

# Cost-effective radio network expansion

An EXPLORER Push-To-Talk case story

# COBHAM

The most important thing we build is trust

## Overcoming the challenges of communication white spots with EXPLORER PTT

*Queensland Ambulance Service's use of sophisticated EXPLORER Push-To-Talk (PTT) solution demonstrates cost-effective method to extend communication coverage.*

Queensland Ambulance Service (QAS), located in the Northeastern part of Australia, works out of fifteen local ambulance service regions that cover an area of more than 600,000 square miles. To provide communication between the ambulances and the operations centers, QAS has a substantial terrestrial network that covers populated areas.

### The Issue

Despite a large LMR based terrestrial network, remote areas of Queensland still experience either very poor or non-existent radio coverage due to the vast distances and a lack of repeater sites. This poses a problem, especially for the one-man ambulances that regularly work outside the coverage areas in so-called 'white spots' and need to be able to communicate with the operations center.

To overcome this, QAS had two choices:

1. Expanding the LMR based terrestrial network by installing additional repeater sites, or
2. Implementing a satellite system with radio-style push-to-talk functionality.

Due to the size of Queensland, an expansion of the terrestrial LMR based network would require a significant number of additional repeater sites in order to provide sufficient coverage of white spots. The cost of installing and maintaining the number of sites needed was deemed too high in comparison to the satellite system.



### The Solution

An EXPLORER 325 satellite terminal, a PTT unit, and a cellular USB modem were installed in ambulances that were based in areas with white spots and unreliable coverage.

Today more than 300 EXPLORER PTT solutions are deployed on QAS vehicles.

The EXPLORER PTT solution enables the operations centers and first responders to stay connected in areas that were previously without coverage. This has greatly improved the service delivery all around – to the patient, the officer on the road, and the operations center.

Cobham SATCOM's PTT equipment is highly valued by QAS; one of the ambulance operators notes that the communication over satellite is "very clear". The PTT solution is now an integrated part of the ambulance fleet, so much so that all its ambulance vehicles are mandated to emerge from the factory pre-wired, ready for installation of the EXPLORER PTT solution.



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## PTT fit for purpose

The decision to install Cobham SATCOM's EXPLORER PTT solution on all new QAS ambulances was the result of a three month trial. The trial was held by QAS to test the usability, voice quality, reliability, and cost of a satellite communication system against terrestrial radio sites.

Feedback from QAS during the trial made it possible for Cobham SATCOM and the local installation partner, Miles Electronics, to adjust the EXPLORER PTT solution to the need of the ambulance officers, and make it fit for purpose.

At the end of the trial period, the ambulance crew was reluctant to give the system back, a testament to the successful collaboration between QAS, Miles Electronics, and Cobham SATCOM to improve coverage in remote areas of Queensland.



“ I feel significantly more comfortable using the PTT over a phone while driving the Ambulance. It is a simple system and looks and feels quite similar to a VHF/UHF unit. - Shane White ”

## EXPLORER PTT in Australia

- Queensland Ambulance Service (QAS) struggled with white spots that made communication either difficult or impossible
- QAS sought to cost-effectively extend communication coverage in areas identified as having poor or non-existent radio coverage
- Cobham SATCOM's EXPLORER PTT satellite solution was preferred over the installation of addition LMR repeater sites
- The EXPLORER PTT solution consists of an EXPLORER 325 satellite terminal, a PTT unit, and a cellular USB modem
- Communication has been improved significantly, resulting in an increase in the service delivery to everyone involved
- The EXPLORER PTT solution is installed on all new QAS ambulances and more than 300 vehicles in the field are already fitted with Cobham SATCOM's PTT communication solution

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