Operationalizing the CPP in the Pacific

Yama Sakura 85

Article, photo by 1st Lt. Benjamin D. Selph
I Corps' Headquarters and Headquarters Battalion

As the complexity of military operations in the Pacific continues to increase, the prospect of communication across the region poses a real challenge for U.S. forces. As important as tactical network establishment is for effective command and control, creating a robust network of contingencies using the various radio systems the Army has to offer shows to be just as vital.

During the Trilateral Yama Sakura 85 exercise in Japan, a small team of Signaleers within I Corps Signal, Intelligence, Sustainment (SIS) Company set out to prove that radio systems are a feasible part of the Primary, Alternate, Contingency, Emergency (PACE) plan for operations moving forward for communications between subordinate units in the area of operations as well as across the Pacific Ocean back to Joint Base Lewis-McChord (JBLM), Washington.

To accomplish the mission of High Frequency (HF) communication across the Pacific Ocean, SIS Soldiers utilized a Command Post Platform (CPP) and its accompanying radio systems and antennas. The CPP encapsulates and mobilizes multiple lower Tactical Internet (TI) systems inside of a shelter mounted on a Humvee. These systems include HF Radio, Tactical Satellite (TACSAT) radio, FM radio, and a Soft Crew Access Unit (CAU) Tactical Operations Center Intercommunication System (TOCNET) that allows use of radios internal to the shelter remotely at any workstation inside the tactical operations center. Leading up to deployment, the CPP team put in countless hours performing maintenance and validating the CPP and its radio systems with internal testing and HF shots to various Military Auxiliary Radio System (MARS) stations. Once in Camp Asaka, Japan, the CPP team used a Sloping V configuration erected on a Quick Erecting Antenna Mast (QEAM) and the CPP's 8-element whip antenna to execute long-range shots. To start, the SIS Soldiers established HF communications on island using the CPP whip antenna with shots to 7th Infantry Division located in Sendai, Japan, roughly 330 kilometers north from Camp Asaka. Branching out, the CPP team moved on to shots with the MARS station located in Okinawa, Japan. These shots were roughly 1,500 kilometers, and once again using the 8-element whip antenna, clear two-way communications over HF were established. They continued expanding the range, shooting to the MARS station in Hawaii next. This was another successful transmission of over 6,200 kilometers, with clear voice heard on both ends.

The CPP team installing a Sloping V antenna.

The culminating training event of Yama Sakura 85 for the lower TI team was a shot from Camp Asaka over the Pacific Ocean back to JBLM. Given the restricted number of frequencies and significant time zone difference, there was a limited amount of time each day the team was able to attempt the cross-ocean shot. Using a Sloping-V antenna configuration and a 400-Watt Power Amplifier, the team was able to transmit voice over 7,700 kilometers to a team at JBLM.

During troubleshooting of JBLM shots, Australian Defense Force counterparts coordinated for the CPP team at Camp Asaka to attempt an HF shot to Australian 1st Division personnel in Brisbane, Australia. After success with JBLM, the CPP team and Australian 1st Division began shooting to each other. Using the same setup as the JBLM shot, a new azimuth, and frequencies, the team was again able to transmit voice the roughly 7,100 kilometers to Brisbane, putting a ribbon on the proof of concept they had been working on over the course of the exercise. Once the CPP was completely set up and operational, the CPP team had the opportunity to give a walkthrough brief to their Japanese Ground Self-Defense Force (JGSDF) counterparts. This brief introduced the general capabilities of the CPP, and the locations and configurations of each antenna. Over multiple iterations, the CPP team briefed multiple field grade and general officers in the JGSDF.

The success of the SIS CPP team during Yama Sakura 85 provides significant data for future mission planning and consideration. The CPP can be fully implemented into future PACE plans for long-range communications throughout the Pacific and back to home station.