Taiwan Coast Guard Administration

Taiwan mobilises TETRA for greater security

MOTOROLA

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BACKGROUND

What is maritime security and what do coast guard agencies do? Protect our waters? Help fight pollution? Keep out illegal immigrants? The fact is coast guard officers do all these – and more.

Coast Guards keep our seas and coastal areas safe so that national security is preserved. Their responsibilities are heavy and diverse: vigilant patrols to maintain maritime law and order, law enforcement, navigation control including dispatch of local notices to mariners, coordination of maritime communications, and providing global positioning information.

Coast guard authorities respond to emergencies such as oil pollution, accidents and search and rescue work. They also handle illegal immigrant interdiction, the detection and arrest of smugglers and other criminal offenders, as well as carry out other inspection and compliance duties.

At a more general level, coast guard agencies also carry out routine duties including issuing safety alerts to the shipping industry, maintaining recreational boating safety and even protecting living marine resources, the environment and the eco-system.

Against this backdrop of diverse responsibilities and activities, invariably carried out over large stretches of water and coastal areas, under all weather conditions, the importance of radio communications to coast guard personnel cannot be emphasised enough.

This need for an excellent radio communication system led to a decision by Taiwan's Coast Guard Administration (CGA) to select Motorola's TETRA digital trunked radio network to provide communications coverage to Penghu and the surrounding island, and 24 nautical miles of coastal coverage.

This is the second pilot project by CGA to verify TETRA technology and the solution providers' capabilities prior to the full implementation of a new radio network for Taiwan nationwide. This project was awarded to Motorola under a special scheme after a careful evaluation on the solution providers' technical superiority, solutions' feature set and the ability to deliver the solution on time.

The network is scheduled to be deployed by the fourth quarter of 2004.

CUSTOMER NEEDS

Penghu's coast guard officers required a reliable communications system to be technologically superior and operate without a hitch under the most difficult conditions, such as all-weather conditions and powerful currents.

The agency's mandate to Motorola was that the system must be able to:

- Provide encrypted voice and data communications coverage for secure transmission of information

- Facilitate clear and instant communication for effective coordination of resources and personnel

- Have the capacity for coverage expansion to meet future needs

MOTOROLA SOLUTION

Motorola provided the Dimetra IP solution, a TETRA-compliant digital trunked radio system based on proven technology, incorporating TETRA Air Interface Encryption (AIE) for secure and encrypted voice and data communication with superior audio quality.

The 380MHz Dimetra IP solution includes 5 sites, 31 fixed stations, and 422 portable radios to be used by the coast guards and 38 mobile radios to be installed in vehicles and vessels. The Dimetra IP solution will also provide ample capacity for coverage expansion to meet the future needs of CGA.

Other than enabling voice and data communications, it will also be integrated with an automatic vehicle location system (AVLS) that allows staff at the operations control centre to rapidly track and dispatch the closest vehicle or vessel to incident locations.

The new digital system will replace an existing analogue conventional radio system currently deployed on Penghu Island.

BENEFITS

- Extension of coverage into the surrounding coastal areas for greater security

- Enhancement of operational ease and efficiency for faster response to emergencies

- Ability to send voice and data simultaneously for improved communication among officers

- Secure transmission of confidential information against eavesdropping

- Optimal use of allocated frequency

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