Multi-Functional Information Distribution System (MIDS)

Executive Summary

- Follow-on test and evaluation is ongoing for the Multi-Functional Information Distribution System (MIDS)-on-Ship and EA-6B host platform integration.
- It remains unclear until all the EA-6B data is analyzed whether the integration will be rated as operationally suitable. This is due to a number of operational mission failures and the comparatively small number of flight hours obtained from the single EA-6B aircraft that was available for test. The Navy, however, has already deployed the system.
- The Navy is developing MIDS-Joint Tactical Radio System (JTRS) as part of the JTRS product line.

System

- MIDS is a family of digital voice, data link, video communications, and navigation terminals with modular functionality for integration into both theater and tactical host platforms.
  - MIDS-Low Volume Terminal (LVT) 1 is primarily for aircraft and shipboard integration (MIDS-on-Ship).
  - MIDS-LVT 2 is primarily for integration into ground-based host platforms (Army Air Defense units).
  - MIDS–JTRS is for integration into host platforms requiring use of the JTRS family of legacy and future communications, navigation, and identification waveforms.
- Acquisition plans include 1,880 terminals for the MIDS-LVT 1 and MIDS-LVT 2 to retrofit on 13 separate host platform types.

Mission

- Joint Force Air Component Commanders employ MIDS-LVT to provide Link 16 (a tactical data link) digital voice and video communications, data link, identification, and Tactical Air Navigation (for fighter aircraft) capabilities.
- MIDS-JTRS will provide theater and tactical digital voice, data link, video communications, navigation, and identification functionality for all host platforms.
- MIDS provides host platform interoperability with legacy Link 16-equipped host platforms.

Activity

- The F/A-18 program conducted follow-on test and evaluation from July 2005 to March 2006 to verify correction of deficiencies identified in the IOT&E report. Testing was conducted in accordance with the DOT&E-approved test plan.
- The EA-6B program conducted operational testing of the integration of MIDS-LVT 1 (in conjunction with the EA-6B Improved Capability III (ICAP III) Block 2 testing) from March - June 2006 to support a fielding decision. Testing was conducted in accordance with the DOT&E-approved Test and Evaluation Master Plan and operational test plan. The final report is in preparation; however, the Navy has already deployed the system.
- Operational testing of MIDS-LVT 1 integration onboard ship was to begin in FY06, but was delayed until FY07. Specific integration issues identified in developmental testing include a unique cabinet design, maintainability features, and coupling with the host ship's Link 16 1,000-watt high power transmitter amplifier. This is the last major integration effort for MIDS-LVT.
- Development of the MIDS-JTRS test strategy for terminal level and lead host platform integration testing has been completed.
- The DoD reorganized the entire JTRS portfolio. MIDS-JTRS is now part of DoD's JTRS Enterprise consisting of multiple product lines, each of which will need aligned test strategies.

Assessment

- Although the final report is not yet released, the F/A-18 preliminary test results indicate that previous effectiveness and suitability issues have been addressed.
- The EA-6B test results will be used to support the decision to field MIDS-LVT 1 to the EA-6B operational fleet. Quick look test results indicate most test objectives were satisfied; however, some essential electromagnetic interference

compatibility testing was deferred due to test asset scheduling conflicts. Testing in a jamming environment was also deferred and still needs to be conducted.

- Data analysis is ongoing and it remains unclear until all the data is analyzed whether the integration will be rated as operationally suitable. This is due to a number of operational mission failures and the comparatively small number of flight hours obtained from the single EA-6B aircraft that was available for test.

Recommendations

- Status of Previous Recommendations. The Navy is following all of DOT&E's previous recommendations and should continue to adhere to them in the future.
- FY06 Recommendations.
  1. The Navy should complete EA-6B integration testing to demonstrate the operation of Link 16 during electronic jamming operations to meet operational suitability threshold requirements.
  2. The JTRS Enterprise should develop an Enterprise Test Strategy that includes MIDS-JTRS to capitalize on JTRS product line lessons learned.