

Lockheed Martin Successfully Tests New Centralized Controller For Unmanned Air, Ground Systems

Lockheed Martin has conducted a successful series of tests of a new centralized controller device for unmanned air and ground vehicles. During these tests, Lockheed Martin demonstrated control of four different unmanned systems from one centralized control device.

The prototype centralized controller consisted of a touch screen laptop computer with a customized hand controller. The unit Lockheed Martin developed allows users to control multiple systems via a hand controller and a touch screen, depending on the needs and requirements of the specific system.

"This is a very important step in risk reduction for the Army's Future Combat System Centralized Controller Device," said Gene Holleque, director -- Combat Maneuver Systems at Lockheed Martin Missiles and Fire Control. "This test proves Lockheed Martin and its industry partners are resolving the issues involved with controlling several disparate unmanned systems from a single centralized controller. It also gives us an opportunity to experiment with human factors early in the process to ensure we can deliver an effective and soldier-friendly controller to the warfighter."

The unmanned systems tested included Honeywell's Micro Air Vehicle Unmanned Air Vehicle (UAV); Lockheed Martin's Silver Fox UAV and Roll Based Operations Architecture (RBOA) robot; and a Lockheed Martin Unmanned Ground Vehicle (UGV) demonstrator. Lockheed Martin is currently experimenting with control of the iRobot Corporation's PackBot from the same centralized controller. The unmanned systems controlled represent the spectrum of small to medium UGVs, to vertical take-off and landing UAVs as well as fixed wing UAVs.

Additionally, several different radio links were demonstrated in conjunction with the centralized controller, including UHF, L-band and wireless broadband. The demonstration also utilized the Joint Architecture for Unmanned Systems message protocol to communicate with the Lockheed Martin UGV. The company experimented with its "Combat Maneuver Mission Route Planner" (CMMRP) automated route planning software and utilized its Human Robotic Interface software when controlling the UGV. The test also demonstrated the centralized controller's ability to execute both pre-planned autonomous operation and manual user tele-operation of the UGV, the Micro Air Vehicle and the Silver Fox UAV.

Headquartered in Bethesda, Md., Lockheed Martin employs about 140,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

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