ELTA North America Request for FCC Experimental License

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Question 7: Purpose of Experiment

This attachment is an update of the previous upload for this form. The original form can be ignored. This application is being made to support the testing and evaluation of a new radar. These tests will be conducted to test and verify new radar processing software and algorithms, develop equipment designs, conduct production tests and equipment calibration, and demonstrate products to customers. Tests will be conducted on the roof of ELTA's facility located at 11840 West Market Place, Fulton, MD in Howard County. This building is a single-story structure located in a mixed-use business development. The antenna, transmitter, and receiver are mounted on the antenna support structure. Other locations will be used for demonstration purposes. These locations are Ft Huachuca, AZ; Camp Dawson, WV; Camp Shelby, MS; Deer Mill, NM; Gillespie Peak, NM; Fort A.P. Hill, VA; Fort Sill, OK; Camp Roberts, CA; Pembina, ND; Walhalla, ND; various locations in Calexico, CA (Jasper and Anderholt, Heber and Bowker, Vanderlinden and Hunt, Zone 20, CAX station, and north of Drop 3) ; various locations in El Centro, CA (Anza Trail, the shoreline, and Billboard Hill); and various locations in Fort Huachuca, AZ (Smoke Weak, Red Force, and San Rafael Ranch). At all the above locations the antenna will be mounted on a tripod of less than 1.5 m in height.

It is essential that these tests be performed outside of a laboratory or anechoic chamber to create the necessary radar environment that includes land and foliage clutter, ground moving vehicles, birds, fixed and rotary wing aircraft, second time around radar targets and clutter, and other atmospheric disturbances that affect radar performance.

The MARS-K system is a pulsed Doppler radar for the detection of personnel and vehicle movement on the ground. The system will transmit linear FM pulses in the 9.8 to 9.975 GHz and 10.55 to 10.6 GHz bands into a planar array antenna.