

CASE STUDY

US Army Joint Multinational Readiness Center

LOCATION

HOHENFELS,
BAVARIA

SOLUTION OVERVIEW

- 8 x fixed 20 channel 380MHz sites
- 10 x mobile 8 channel 380MHz sites
- 1,400 quad-mode, rugged terminals
- 50 dispatch console positions

BUSINESS BENEFITS

- Doubling of voice capacity
- Enhanced redundancy
- Superior mobility and deployability
- Enhanced communications security



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The Customer

The U.S. Army's JMRC (Joint Multinational Readiness Center) is the only U.S. Training Area located outside of the United States. JMRC provides a myriad of indispensable capabilities to the U.S. Army, European allies and other partners. JMRC supports training for other U.S. agencies and foreign non-military organisations.

The Hohenfels Training Area is 163 km² and is primarily used to conduct manoeuvre training and combat simulation against an opposing force, with operations refereed by Observer/Coach/Trainer (OCT). Grafenwöhr Training Area is 233 km² with 44 digitally connected computerised ranges, the most in the U.S. Army. There are 43 artillery position areas, 24 mortar firing points, two airfields, three surveyed drop zones, three demolition areas and two dig sites for engineer training, two main impacts areas and three impact areas associated with specific ranges.

"Site acceptance testing was successfully completed in August 2017 and the government is ready to move to the next phase. Tait personnel executed this project with a high degree of success." – Charlie Givens

Senior Engineer | JMRC-IS Raytheon

The Situation

Since 2003, the training areas Safety communications have been provided by Tait's MPT-1327 analogue trunked network with eight fixed and ten mobile tower sites using 240 channels. This supports range control and combat simulation exercises over the 396 km² training area. Components of the network began to reach end of life in 2015, necessitating a move from a circuit-switched to an IP-based topology.

During this process, the Army indicated a preference to move to Tait's trunked digital DMR protocol air interface.

- Near plug-and play deployment of mobile sites
- Quick radio updates over the network (planned for 2018)
- Radio location services (planned for 2018)

Response

Tait partnered with Raytheon, AITC (a service disabled veteran-owned contractor) and Magdalene (Tait's Service Provider) to propose a migration of their Tait network from analogue to DMR.

Tait obtained JF-12 Army certification for the new equipment. Replacing the worn and aging portable and mobile radios with Tait's 9300 terminal series quad-mode portable and mobiles was the natural first step.

Outcomes

Replacement of the obsolete subscriber units with quad-mode Tait DMR terminal units in 2016 encountered no issues and required minimal re-training of range control and OCT staff.

The analogue network was replaced in 2017 with the Tait DMR trunked radio network. Coverage and audio quality were enhanced by upgrading from analogue to digital.

Moving from a digital circuit switched backbone to an internet protocol (IP) based backbone had several benefits:

- Elimination of complex wiring and multiplexing equipment, which were points of failure
- The addition of multiple control nodes for enhanced redundancy

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