Successful System Interface Demonstration Shows MEADS Ready For Development Phase

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The Medium Extended Air Defense System (MEADS) demonstrated its ability to acquire, classify, track and destroy simulated aircraft and missile targets in a successful System Level Interface Demonstration at Lockheed Martin facilities in Syracuse, New York.

The objective of the demonstration was to link hardware, software and end- to-end simulations, to validate end item plug-and-fight communications and to engage and destroy simulated air-breathing and ballistic missile threats.

MEADS is a mobile air defense system designed to replace Patriot systems in the United States and Germany, and Nike Hercules systems in Italy, and meets the requirements of the "capabilities oriented" air defense concept in Germany. MEADS incorporates the proven hit-to-kill PAC-3 missile in a system that includes surveillance and fire control sensors, battle management/communication centers and high firepower launchers. The system will combine superior battlefield protection with unprecedented flexibility, allowing it to protect maneuver forces and to provide homeland defense against tactical ballistic missiles, cruise missiles, unmanned aerial vehicles and aircraft.

"The tri-national team is validating that its approach to developing standardized interfaces required for a sophisticated netted/distributed system really works," said Brig. Gen. Thomas J. Gericke, NAMEADSMA's General Manager who witnessed the demonstration. "This will allow MEADS to provide flexibility and capability unlike any other fielded or planned air and missile defense system."

Proving successful integration and control of a simulated PAC-3 missile using sensor and control elements in the MEADS architecture represents a major step in advancing the system closer toward System Design and Development. All systems worked as planned and verified the MEADS intra-system plug-and-fight concept and the communications software design.

"After we injected a threat into the simulation, the radars produced tracking reports, and the Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) system used the reports to decide when and whether to launch," said MEADS International (MI) president Klaus Riedel. "Once the launcher received the command and launched a missile, processors tracked the threat and the Multi-function Fire Control Radar (MFCR) provided initial missile guidance. The missile seeker acquired the threat and PAC-3's hit-to-kill technology destroyed the target."

A second major objective also was achieved by demonstrating technological maturity and cost reduction for MEADS, which will enter development next year.

"In addition to meeting all System Level Interface Demonstration objectives, the MI team proved its ability to integrate software from various companies located in Europe and the United States into a working end-to-end simulation in a short period of time," said MI executive vice president Dave Seckinger. "We verified critical system interfaces and system functions while completing a key initial demonstration of the robust battle management and radar processing algorithms that enable MEADS to defeat the entire spectrum of future air and missile threats."

Air and missile defense lessons learned during the recent Iraqi conflict validated the MEADS system requirements to provide key improvements in BMC4I, strategic and tactical mobility, 360-degree coverage, operator situational awareness, and target classification, discrimination, and identification (CDI). MEADS will also provide significant reductions in operation and in support burdens and costs compared to the Patriot system.

MEADS is currently in the Risk Reduction Effort (RRE) phase. The 32-month RRE, which began in 1999, mitigates risk through prototype hardware developments, demonstration tests, performance assessments and simulation, incorporating the PAC-3 missile as part of the system design baseline.

At the culmination of the RRE, MI will conduct a Final System Demonstration in Italy utilizing the MFCR. During that demonstration, MEADS will track and engage a live target as further evidence of the system's maturity.

In 1999, MEADS International, Inc. was selected by NAMEADSMA, a chartered organization of NATO, to develop MEADS. A multinational joint venture headquartered in Orlando, Fla., MEADS International's participating companies are MBDA Italia, EADS European Aeronautic Defence and Space Company and LFK- Lenkflugkorpersysteme (LFK, a subsidiary of EADS and MBDA) in Germany, and Lockheed Martin in the United States. Together, these companies have focused an international engineering team in Orlando to develop systems and technologies for the MEADS program, which continues as a model for collaborative transatlantic development.

The U.S., Germany and Italy are financing the MEADS program in shares of 55, 28 and 17 percent, respectively.

SOURCE: MEADS International, Inc.
