Lockheed Martin UCAR Team Successfully Tests Candidate Sensor Technologies

The Lockheed Martin Unmanned Combat Armed Rotorcraft (UCAR) team recently completed airborne and ground demonstrations of potential UCAR sensors.

The goal of the UCAR program is to demonstrate the technical feasibility, military utility, and operational value of an unmanned rotorcraft system capable of autonomous collaboration with manned and unmanned air and ground systems. The Defense Advanced Research Projects Agency (DARPA) is developing the UCAR system jointly with the U.S. Army.

The sensors team supporting the Lockheed Martin-led UCAR effort is comprised of Lockheed Martin Systems Integration - Owego, Lockheed Martin Missiles and Fire Control and Raytheon Unmanned & Reconnaissance Systems.

"Lockheed Martin and Raytheon have worked together as a formidable sensors team to improve both autonomous sensor collaboration and automatic target recognition," said Dan Rice, UCAR program director at Lockheed Martin Systems Integration - Owego.

During the recently completed Phase II preliminary development program, the team successfully collected simultaneous sensor data from two sources. Lockheed Martin Missiles and Fire Control measured simultaneous data from Forward Looking Infrared (FLIR) and Laser Detection and Ranging (LADAR) sensors against difficult target classes. The testing demonstrated excellent potential for autonomous detection and recognition by the sensor system.

"Our UCAR sensor team has identified the key risk reduction activities required to guarantee a successful transition of technology for the Phase III system development program," said Jeff Pridmore, vice president of Technical Operations and Applied Research at Lockheed Martin Missiles and Fire Control.

In addition, Raytheon successfully completed airborne radar and ground based distributed aperture sensor demonstrations proving the operational feasibility of a millimeter wave radar and a wide-angle infrared sensor in a low-flying aircraft.

"The Phase II sensor demonstrations of the radar and distributed aperture sensor system addressed difficult and compelling aspects of the mission equipment package," said Tom Kennedy, vice president, Raytheon Unmanned & Reconnaissance Systems. These tests constitute a significant step in ensuring success of the proposed sensor configuration for the low-flying UCAR in its multifaceted role."

The Lockheed Martin UCAR team includes Lockheed Martin Systems Integration-Owego, Lockheed Martin Aeronautics Company Advanced Development Programs, Lockheed Martin Advanced Technology Laboratories, Lockheed Martin Simulation, Training & Support, and Lockheed Martin Missiles and Fire Control; Bell Helicopter, a Textron company; Raytheon Company; the Charles Stark Draper Laboratory; Whitney, Bradley & Brown; L-3 Communications; and DRS Technologies and Harris Corporation.

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