

Harris CapRock Solution Provides Worldwide Reach-back Capability for U.S. Marine Corps Through DISA Task Orders

During Operation Iraqi Freedom in 2003, military satellite constellations were unable to support the growing wideband beyond line-of-site requirements of the U.S. Marine Corps. Given these shortfalls, the military began to take advantage of commercial satellite capabilities to support their mission. The Marine Corps adopted a commercial satellite system known as Support Wide Area Network (SWAN) to augment military systems in order to extend the Marine Corps Enterprise Network (MCEN) to deployed users. Marine forces worldwide rely on the MCEN for seamless access to NIPRNET, SIPRNET, and secure voice.

SITUATION

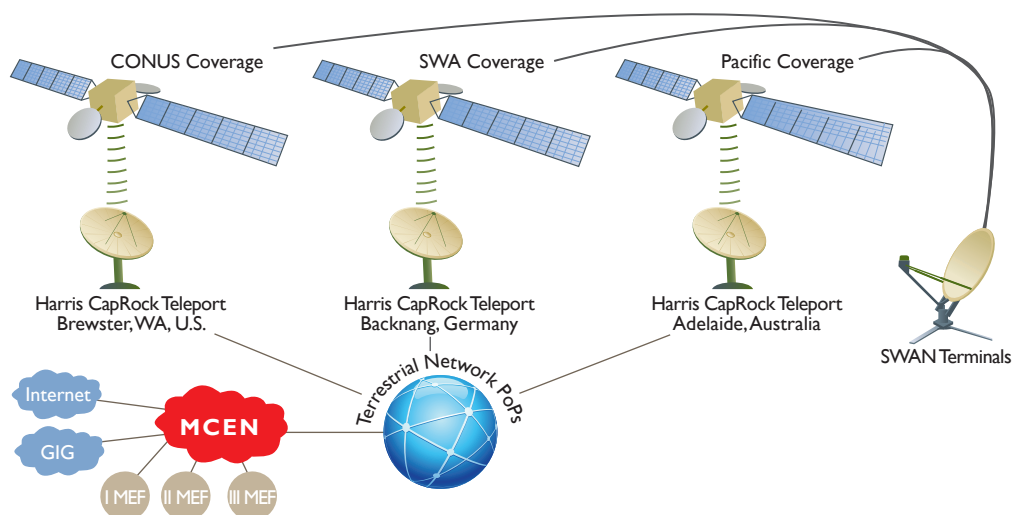
Based on the changing mission tempo, Marine Corps requirements were transforming rapidly, ranging from a robust communications solution for only a single location, to support for geographically dispersed users worldwide. Marine Corps Systems Command (MARCORSYSCOM), through various DISA task orders (currently 688), worked with Harris CapRock to create a cost effective solution that enables flexible usage of commercial satellite bandwidth pools across CONUS, SWA, and Pacific regions. When requirements in a particular region grow, bandwidth can be decremented from one region and increased in another.

In addition to this flexible bandwidth pool, a dedicated architecture was required to support the Marine Corps' demanding and diverse operations. MARCORSYSCOM, with close guidance from Marine Corps Tactical Test and Support Activity (MCTSSA), leveraged Harris CapRock's commercial infrastructure to meet the following requirements:

- > Significantly reduced Broadband Global Area Network (BGAN) beyond line-of-sight (BLOS) air time costs.
- > Flexible way to support bandwidth demands of present & future commercial Ku-band systems.
- > Commercial alternative to the over-tasked & inflexible military satellite and teleport systems.
- > Development of a Marine Corps owned and controlled satellite and terrestrial network with worldwide reach-back connectivity.
- > A way to reduce operational footprint requirements of very small aperture terminal (VSAT) technology and provide flexibility to first-in communications elements.

HARRIS CAPROCK SOLUTION

Harris CapRock engineered a flexible way for the Marine Corps to leverage commercial infrastructure so that deployed users worldwide could figuratively "reach-back" and access the MCEN. Harris CapRock developed a private network architecture using commercial teleports and terrestrial points of presence to extend the Marine Corps backbone and connect users to the MCEN. This solution enables the Marine Corps to link remote users located anywhere in the world back to their garrison bases where they have regulated access to network services.



Worldwide Reach-back Connectivity (WWRC)



RESULTS AND BENEFITS

The reach-back capability enables forward-deployed Marines to directly access the network in real-time, offering them the resources and information to make critical mission decisions. Harris CapRock's dedicated and controlled solution offers extensive benefits to Marine Corps users.

- > Use of VSAT could reduce BGAN bills by 50% and increase throughput 800% throughout MEUs.
- > Provides 10 times less lead-time than external DISA/DITCO process.
- > Provides 24/7 world-wide access to the MCEN and removes the need for Major Subordinate Commands (MSCs) to allocate TO equipment to provide similar reach-back capabilities.
- > WWRC commercial model eliminates bureaucracy, reduces time and expenses, and provides mission assurance.
- > Eliminates reliance on higher Marine Corps headquarters SATCOM equipment readiness, multi-service prioritization of access issues at DISA STEP sites, and interoperability/configuration issues with Army regional hub nodes (RHN).

CURRENT ACTIVITIES AND INITIATIVES

- > MCTSSA has tested and endorsed the WWRC architecture for current and future bandwidth requirements. Follow-on tests of the WWRC are scheduled for the coming months.
- > Marine Expeditionary Forces (MEFs) have begun readdressing the need for WWRC capabilities and are redeveloping plans to utilize WWRC architecture.
- > MEUs have begun investigating ways to leverage VSAT technology and WWRC in order to drastically lower BGAN costs and provide increased throughput.
- > Interim authority to operate is in place for use of iDirect networks and is currently operational. Future programs such as ECCS & NOTM have begun testing with WWRC architecture through MCTSSA.

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