TRBOnet
Dispatch Systems

CASE STUDY

TRBONET TESTED UNDER EXTREME CONDITIONS

GABRIEL DE CASTILLA ANTARCTIC CAMPAIGN

The Antartic Campaign takes place every year at the Spanish army's Antarctic. The campaign is named after Gabriel de Castilla, who was an early explorer of Antarctica. Located on the Deception Island, the base assists the Ministry of Economy, Industry and Competitiveness (MINECO) and the Spanish Polar Comitee (SPE) with their research in Antarctica

HARSH ENVIRONMENT

Deception Island is the visible part of an active volcano in the Bransfield strait's basin. Its shape is approximately circular with a mean diameter of 15 km. The terrain is mountainous; the island surface has an average elevation of 350 m with Mount Pond at 539 m being the highest point. 60% of the terrotory is covered by glaciers. There is a large bay in the interior of the island called Port Foster. It has a narrow entrance (around 150 m) that leads to the Antarctic Ocean.

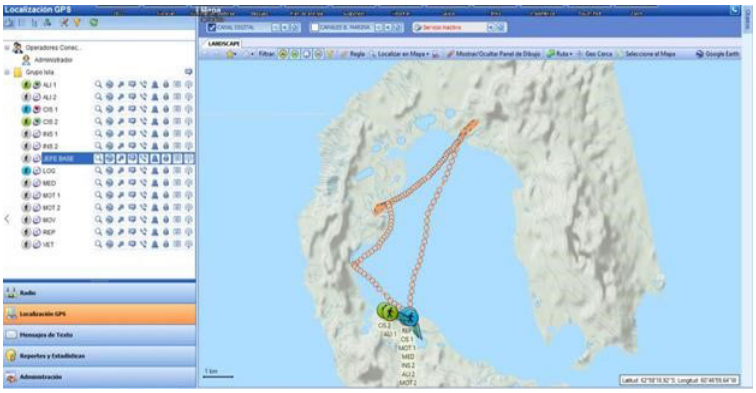
CHALLENGE

Supporting scientific and technical researchers at the base is one of the main duties for the Spanish army in Antarctica, specifically in logistics, supplies, journeys and security.

A radio communication system is critical to supporting these activities. The challenges are that this system must combine two types of radio networks – a DMR system for local communication on the island and a marine channel for operators to be able to talk with approaching ships. The radio network must also be able to interface to an IP telephony system in order to communicate with Spain in case of emergencies anywhere on the island. And, there should be one dispatcher console that displays the real time location of scientific and military personnel at all times.

BENEFITS

- Provides radio network coverage on the island with voice and data information.
- Geofence alarms - the dispatcher receives an alert when any radio leaves the base.
- Integration of the radio network with the telephony system.
- Integration of two different types of radio communication – MOTOTRBO IP Site Connect and marine band.
- Man Down Emergency alarms.



SOLUTION DETAILS

- IPSC system with two SLR5500 repeaters in VHF
- DMR DP4801e radios
- Analog VHF bases in marine band
- Digital control radio DM3600
- TRBOnet Enterprise software
- TRBOnet A002