

Cobham's Soldier Systems Extends Reach into Marine Interdiction

One System, Two Environments, Multiple Capabilities

Cobham Defence Communications has developed a Marine Interdiction Operations System (MIOS™) as an extension to the Integrated Digital Soldier System (IDSS™). MIOS enhances mission capability and provides secure Blue Force Tracking and advanced Situational Awareness for boarding party operations. IDSS and MIOS provide a coherent 'handshake' between Land and Sea operations by providing reach back to the command structure, amphibious and special forces, and Beach Masters.

Cobham's C4I systems, soldier and platform based, provide a fully integrated Combat Management System (CMS). This allows mounted and dismounted combat units to monitor, analyse, communicate and react effectively to the rapidly changing combat environment, even through the 'chaos of battle'. Such improved capability directly and significantly enhances mission success in terms of survivability, manoeuvrability and lethality.

Cobham's tactical C4I users may be equipped with the wearable IDSS with its Soldier Data Terminals (SDT) or may access the system via the BattleHawk Vehicle System (BHVS) or Command Terminal. With hardware and software conceived, designed and built by Cobham, IDSS and BHVS provide fully integrated solutions that can be easily reconfigured to meet customer requirements in terms of mission profile, load carriage and platform integration. Incorporating advanced microprocessor technology and operating on Windows XP or Linux, all systems offer an open architecture, simplifying future technology insertion and providing the ability to run a wide variety of additional third party applications. At the heart of Cobham's C4I systems is BattleHawk software. BattleHawk is highly capable and utilises a touch screen HCI to provide full digital

mapping, 2D and 3D terrain analysis, navigation, situational awareness and integrated command and control protocols for information exchange to higher level C4I systems.

Cobham's C4I Marine Interdiction Operations System (MIOS) is a Situational Awareness and Blue Force Tracking system specifically developed for secure Boarding Party operations. The system has been designed to support Military, Coast Guard, Search and Rescue, Border Protection, Law Enforcement and Special Forces; organisations who are countering the increased threat from piracy, smuggling and human trafficking. Cobham has developed MIOS through its experience as a world leader in the design and manufacture of systems for land and marine platforms.

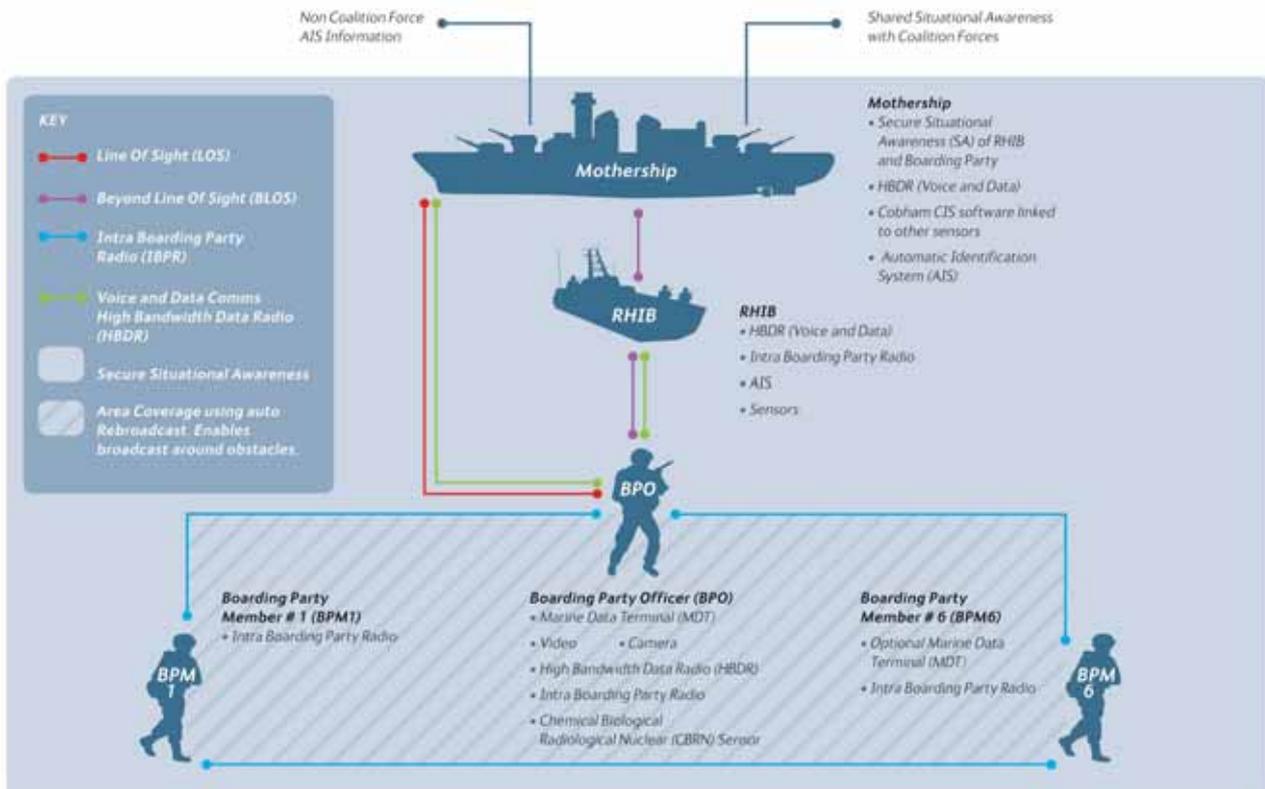
From design to delivery, the company has focussed on providing a solution which utilises bespoke military spec hardware that operates reliably in challenging environmental

conditions. MIOS is designed for ease of integration with existing systems and utilises Cobham's WaveHawk Command Information System (CIS) Software, to provide a combined picture for effective operations. MIOS may be used with a range of legacy equipment and the Boarding Party system is designed to be radio and battery agnostic. This leads to a reduction in training, integration and support costs. The system delivers the ability to integrate Land and Sea Situational Awareness (SA) by utilising a combined SA picture from BattleHawk and WaveHawk platforms.

The lightweight, body worn equipment allows users to quickly capture and transmit video files and still images of ships, documents and people, without the need for separate scanners, transmitters and antennas. This dramatically increases the speed of data transfer to support improved decision making by Commanders in remote locations.



Marine Interdiction Operations System (MIOS™)



This delivers the user with live, real-time situational awareness, Blue Force Tracking and image transfer at over 15Km using secure UHF COMMS. Using a secure VHF link at ranges of 40Km for messaging and Blue Force Tracking between Mother Ships and RHIBs, MIOS may also be used by Coalition forces to give a much wider Blue Force picture.

The individual soldier level solution is based on a marinised version of the successful Integrated Digital Soldier System (IDSS) ensemble and utilises a scalable element of the WaveHawk software for the dismounted user. This provides core functionality, adapted to the specific requirement of boarding parties; wide area real time SA and accurate Blue Force Tracking, C2 capability between Mothership, RHIB and Boarding Party Officer (BPO), Intra-boarding party voice communications, as well as the capture and secure transmission of text, images and video files.

KEY BENEFITS OF MIOS™

- Safer Boarding Party activities based on secure Situational Awareness (SA)
- Secure tracking of vessels and personnel
- More efficient use of assets
- Ability to share data with coalition forces
- Enhanced communications capability
- Improved tempo of operations
- System stretch to include land and airborne assets (Beach Master and Reconnaissance)
- C4I system from Mothership to RHIB and Boarding Party Officer (BPO)
- Intuitive operation and low training overhead

The system also captures positional information of units to support legal actions and can be used to replay operations on screen for after action review.

Chemical, Biological, Radiological, and Nuclear (CBRN) sensors may also be used by Boarding Parties to identify hidden threats and protect crews. Automatic reports are created and transmitted to selected users with Cobham's WaveHawk software. Reports quickly identify the location, type and level of threat when detected. The MIOS system can be used on a range of platforms including RHIBs, landing craft, ships and amphibious vehicles, providing a full tactical C4I picture. This can be extended to land based units through the interoperability provided by

KEY FUNCTIONS OF MIOS™

- Wide area real time SA and accurate Blue Force Tracking
- C2 capability between Mothership, RHIB and Boarding Party Officer (BPO)
- Intra-boarding party voice communications
- Capture and secure transmission of text, photographic imagery and video files
- Line of Sight (LOS) voice and data communications with high data rates
- Beyond Line of Sight (BLOS) using rebroadcast capability
- Capture of positional information to support legal actions
- Integration of Automatic Radar Plotting Aid (ARPA) data
- Ability to attach intelligence data to targets

Cobham's WaveHawk and BattleHawk CIS software. This level of interoperability provides a fully scalable solution for modern military and security operations.

At the core of the system is the Cobham designed Marine Data Terminal (MDT), a powerful, rugged militarised, lightweight computer designed to meet the rigours of the Boarding Party Operations. This functional unit has been designed to be easy to use and benefits from simplified Human Computer Interface (HCI). The MDT utilises a large daylight readable high resolution touch screen display. The MDT provides Boarding Party teams with real time situational awareness, Blue Force Tracking and full navigation capabilities. It may also be used to support a wide range of other features including translation software, video cameras and CBRN sensors.

The MDT can be supplemented by Cobham's larger User Data Terminal (UDT), which is a large daylight readable touch screen unit which processes and displays WaveHawk CIS software and AIS information. The full Windows XP system supports RS232/RS422/RS485, USB 2.0 and Ethernet interfaces, as well as NMEA devices such as depth sounders. This IP67 rated unit allows easy operation at sea and its rugged construction has been designed specifically for harsh environments such as RHIBs, landing craft or other military platforms. The large screen provides accurate position information of units which leads to safer operations.

MIOS and IDSS provide a truly interoperable capability that delivers a significant SA enhancement on Land and Sea.

For more information please contact David Anstey, david.anstey@cobham.com. ■