

Application Background:

The purpose of this project is to test a special communication network designed for military applications in contested and denied environment. This project is taking place at 29 Palms SELF airfield and range 220 and is in conjunction with another exercise.

Concept of Operations:

Two ground stations (MRZR and dismounted soldier) along with a UH-1Y helicopter (1 kft AGL, 2.5 nm radius loop) represent spokes in a hub-spoke topology. The hub aircraft is a KTS-1 Cessna Caravan (typical altitude will be 5kft AGL in a 24 nm east/west racetrack pattern). The aircraft will broadcast in C-band and receive from the other 3 terminals in S-band. Figure 1 illustrates the concept of operations for airborne to airborne/ground testing.

Spectrum Requirements:

The 29 Palms Spectrum Manager will allocate a frequency for the S-band uplink within 2.20 to 2.29 GHz. The 29 Palms Spectrum Manager will also allocate a frequency for C-band downlink within 4.43 to 4.91 GHz or 5.28 to 5.445 GHz. All the radios are connected to omni antennas.

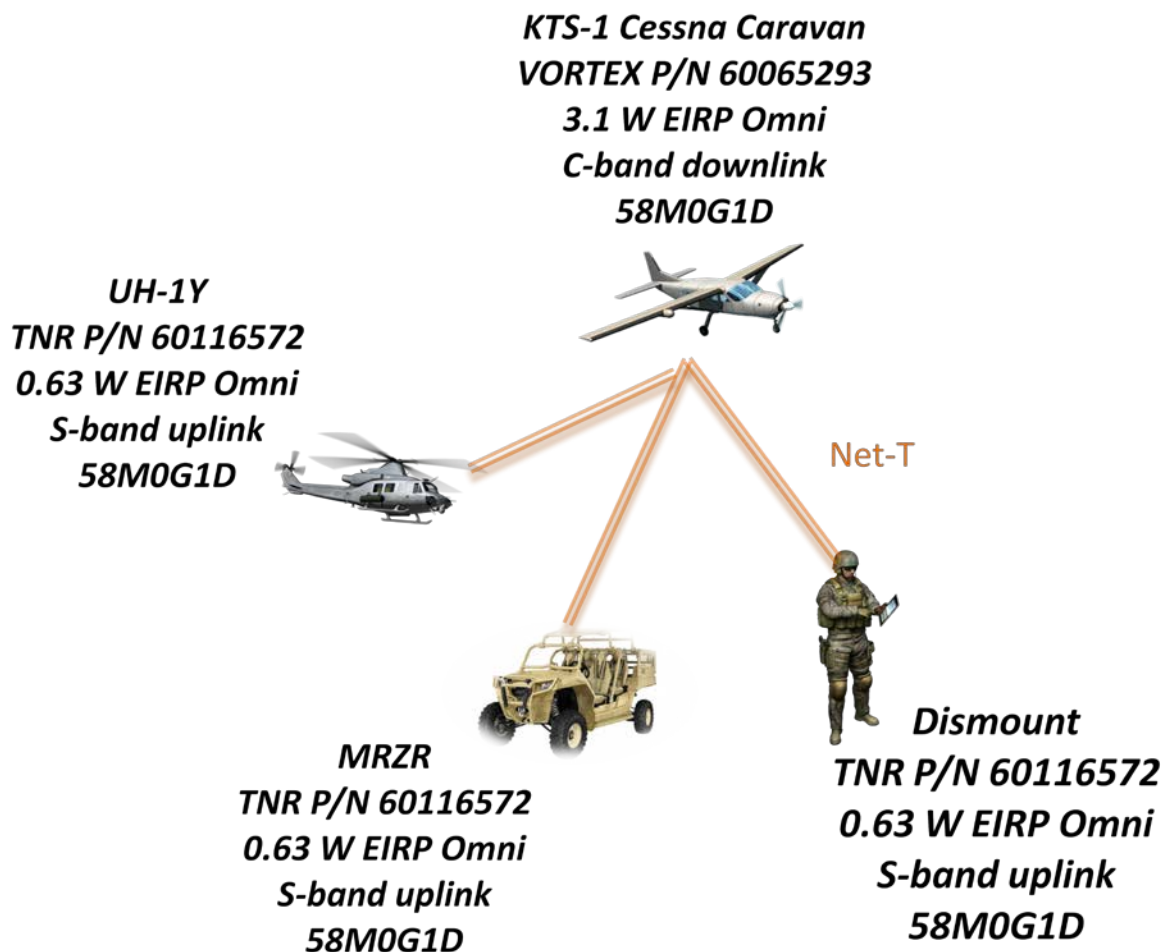


Figure 1 Concept of Operations – Ground & Flight Test

Location of Equipment:

The approximate locations of the stations are shown in Figure 2.

- MRZR and dismounted soldier: Lat: N 34° 24' 26.4", Long: W 116° 16' 22.4"
- UH-1Y: Lat: N 34° 24' 26.4", Long: W 116° 16' 22.4, 2.5 nm radius, 1kft AGL
- Cessna Caravan: Lat: N 34° 24' 26.4", Long: W 116° 53' 32.9", 12 nm radius, Alt 5kft AGL

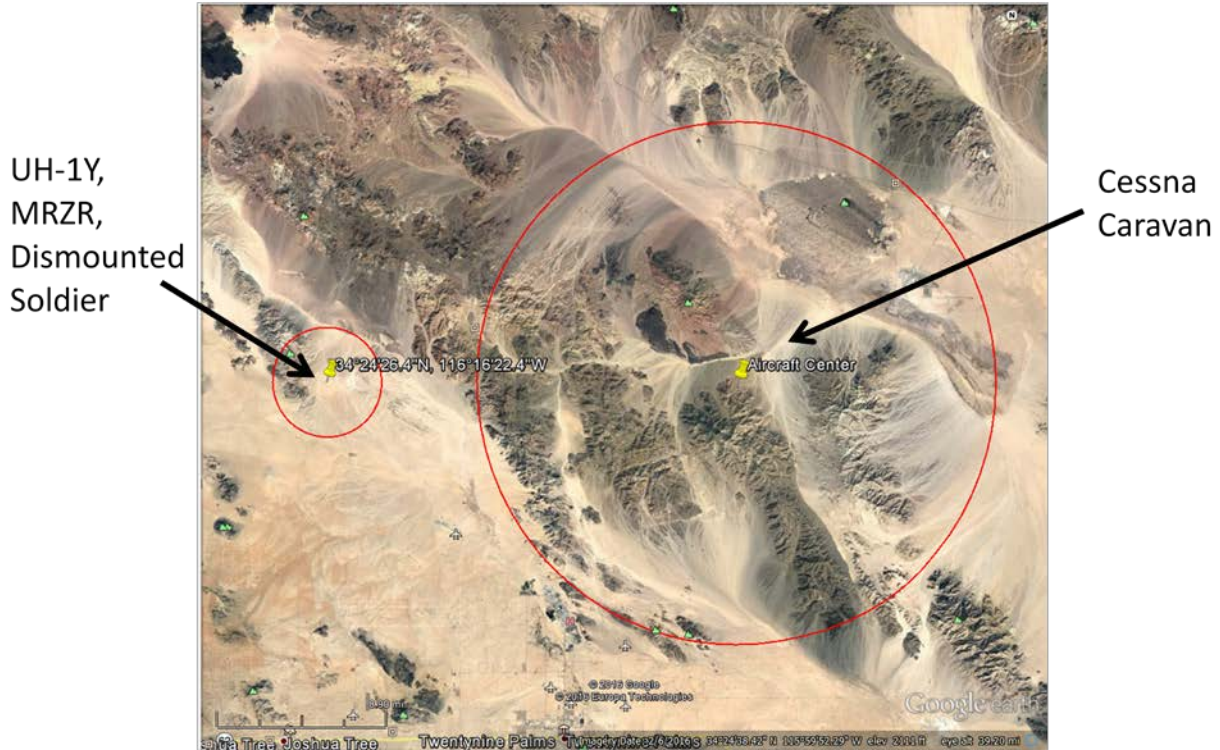


Figure 2 Locations of Equipment