Multi-Platform - Common Data Link (MP-CDL)

SUMMARY

- The Multi-Platform-Common Data Link (MP-CDL) program has not passed any formal acquisition milestones. There is no definitive acquisition program and strategy; however, the program has a Service-approved strategy to get through a 2005 flight demonstration.
- The MP-CDL can provide the data link for the Multi-platform Radar Technology Insertion Program (MP-RTIP) and the Network Centric Collaborative Targeting (NCCT) programs. However, the NCCT program recently decided not to use MP-CDL as its data link.
- Testing has been limited to laboratory testing of developmental hardware.
- There is no approved Test and Evaluation Master Plan for the MP-CDL program. The test program is in flux with the cancellation of planned testing at the Roving Sands 2005 exercise.

SYSTEM DESCRIPTION AND MISSION

The Air Force planned the initial installation of the MP-CDL for the E-8C Joint Surveillance Target Attack Radar System (JSTARS) as a replacement for the E-8C’s Surveillance and Control Data Link. The E-8C Surveillance and Control Data Link transmits data to and from the E-8C aircraft and its ground station, and the Common Ground Station. The Multi-Platform Radar Technology Insertion Program (MP-RTIP), which originated as a radar upgrade to JSTARS, requires a more capable data link to transmit radar data. The Air Force restructured the MP-CDL program to be the data link for a Network Centric Warfare capability. The NCCT no longer plans to use the MP-CDL. However, the MP-CDL Capability Development Document includes requirements to support both the MP-RTIP and NCCT programs.

The MP-CDL was originally to replace the JSTARS data link, as the higher quantities of data generated by the MP-RTIP radar required a more robust data link than the JSTARS could provide. MP-CDL provides several orders of magnitude greater data throughput, and will provide the means to exchange data between the JSTARS E-8C and Common Ground Station, Global Hawk, E-10A aircraft, and the Army and Air Force Distributed Common Ground Systems.

The Air Force restructured the MP-CDL program to support the NCCT Advanced Concept Technology Demonstration. The NCCT Advanced Concept Technology Demonstration requires the low data latencies provided by MP-CDL rather than its high throughput. The NCCT Advanced Concept Technology Demonstration provides a combat capability by networking command, control, and intelligence, surveillance, and reconnaissance assets into a collaborative entity. NCCT should dramatically improve target location accuracy, timeliness, and combat identification certainty for the warfighter. Networking optimizes high-speed machine-to-machine interaction between sensors for detection, association,
and correlation of high-interest and time-sensitive targets. NCCT is focused on the find, fix, track, and assess elements of the kill chain.

Most recently, the NCCT program has backed out of its previous intention of using the MP-CDL as its data link for networking intelligence, surveillance, and reconnaissance assets. This will not allow the MP-CDL the opportunity to test low data latency requirements.

TEST AND EVALUATION ACTIVITY

Test and evaluation activity has been limited to laboratory testing at the contractor’s facility of MP-CDL hardware, which is still in development.

The Air Force Operational Test and Evaluation Center has begun development of an operational test concept for MP-CDL.

There is no completed MP-CDL program Test and Evaluation Master Plan.

TEST AND EVALUATION ASSESSMENT

Because of the cancellation of the Roving Sands 2005 exercise, the MP-CDL program is examining other testing options for completing an operational assessment of the program in 2005. It is likely the testing will be less robust than expected at Roving Sands 2005. The integration of MP-CDL program onto the JSTARS test aircraft at Melbourne may be a solution.

Several operational issues need to be resolved in the MP-CDL program. These include data latencies, data throughput, network configuration changes, integration of MP-CDL onto individual platforms, and interference with other data links and communications devices. There is no Test and Evaluation Master Plan for the MP-CDL program and therefore, no approved test strategy. The MP-CDL test program is currently only ad hoc.