

Lockheed Martin Demonstrates Next-Generation Air Battle Management System

Transformational Capability Integrates Operational, Tactical Battle Management

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COLORADO SPRINGS, Colo.

Lockheed Martin today demonstrated a revolutionary new system for air battle management -- one that enables warfighters at all levels to react and respond in real time to the constantly changing battlefield situation. The Total Integrated Warfare (TIW) initiative, showcased today in a Capstone demonstration, combines today's deployed, proven systems with experimental technologies developed by Lockheed Martin to deliver unprecedented capabilities for real-time battle management and execution.

"One of the lessons learned from Operation Iraqi Freedom is that commanders must be able to react and respond to rapidly unfolding events and changing scenarios on today's battlefield. While initial mission planning capabilities have significantly improved, it's difficult to make changes to that plan on the fly, when time and flexibility are critical," said Lorraine Martin, vice president of joint command, control and communications systems for Lockheed Martin Integrated Systems and Solutions. "TIW integrates the strategic, operational, and tactical levels of battle management, allowing mission commanders and Air Operations Center (AOC) operators to work collaboratively to change and execute multiple missions on a moment's notice."

Enabling that unprecedented collaboration between the operational and tactical level are two new experimental systems developed by Lockheed Martin: the Mission Battle Management System (MBMS) and Operational Battle Management System (OBMS). MBMS would be deployed on board aircraft, while OBMS would be deployed to the AOC or similar command centers such as the E-10A Multi-Sensor Command and Control Aircraft (MC2A). Together they integrate and streamline operational and tactical functions, enabling real-time situational awareness, automated mission planning, and dynamic re-tasking of aircraft. MBMS and OBMS work in conjunction with current Joint systems of record such as the Theater Battle Management Core Systems (TBMCS), the Lockheed Martin-developed "engine of the AOC." With its emphasis on machine-to-machine interaction, most new missions can be automatically generated and re-tasked to pilots with a single keystroke.

"With the connectivity between OBMS and MBMS, Lockheed Martin has, for the first time, established a Transformational capability for dynamic battle management that can reduce timelines for planning, decision-making, and execution from days and hours to minutes and seconds," said Neil Kacena, deputy, Advanced Development Programs (a.k.a. Skunk Works), Lockheed Martin Aeronautics Company. "These new capabilities enable centralized mission planning and decentralized execution, maximizing the effectiveness of the warfighter in all situations."

The TIW Capstone demonstration features a number of operational scenarios, each involving both real and simulated aircraft and command centers. F-16 Fighting Falcons and other fielded assets conducted significant live-fly tests in several scenarios. During the highly successful tests, pilots aboard the aircraft demonstrated automated re-tasking and re-planning through advanced communications links that connected them with deployed and experimental systems at ground stations across the country.

TIW scenarios also incorporate future battle management platforms such as the E-10A. "TIW represents a major step forward in our approach to next-generation battle management and cruise missile defense operations as it pertains to several nodes of the Constellation, including the E-10A Battle Management Command and Control (BMC2) subsystem," said Martin. "Many of the new capabilities we are demonstrating today are relevant to the E-10A's mission, and we've already applied key lessons, concepts and technologies from TIW to the E-10A program."

The TIW Capstone initiative was developed jointly across numerous Lockheed Martin locations, linked together in a virtual, collaborative environment by the Global Vision Network. Primary development locations included Lockheed Martin's Horizontal Integration Vision (HI-Vision) lab in Colorado Springs and the Integrated Warfare Development Center in Ft. Worth, TX.

Headquartered in Bethesda, Md., Lockheed Martin employs about 130,000 people worldwide and is principally engaged in the research, design, development, manufacture and integration of advanced technology systems, products and services. The corporation reported 2002 sales of \$26.6 billion.

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