Back to the *future*

Boeing team in Australia develops advanced communications system using 'old' technology

By Fiona Tristram

A Boeing Defence Australia team has achieved another first in high-frequency technology, and in the process changed the way the capability can be used in modern communications.

The Modernized High Frequency Communications System, or MHFCS, designed and built by Boeing Defence Australia, will help bring high-frequency communication back into vogue after being considered "old technology."

"Boeing's High Frequency Modernization Program team has built and delivered the most advanced high-frequency system in the world," said Nan Bouchard, vice president and general manager of Boeing Command, Control & Communications Networks. "This is an outstanding achievement and a true indication of Boeing's commitment to developing advanced technology solutions globally for our customers."

Successfully introduced into Australian Defence Force operations in September, the system can securely transmit voice and data services such as e-mail, facsimiles and the Internet in areas where traditional telephone services are limited or unavailable. It is considered the world's most advanced strategic high-frequency communications network because of its automation levels, range and clarity, traffic volume, and connection speed.

It will be used on a number of Australian Defence Force platforms, including Collins Class submarines, Air Warfare destroyers and AP-3C Orion aircraft. It is designed to improve immediate communication transmissions between mobile platforms and land personnel or facilities, without the need for third parties to create a connection.

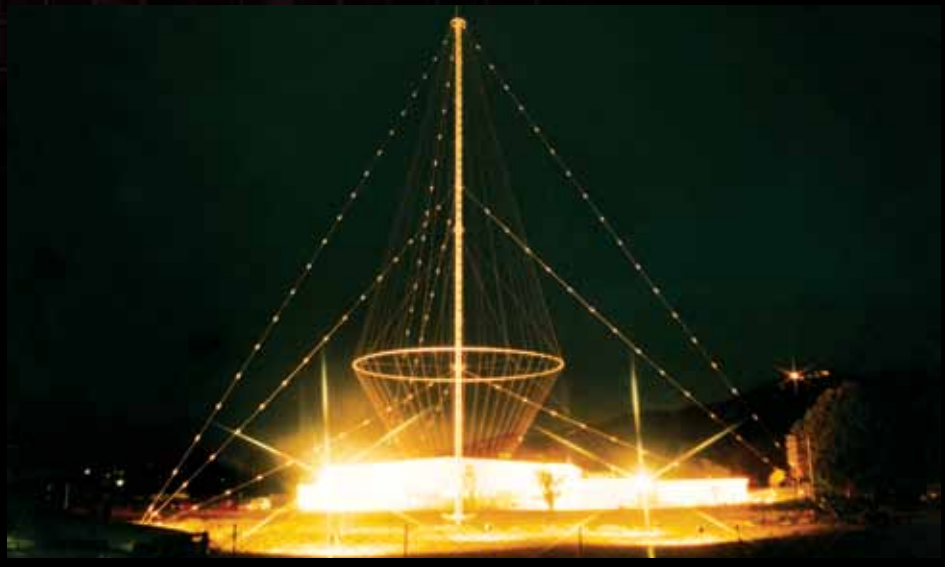

PHOTO: An "antenna rosette" used in Boeing's Modernized High Frequency Communications System. The antenna is designed and manufactured by Radio Frequency Systems.
RADIO FREQUENCY SYSTEMS

Stephen Hudson, chief engineer for the new communications system, compared its development to building a 3G cellular telephone network, but using high-frequency communications. "If you think about the cell phone you use every day, it requires thousands of base stations to transmit and receive your calls and texts," he said. "With MHFCS, because we are using high-frequency technology, we only require four stations to provide a similar global communications service."

The system, which Boeing Defence Australia will market internationally, can communicate with distant ships, aircraft and ground units and operates as a backup to satellite communication systems. And for the first time, the system provides Australia with national sovereignty over its communications in case of conflict.

Steve Parker, vice president and general manager of Boeing Network and Space Systems, Australia, said the system has the capacity to change high-frequency communications globally. "It can provide nations with the highest level of global connectivity while, for the first time, maintaining national sovereignty and information security.'' ■

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