AESA Radar STA For BOLD QUEST Exercise

1. Purpose of Operation

During Bold Quest Exercise Raytheon will conduct testing and developing definitions of Vertical Scan Type, Vertical Scan Speed, and Vertical Scan Rate as applied to this antenna with software adapted electronic beam scanning. The basic operation of the antenna is mechanical rotation in azimuth, at a selectable 20 rpm or 30 rpm. In addition, the antenna beam can be scanned in azimuth electronically over +/- 45 degrees from its instant physical position. The antenna beam can be electronically scanned in elevation from – 10 degrees to + 55 degrees. Electronic scanning can take place to any angle within the azimuth and elevation limits from one transmission dwell to the next. Each dwell transmitted at one beam position lasts for time durations in the region from 0.7 to 4 milliseconds, and the transition to the next dwell at any other azimuth/elevation position is 10 microseconds. So, the maximum scan speed could be 90 degrees per 10 microseconds.

- Files Number: 1045-EX-ST-2016
- _ Class of Station: FIXED
- _ Station Location: FIXED
- _ Effective Date: 9/26/2016
- _ Expiration Date:11/30/2016

2. Experimental Explanations

During Bold Quest Exercise Raytheon will conduct developmental testing and evaluation on the radar system Most of the time, programmed search scanning is within the vertical region of 0 to 15 degrees,covering a vertical sector of sequential beams in about 13 milliseconds. Search scanning is interrupted by individual beams placed anywhere within the electronic scan volume as necessary to maintain track on previously detected aircraft or projectiles