

Case Study

Location: Perth, Australia

Product: Acom

Keeping Watch Over Australia's Great Barrier Reef

Acom Helps Protect A Natural Wonder

For over a decade, Zetron has worked with the Maritime Safety Queensland (MSQ) of Queensland, Australia, to help ensure the effectiveness of MSQ's communications system. This system is vital to an agency whose responsibilities include keeping the Great Barrier Reef and its waterways safe and pollution free.

The challenges of protecting the reef

The Great Barrier Reef is regarded as one of the seven natural wonders of the world. The world's largest coral reef system, it is located off the coast of Queensland, Australia. It is composed of roughly 3,000 individual reefs and 900 islands, and stretches for some 2,600 kilometres.

The "inner shipping route" is a narrow shipping channel that runs between the reef and the mainland. Ensuring safety in these waters is a significant concern. An oil spill or shipping collision in the area could cause significant damage to the coral reef as well as the loss of the many varieties of fish it supports. It could also deliver a major blow to the local tourism industry that is so vital to the Queensland economy.

Maritime Safety Queensland

MSQ wanted to upgrade its communication system to one that was feature rich, highly available and reliable, and expandable. Zetron's Acom Advanced Communications System was chosen as the basis for the new system because it met these requirements. In addition, with an office in Brisbane, Australia, Zetron would be able to provide the local support MSQ requires for its system.

Acom provides an evolving solution

The initial Acom installation for MSQ was deployed in 1996 at its new communications-control facility at Hay Point, Mackay, in North Queensland. It includes a network of VHF radio bases placed along the coastline. MSQ uses it to monitor both the maritime distress frequency and the working channel. The network of radio bases is connected to the control facility through Telstra rented landlines and a network of "line-of-sight" microwave towers.



The Acom system is equipped with PC-based operator consoles from which the operators select the various radio circuits that connect the operator's audio.

A feature of Acom that makes it a particularly appropriate choice for MSQ is its support for remotely changing radio channels by using frequency-shift keying (FSK), Dual Tone Multi-Frequency (DTMF), or Selective Calling (SELCAL) tones. This allows the operator to choose which radio channel to monitor or respond to, and thus reduces the number of physical radios required at the base sites.

The system also includes VHF radio bases that can operate on multiple channels. The console system allows operators to select the required channel on the console screen. Acom then generates the appropriate signaling/control sequence and displays the selected channel. Incoming radio traffic is displayed on screen in a radio queue. External interfaces are provided for radio bases and PABX/PSTN exchange lines. These can easily be expanded with the provisioning of additional hardware.

The latest and greatest for MSQ

Since the initial installation, Zetron has continued to work closely MSQ to ensure that its Acom system remains compatible with current radio equipment. In February 2006, MSQ's Acom system was upgraded to accommodate Dual Tone Multi-Frequency (DTMF)-controlled radios. The system's PC platform was also updated to operate in a Windows XP environment, which allows the system to take advantage of the latest Acom features.■



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