

Application for Experimental License

By this application Northrop Grumman Systems Corporation (NGSC) applies for an experimental 2-year license for the purpose of conducting research and development to develop new radar waveforms and signal processing algorithms for use in potential Defense contracts. Closed loop development has progressed to the point where open air testing in a real world environment is required.

Tests will be conducted from a laboratory facility adjacent to the BWI airport in Linthicum, MD. The lab provides a fixed field of view with an orientation of 310 degrees true. The antenna has a beam width of 54.1 degrees.

The hardware consists of a modified Northrop Grumman GREX receiver / exciter, coupled with a commercial standard gain horn antenna. The transmitter has a maximum power output of 20 watts. The horn antenna has a gain of 10 dBi, with a -3 dB insertion loss. The maximum ERP is 61 watts.

The transmitter uses a fixed center frequency of 3.440 GHz. The waveforms under investigation use LFM and BPSK modulation techniques. The waveform bandwidths vary from 20 MHz to 480 MHz. The waveforms will use pulsed and CW emissions. The waveforms will be transmitted from the horn antenna to a receive horn antenna located in the far field for processing.

Questions regarding this effort should be directed to Kevin Nekula at 410-765-6567, kevin.nekula@ngc.com.