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

The Multi-Platform – Common Data Link (MP-CDL) was initially planned to replace the Joint Surveillance Target Attack Radar System (JSTARS) E-8C Surveillance and Control Data Link (SCDL), which transmitted data to/from the E-8C and its ground station, the Common Ground Station (CGS). The Air Force restructured the MP-CDL program to be the data link for a Network Centric Warfare capability to support Network Centric Collaborative Targeting (NCCT) Advanced Concept Technology Demonstration (ACTD), in addition to its role supporting the Multi-Platform Radar Technology Insertion Program (MP-RTIP) family of systems. Because of difficulties determining the requirements, the Air Force has restructured the program as a technology development and experimentation program. The MP-CDL program will produce a few systems with which to explore concepts and capabilities. If those capabilities meet an operational need, the Air Force may decide to produce them for employment on combat systems.

MP-CDL originated as a program to replace the JSTARS SCDL. The enormous quantities of data that the MP-RTIP sensor should generate, in particular Synthetic Aperture Radar imagery, drives the need for a replacement to the SCDL. MP-CDL provides several orders of magnitude greater throughput than the SCDL. MP-CDL will provide the means to exchange data between the JSTARS E-8C and CGS, Global Hawk, E-10A Multi-sensor Command and Control Aircraft, and the Army and Air Force Distributed Common Ground Systems. MP-CDL is currently planned as a line-of-sight (LOS) data link. The criticality of that LOS data link was demonstrated by the SCDL in Operation Iraqi Freedom. However, the Air Force is also considering a requirement for a beyond-LOS (BLOS) for the MP-RTIP family of systems because, in most contingencies (e.g., peacekeeping contingencies in the former Yugoslavia) BLOS has been the only means of transmitting data to the warfighters who needed it.

The Air Force restructured the MP-CDL program to support the NCCT ACTD. The NCCT ACTD requires the low data latencies provided by MP-CDL rather than its high throughput. The NCCT ACTD is intended to provide 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 find, fix, track, target, engage, and assess kill chain.

TEST & EVALUATION ACTIVITY

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

The MP-CDL Program Office has initiated Test and Evaluation Master Plan preparation for a Milestone B planned for 2005.

TEST & EVALUATION ASSESSMENT

The MP-CDL is being designed to connect many joint command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) platforms. Therefore, coordination with each of these platforms will be crucial during development. Thus far, the MP-CDL program has not produced an Operational Requirements Document, in part because of CDL users' concerns that the MP-CDL's broadcast mode has potential to cause significant electromagnetic interference. The current acquisition strategy was conceived
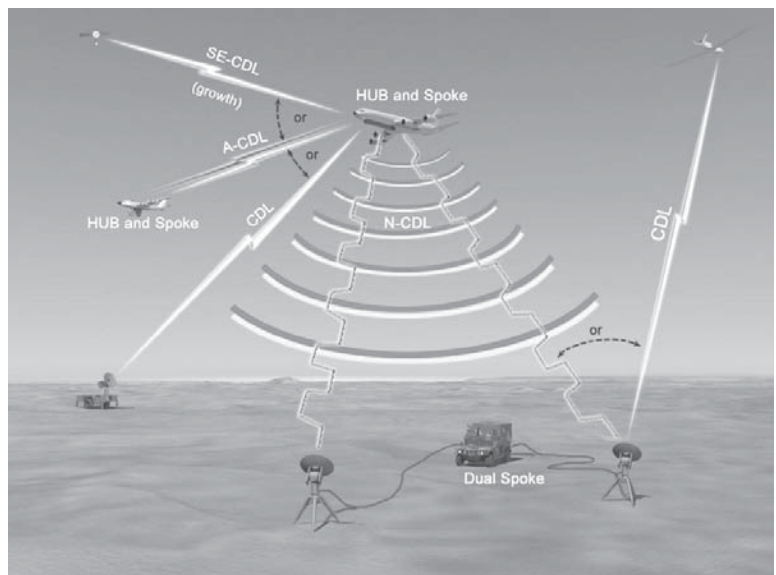
The Multi-Platform-Common Data Link is being designed to connect many joint command, control, communications, computers, intelligence, surveillance, and reconnaissance platforms.

as a means to continue test and experimentation to support the MP-RTIP data link and NCCT requirements, while allowing the CDL community time to resolve the potential problems. However, the Air Force has indicated a need to field MP-CDL terminals produced under this strategy if MP-CDL meets the Air Force's requirements. Therefore, continued oversight of MP-CDL by the multi-Service CDL community and DOT&E will be required to ensure that the system meets joint requirements.

The linkage between MP-CDL and the NCCT ACTD is also a cause for concern. Many of the platforms that require MP-CDL to handle the large volumes of data generated by MP-RTIP are also platforms that will eventually participate in NCCT after it is fielded. This creates the possibility that platforms might end up with an MP-CDL terminal adequate to support NCCT's needs, but not MP-RTIP's needs.