Silvus Demonstrates Robot Repeater Capability on TALON & FasTac for TARDEC's ISR Mission Concepts System at AEWE Spiral G

Announcement

Silvus Technologies demonstrated its MIMO radio repeater capability integrated into QinetiQ's TALON and iRobot's FasTac robots at the Army Expeditionary Warfighters Experiment (AEWE) Spiral G. TARDEC's Ground Vehicle Robotics group requested Silvus to integrate its SC3500 MIMO radio into both robotic platforms as part of TARDEC's ISR Mission Concepts platform.

Setup

The Silvus SC3500 dual band MIMO radio is a mobile ad-hoc mesh network IP based packet transceiver that delivers cutting edge technology and superior video/command/control data to the operator. It can scale to dozens of nodes in a network and provide an aggregate throughput in excess of 10 Mbps.

The SC3500 integrates easily into both systems using the QinetiQ IP conversion kit for the TALON and a Silvus Integration Kit for Packbots, allowing for a quick bolt-on conversion and operation in a mesh network or repeater configuration. 3 dBi omni antennas were used on all radios with 1 Watt total TX power. The soldiers were instructed not to worry about antenna placement.

The repeater setup was tested in a variety of training missions conducted by the U.S. Army infantry. Some of the missions conducted were:

- Reconnaissance / Surveillance into urban terrain
- Forward Operating Base security
- Defense of urban stronghold

Figure 1. *Silvus SC3500 integrated into FasTac & TALON, note the Silvus radio on the ground with the soldiers*

Results

The Silvus radios extended the range over existing comms systems used in robots. When applied to infantry missions, it provided them with advanced reconnaissance and surveillance capabilities of their objective from safe standoff distances taking them out of harms way. Using a repeater setup provided:

- 500 meters NLOS range in variable field terrain such as rolling hills and vegetation
- 500 meters NLOS into urban centers
- No need for directional antennas, soldiers focused on missions, not antenna setup
- Either robot could be used as repeater at any time

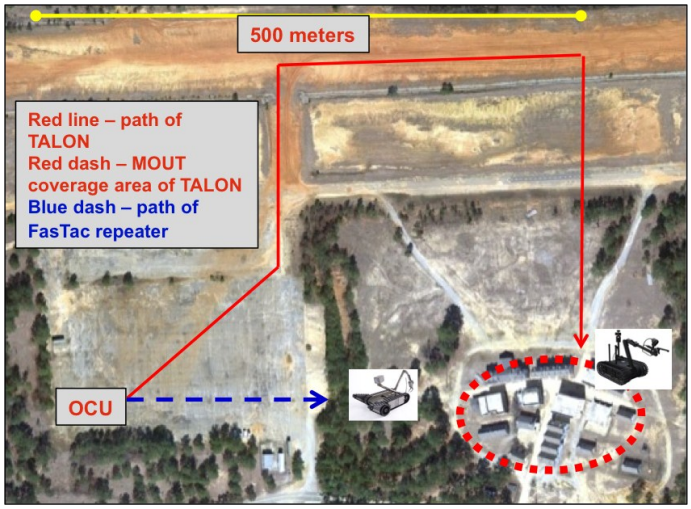

Figure 2. *Silvus repeater setup: FasTac in treeline while TALON maintains coverage through entire urban area*

Warfighter Review

U.S. ATEC (Army Test and Evaluation Command) polled infantry soldiers polled using Silvus' MIMO radios who feel the SC3500 is ready for war. They determined a user 'take to war' score of 3.7 out of 4.

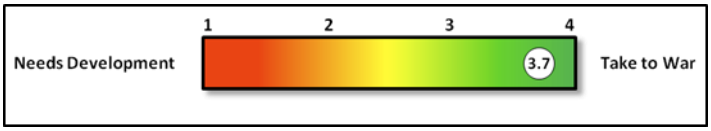

Figure 3. *AEWE soldiers poll on whether to take Silvus MIMO Radios to war, scored 3.7 out of 4*

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