

RECENT PROGRAMS

Digital Mapping Interface System (DMIS)



Moving map systems can provide combat aircrews with consolidated information in a format that is tailored to mission needs and is easy to understand at a glance.

The problem is that up to this time, such map systems have been costly to install, expensive to maintain and proprietary.

SSAI has met the challenge of an affordable, non-proprietary map system DMIS, under the SOF Support Services Contract (SSSC) at WR-ALC/LU. We developed a Digital Map Interface System (DMIS) to capture, format, and forward display information from the MIL-STD-1553B data bus or other aircraft data sources to the FalconView mapping tool. The DMIS meets has significant advantages. It is

- Inexpensive to install
- Relatively easy to maintain; and
- The software/hardware designs are Air Force owned

The DMIS provides Enhanced Situational Awareness (ESA) to SOF C-130 crew members by updating the location of the aircraft over a digital map overlay and by locating and displaying other relevant navigation and sensor data on the map. SSAI originally developed DMIS for the AC-130H Gunship using both redundant 1553B data and user defined data sources to provide reliable coordinate data even when one aircraft data bus is not available. Due to this flexible design, the DMIS system can easily and quickly be adapted to work on any aircraft where a source of position data is available on a digital navigation bus.

Features of DMIS include:

- User-selectable redundant data sources for aircraft position, attitude, and velocities
- Platform unique data capture and formatting:
 - Gunship – gunfire events, sensor look angle (FLIR, TV, Radar) projection to terrain intersection
 - CT I, CT II, Gunship – mark early leg changes
 - All – position decoding from data bus messages
- Interface with PFPS – FalconView standard mission planning and rehearsal tool for the digital mapping capability (real-time feed provided by DMIS)
- Repeating laptop video display is NVG compatible, laptop screen can be filtered for NVG compatibility
- Low kit costs about \$30K installed on a C-130 with Repeater Display, or about \$20K without

Under a separate Flexible Acquisition and Sustainment Tool (FAST) contract at WR-ALC, SSAI designed versions of DMIS for the MC-130E Combat Talon I (CT I), MC-130H Combat Talon II (CT II), and MC-130P Combat Shadow aircraft platforms. We also developed low cost kits to install the systems. SSAI has responded to subsequent modifications of the FAST contract to install a fold-down Repeater Display on the C-130 glareshield between the Pilot and Copilot positions for the CT I platform. We also replaced an existing CRT monitor with a DMIS flat panel Repeater Display that incorporates the existing RADAR/FLIR video sources for the Combat Shadow platform.

SUPPORT SYSTEMS ASSOCIATES, INC.

