

Feature Story

Boeing's trailer-mounted SATCOM solution transforms combat communications

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Boeing Defence Australia's (BDA) trailer-mounted satellite communication (SATCOM) terminals which provide pioneering combat communication capability to deployed warfighters have achieved Acceptance by Defence.

Developed as part of LAND 2072 Phase 2B 'Project Currawong', the Medium SATCOM Terminal, or MST, is a trailer-based terminal comprising a 2.5 metre satellite dish. It is rapidly deployable and is the only secure SATCOM system of its size with dual band certification for the military's Wideband Global SATCOM X and Ka Bands, in addition to the civilian Ku Band.

"The MST is versatile, flexible and robust and takes communications in the field to the next level," said BDA's Project Currawong director, Ian Vett. "Its ability to go anywhere a Hawkei vehicle can go and seamlessly connect to both military and civilian satellites far exceeds any SATCOM capability currently available to the warfighter.

"When combined with the other components of the Currawong battlespace communications system, our deployed troops are better equipped than ever to securely exchange voice, data and video communications with each other and back to headquarters regardless of their location and environmental conditions."

A step change in the evolution of combat communication systems, the MST taps into the Currawong system's enhanced multi-security bearer and networking services, control and management capabilities.

"The MST is managed via the Currawong Mission System Manager (MSM) which automates network planning, configuration and control of all communications components within the system. This optimises connectivity and enables network managers to focus on higher-level tasks in support of the mission."

Brigadier Warren Gould, the Director General Systems and Integration within Army Headquarters said "Army welcomes the introduction of such a rapidly deployable SATCOM capability".

The MST is an Australian capability which was developed and tested through an expansive chain of Australian and US suppliers and required extensive collaboration between BDA and the customer.

“The end product needed to be able to be towed by the light-weight Hawkei Protected Mobility Vehicle while incorporating all the functionality and ruggedised durability needed to operate in even the harshest of off-road environments,” said Vett.

“Existing off-the-shelf equipment was not certified to the operational standards required for modern military missions, so the five-year development and production program for MST has required complex engineering design and integration works, extensive production and testing.

“This involved upwards of 100 modifications to the original design and the inclusion of 198 subsystems and modules to the MST; by comparison the high capability line of sight radio developed for Project Currawong has around 44,” said Vett.

Twenty-four MST units will be deployed to Army Combat Signal Regiments across Australia along with the Defence Force School of Signals and Royal Australian Air Force.

The MST adds another dimension to BDA’s proven network and communications capability, with significant opportunity for knowledge gained through its development to be applied to other defence programs and platforms.