

# Defence Materiel Organisation (DMO)

## Alice Springs, Australia

Case Study



### THE CUSTOMER

The Defence Materiel Organisation (DMO) (a department of the Australian Department of Defence (DoD)) has contracted BAE Systems Australia (BAE) to run and maintain the DoD Alice Springs Jindalee Operational Radar Network Radar 3 (JORN Radar 3). In maintaining the JORN Radar 3, BAE operates across approximately 11,583 square miles (30,000 square kilometers) at the DOD Alice Springs Base.

### SITUATION

The DMO needed to upgrade their aging radio communications system to improve coverage and provide the ability to securely communicate information.

The new system needed to address safety concerns for BAE staff that were traveling long distances on remote roads, between the two remote bases and Alice Springs. The previous system was unable to provide the coverage needed for assured safety; if problems arose there was no guarantee that the technician could contact headquarters for assistance.

It was also identified that the security levels of the previous radio network were not adequate, as any person with a scanner could easily monitor the DoD's communications. For the DoD it was important that the new system provided a level of security where only the right people have access to information regarding their operations.

**Tait improved worker safety through the emergency call button on each Tait P25 TM9155 mobile and TP9160 portable radio. When pushed, the user is directly linked to headquarters allowing for improved response times.**

## RESPONSE

Tait provided the DoD with a P25 digital system. Tait P25 TB9100 base stations were installed at three sites – one at Alice Springs and two others in the surrounding area. Tait P25 TM9155 mobiles and TP9160 portables were deployed to maintenance personnel and vehicles. A spare Tait P25 TB9100 base station was provided to enable quick response to any maintenance issues.

The Tait P25 digital system significantly improved coverage between the facilities, without the need for any additional sites or channels. The Tait P25 TB9100 base station's Ethernet interface allowed the three repeater sites to be linked via voice over IP (VoIP). This created the wider area network required to cover the 11,583 square miles (30,000 square kilometers) of land.

To strengthen communication clarity, base and mobile voting were implemented. This feature, with the system's ability to recover audio, means the new system provides superior audio quality across the coverage area.

Tait improved worker safety through the emergency call button on each Tait P25 TM9155 mobile and TP9160 portable radio. When pushed, the user is directly linked to headquarters allowing for improved response times. Every P25 transmission is made over the P25 Common Air Interface (P25 CAI) which can only be heard by a P25 digital radio. For BAE staff this ensures that those operating analog radios in the surrounding area cannot access their communications. Furthermore DoD also has access to P25 digital encryption options which could be used in the future to protect highly sensitive information.

Talk groups, a standard P25 conventional feature, have been implemented to improve internal security measures and further streamline communications. By grouping users into talk groups, the DoD has greater control over who listens to what, which helps streamline communications by ensuring others on the network are not disturbed by irrelevant chatter.

## OUTCOME

Benefitting from the improvements of the Tait P25 digital communications system, BAE staff are now better equipped to perform their role in Australia's defense, from the Alice Springs facility.

## MORE INFORMATION

For news, product specifications, comprehensive technical information and contact details of your nearest Tait service facility, please visit [www.taitradio.com](http://www.taitradio.com)

Saun, G. (2009). Projects – JP 2025 – Jindalee Operational Radar Network (JORN): Project Description. Retrieved August 27, 2012, from <http://www.defence.gov.au/dmo/esd/jp2025/jp2025.cfm>

Tait is a global leader in designing, delivering and managing innovative communication solutions that help utilities and public safety organizations to keep the lights on and communities safe.

The word Tait and the Tait logo are trademarks of Tait Limited. Tait is an ISO 9001: 2008 and ISO 14001: 2004 certified supplier.

## CUSTOMER PROFILE

The Australian Department of Defence contracted BAE Systems Australia to run and maintain a Radar Network (JORN Radar 3) that contributes to "broad area surveillance of Australia's strategically important northern approaches" (Saun, 2009).

## APPLICATIONS

- ▶ Tait P25 digital system

## BUSINESS BENEFITS

- ▶ Reliable communications over vast distances
- ▶ P25 Common Air Interface (P25 CAI) helps maintain privacy
- ▶ Talk groups help maintain internal security and streamline communications
- ▶ P25 digital system is backwards compatible with analog for interoperability in emergencies
- ▶ Easy communication outside the network with phone interconnects
- ▶ Flexible Tait P25 network for future upgrades
- ▶ Superior audio quality across the coverage area

## PRODUCTS USED

- ▶ 33 Tait P25 TM9155 mobile radios
- ▶ 10 Tait P25 TP9160 portable radios
- ▶ Three Tait P25 TB9100 base stations