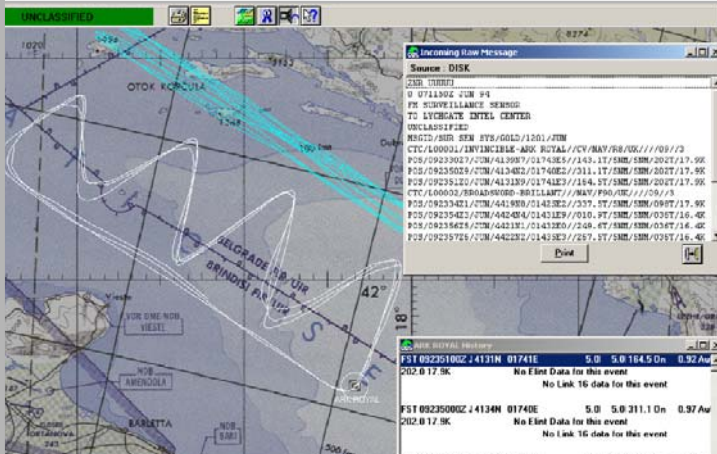


Over-the-Horizon Airborne Sensor Information System

OASIS



The Over-the-Horizon Airborne Sensor Information System is a proven, platform situational awareness product that combines on-board radar, EO/IR and GPS track data with off-board information to provide a tactical picture to the user.

Benefits

- Integrates track data from on-board sensors with off-board data to provide a tactical picture for the operator
- Interfaces with on board GPS system to provide "ownship" centered map displays if selected by operator
- Interfaces with imaging systems to enable "snapshots" to be captured and transmitted off-platform
- Built-in correlation engine that correlates on position and attributes to provide the best possible track identification
- Interfaces with on-board radios to provide access to military broadcasts such as Link 16, TIBS, etc.
- Provides the capability to operate on the Officer-in Tactical-Command Information Exchange System network in both subscriber and net controller mode

Overview

OASIS provides an organic sensor interface, combined with Link 16, TADIX-B, Officer-in Tactical-Command Information Exchange System (OTCIXS) and line-of-site communications connectivity. The OASIS display system offers automated correlation and tracking algorithms, track management utilities and tactical decision aids. This enables OASIS to support the generation, maintenance, review and dissemination of an integrated, multi-source over-the-horizon targeting (OTH-T) database. The conglomerate of capability provides a comprehensive situational awareness system and the ability to perform targeting and surveillance using on-board and off-board systems.

Features

- Reception, manipulation and storage of images, overlays, text files, labels and symbols
- APG-66 radar interface
- APS-143 radar interface
- APS-137 radar interface
- Auto detection and configuration
- WESCAM 16DS, 20TS FLIR interface
- Cross cueing of radar and FLIR contact
- Single screen display of video and situation awareness
- NT connectivity with OTCIXS, TADIX-B

Situation awareness, communications and imagery transmission and receive capability can be provided in a notebook and docking station configuration, a standard PC

configuration or in a VME chassis configuration that fits standard 19 inch racks. OASIS can connect to a number of radios to receive off-board information. Options include: MATT, CTT, LST5D, ANDVT, PSC5D, and Mini-DAMA. OASIS can also receive/transmit data across the 1553B bus.

Mini-OASIS

Mini-OASIS is a new version of the existing OASIS system currently on U.S. Navy P-3 and U.S. Coast Guard C-130 aircraft. Mini-OASIS is currently being used on U.S. Coast Guard Falcon Jet aircraft and on other classified platforms. Mini-OASIS is best categorized as a "platform situational awareness system" that incorporates multiple types of sensor and message information into a common display.

Mini-OASIS Software Capabilities

- Mini-OASIS runs in the Windows NT 4.0 operating system and is comprised of four primary software modules:
 - Communications and Radar Processing (CARP) – Used for interfacing with radars, GPS and 1553 bus
 - Radio Communications (RADCOM) – Used for radio control. On OTCIXS broadcast, Mini-OASIS can act as Net Subscriber or Net Controller.
 - OASIS Display System (ODS) – Data correlation, mapping and display functions
 - Image Processing (IP) – COTs software used to provide live video, screen captures and capability to transmit and receive image captures

Mini-OASIS Hardware

- A fully capable Mini-OASIS unit, which includes Link 16 capabilities, is comprised of the following hardware:
 - (2 VME slots) VMC 7765 Single board computer (Dual Pentium III 850 Mhz processors)
 - (1 VME Slot) PCI bridge board with synchronous and asynchronous serial port capabilities, Octal Pro 8-port asynchronous EIA-232 serial card, and dual Ethernet card
 - 1 VME slot) View 6000 (now obsolete – moving to View 8000 card)
 - (1 VME slot) Image capture card
 - (1 VME slot) BAE DLP card (Link 16)
 - One or two removable 20 Gb hard disk drives (SCSI interface)
 - One 3.5inch floppy drive
 - One DVD ROM (SCSI interface)

A fully capable Mini-OASIS unit as currently designed weighs approximately 120 pounds. The dimensions of the VME chassis currently used by most customers are 12.25 x 19 x 24.4inches (H x W x D). Raytheon's new version of Mini-OASIS moves out of the VME world and into the CompactPCI world. This opens the door for even smaller Mini-OASIS units to include less weight and price.

OASIS System Requirements

CPU:	Pentium III or better
Memory:	64 Mb / 128 Mb+ recommended
Disk Space:	100 Mb / 1 Gb+ recommended for map storage (if required)
Graphics Card:	VGA or SVGA
Operating System:	Windows NT 4.0

Mini-OASIS Interface

Currently, Mini-OASIS can interface with the following:

Radios:	MATT via serial port ANDVT/HF radios via synchronous serial port LST5D/UHF SATCOM/LOS via synchronous serial port PSC_5D via serial port MIDS/JTIDS Terminal via 1553 bus KG-84a/Mini-DAMA via synchronous serial port KY-58/ARC-182 via synchronous serial port
Broadcasts:	TDDS (TRAP) TIBS OTCIXS Link 16
Radars:	APS-137 via serial interface APG-66 via 1553 bus APS-143 via 1553 bus
Electro Optic/FLIR:	L3 Comm/Wescam Model MX15/MX20
GPS:	ARN 151 via serial connections
Other:	1553B (Capable of being 1553B bus controller/RT)

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