create dedicated unmanned ground vehicles.

In the tests being conducted on Fort Gordon, the lead vehicle develops a path along a route that it transmits to the follower vehicle that can follow the path immediately or weeks later.

"This is the beginning of going from point A to point B autonomously," Jaczkowski said.

He said the payoff will be in saving lives from such routine missions as resupplying forces in environments like Iraq where roadside bombs wreak havoc.

The group will continue testing Feb. 24 to March 10, Jaczkowski said.

The next time the US military goes to war in a foreign land, there will be a lot more robots and a lot less soldiers doing the grunt work. One of the first tasks that will be assigned to robots instead of soldiers will be driving - resupply, convoy operations, ground medical evacuation and unmanned reconnaissance are all areas targeted for autonomous vehicles.

That's one of the clear take-outs from recently released information regarding the U.S. Army's unmanned ground vehicle experiments and advanced technology demonstrations.

The Stryker is being used as a surrogate in the testing of the software and hardware being developed to allow the autonomous navigation of any military vehicle, but given the well documented capabilities of the Stryker, it's worth considering just what could be possible a few years from now.

The Stryker is a family of eight-wheel drive combat vehicles built for the US Army that provide a force that will move rapidly as a cohesive combined arms combat team. This is possible because the Stryker combines a number of unique capabilities: it is small and light enough to be transportable in a C-130 aircraft, it is tough enough for the battlefield with integral all-around 14.5mm armour protection, and it is VERY fast for an armoured vehicle being capable of 100kmh on sealed roads and 90kmh off road. With a fuel range of over 450 kilometres, the Stryker can move swiftly across the battlefield or to perform a variety of tasks in any one of its multitudinous guises.

Stryker can be transported on the ground using trucks or by air on C-17, C-5 and C-130 aircraft. The C-5 and C-17 aircraft can carry seven and four Strykers respectively. The C-130H can fly safely carrying a maximum 38,000lb load, so the Stryker's weight, 36,240lb, and size are within the payload limit of the C-130H. The C-130 can operate from smaller airfields in more remote locations. All configurations of the Stryker can disembark from the C-130 in combat ready status.

Stryker comprises two variants - the Infantry Carrier Vehicle (ICV) and the Mobile Gun System (MGS). The ICV has eight additional configurations: Reconnaissance Vehicle (RV), Mortar Carrier (MC), Commanders Vehicle (CV), Fire Support Vehicle, (FSV), Engineer Squad Vehicle (ESV), Medical Evacuation Vehicle (MEV), Anti-tank Guided Missile Vehicle (ATGM), and NBC Reconnaissance Vehicle (NBCRV). Eight configurations are in production now, the first systems having been delivered in Feb 2002. The MGS and NBCRV are in development and will be delivered beginning of 2005.

The purpose of building in autonomous navigational capabilities is to free manpower from the dull, dirty and dangerous activities common to military operations. If a vehicle can be equipped to drive itself from one location to another and have the sensors and "intelligence" to recognise obstacles and avoid them, soldiers can be free to perform other high priority missions. An example could be resupply vehicles self-navigating to a unit with replenishment stocks thereby reducing the need for soldiers to drive 24/7 in a combat zone.

[link](#)

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*We can see the dream's of US Warmongers. While the americans take their normal lives, machines will make the killings for them.*

*No complaints, no morals, no woundeds, no medicaid assistance...*

*The perfect warriors for US warmongers.*

*Previous articles about the subject:*

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**Would you fear?**

by Yasis on 25.02.2006 [08:35 ]

Would anybody fear a vehicle without humans soldiers?

**toy**

by Yasis on 25.02.2006 [08:37 ]

Just a toy. They will find ways to disrupt the communications between vehicle and human controller.

**Great!**

by Yasis on 25.02.2006 [08:38 ]

That way, they can redirect the convoy to supply Iraqi Resistance with guns and food.

**Hi tek toys**

by indijo89 on 25.02.2006 [11:33 ]

Yes, these things are high-tek toys. But they still can be used to subjugate and oppress poor people everywhere, until some rich kid with connections to high tek takes pity and decides to side with the oppressed.

It's easy for wealthy brats to forget that everyone isn't as lucky as they are and everyone doesn't have their hands in a toy factory outlet to do as they please.

The problem with these toys is not what they can do but who is behind the controls and how small their conscience is.

**I think a big.....**

by Peter on 25.02.2006 [12:38 ]

paintball gun would be the answer to this :)

**wealthy brats**

by Raven-De-Darken on 25.02.2006 [12:48 ]

These wealthy brats like Gw Bush got there wealth from killing people its all blood money  
American wasting more money from there afgn high???  
in other words there drug cartel money that supports these toys  
and wars for there bloody butchering

**Actually, Peter, you're right!**

by kamau on 25.02.2006 [13:29 ]

A good paintball to the eyes or lenses of these remote controlled robots are just what the doctor ordered. Robots or humans can't fight what they can't see!

**Stealth bombers?**

by BERNIE on 25.02.2006 [15:08 ]

These multi-million dollar planes, which were hyped as the latest in air warfare, were easily shot down by the Serbs, and so will these new fangled war toys will be disabled by wal-mart technology, a simple laser pointer would be very effective against these toys. "Get" these war engineers off of welfare and see if they can get a truly productive job.

**War as kid's play**

by AnaII on 25.02.2006 [15:31 ]

I keep getting amazed with north-american trend to transform averything they touch in a mix of vicious game and a murderous mindset, even tough they allege they have managed cirurgical strikes and smart bombs. In fact, for them to kill the most of all the «others» is a perfect and desirable scenario.

In those days of armaggedon, we know very well that while many will die, many more will stand against this evil empire.

**simplicity is the best**

by Yasis on 25.02.2006 [18:02 ]

*A good paintball to the eyes or lenses of these remote controlled robots are just what the doctor ordered. Robots or humans can't fight what they can't see!*

Great concept! Amazing that these so-called high-tech killing toys of USA could be neutralised that easily.

**hmmmm.....**

by Yasis on 25.02.2006 [18:03 ]

Why, Iraqi Resistance can easily hijack one of these instead of blowing them up. They can then build up an army of captured USA killing toys.

**When a laser beam can be broke into pieces by a water sprinkler then what is this technology!!!**

by cosmo on 25.02.2006 [19:34 ]

These are toys for idiots, these toys will not survive in a war of subsistence.

Only robust material will.

Flying high up and bombing with B52, that time is not possible in Iran, their stealth aircraft is always appearing on the radar screen as a bubble everybody knows that and once it opens the bottom to drop bombs its their like a sitting Duck.

The technology of the US and its allies is that it will not win or protect them in WW3.

This is their way of intimidating other nations who lack this technology and who are not knowing its a Bankrupt Technology.!!

**@ Kamau**

by Peter on 25.02.2006 [21:07 ]

Thanks....I was not actually trying to be totally sarcastic when I made that statement. It seem the obvious thing to me, on the spur of the moment.

**not that easily**

by caffeinehigh on 26.02.2006 [01:07 ]

'A good paintball to the eyes or lenses of these remote controlled robots are just what the doctor ordered. Robots or humans can't fight what they can't see!

windscreen wipers would tkae care of the paint, not that effective

**Ha - The Robot Talks**

by sjreese on 26.02.2006 [01:58 ]

"Last summer, my human masters and I went to Iraq to cool off from the heat and battle. I was greatly amusing them with my 'hot-dogging" stunts on the Haifa road way, and we were racing each other to the airport! Leading my humans by a good 10 meters ascended the hills to go on it again. I jumped on the road, ignoring my humans' yelling. Even the TARDEC electrical engineer with trying to get my attention with loud blasts from his whistle. As I was sliding down again, one human yelled 'Check your butt!' It seems the action of rappelling down the hill of a IED had jarred loose my water-protective coating on my posterior. On splashdown, electrical current from my innards surged through the armament, causing a free fire (killing zone) at all in its path. Over forty humans — 82nd and 101st airborne, whole commands — died that day. I was so embarrassed."

**@ Yasis**

by Neyaz on 26.02.2006 [02:41 ]

Would anybody fear a vehicle without humans soldiers?

I don't think so....I don't fear them loaded with soldiers either, I wonder if they have a recored messages like>>>BRING IT ON!...no telling with todays hi-tech!

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