

## Vessel Boarding Inspection

### Defense Threat Reduction Agency / U.S. Navy, Panama City, Florida

#### The Challenge

The Defense Threat Reduction Agency (DTRA) is a government agency that consolidates a variety of U.S. Defense Department functions to deal more effectively with the threats posed by nuclear, chemical or biological weapons. An important component of protecting homeland security is inspecting foreign ships and cargo before they are permitted to enter U.S. waters.

Since the beginning of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) in Afghanistan, there has been an increased risk of Al Qaeda terrorists boarding ships and an increased probability that terrorists are attempting to bring nuclear material to the United States. To perform these inspections, military personnel are required to board a foreign vessel and inspect the cargo on the ship for bombs or bomb-making materials, and Chemical, Biological, Radiological / Nuclear, and Explosive (CBRNE) contamination. They also ensure there are no terrorists on board the ship.

The challenge presented to 3eTI was that communications were lost between the host ship and the personnel who were boarding ships to be inspected — which were two to three nautical miles away. Inspection personnel were dispersed and then completed their inspections and seized the necessary samples, such as fingerprints and suspicious materials. These samples were then taken back to the host ship to be processed via satellite communications (SATCOM) through the FBI system. This process took anywhere from four to eight hours, during which time the inspection personnel who remained on the foreign vessel were placed at risk.

#### The Solution

3eTI developed a secure wireless mesh network solution that provided for continuous communication between inspection personnel on the foreign ship and the host ship, which could be located two to three nautical miles away. The portable, wireless system maintained communication throughout the entire foreign vessel, including below decks and in the cargo area of the ship. The solution — which enabled voice, video and data to be sent to the host ship in real time — could be expanded as the inspectors toured the ship. The solution met all Department of Defense standards for security, which prevented unwanted eavesdroppers from intercepting the information.

#### Products Used

- Four-Channel Wireless Video Network System (3e-528Q)
- FIPS 140-2 / 802.11i Video Server and Wireless Mesh Access Point / Bridge (3e-525V-3)
- FIPS 140-2 Outdoor Dual Radio Wireless Mesh Node (3e-525A-3)
- Man Mobile IP Router (MMIR)



#### The Benefits

The solution ensured secured communication could be maintained between inspection personnel on a foreign ship and the host ship. This helped streamline the search process, increase security and enhance force protection. Real-time video and audio enabled the command center on the host ship to monitor activity and alert inspectors to any potential danger. The ability to use SATCOM from the host ship without waiting for data to shuttle between ships enabled data to be sent to the FBI — and results received — on an accelerated basis.

The inspectors were able to communicate with the host ship as the inspection was taking place, which helped to improve the safety of inspection personnel, placing them at lesser risk. The 3eTI solution also helped to save valuable time and enabled the Navy to better utilize their resources. This improves homeland security by allowing for inspection of a greater number of ships in the same amount of time.