

Northrop Grumman Systems Corporation Application for Special Temporary Authority

The above-referenced application is submitted on behalf of Northrop Grumman Systems Corporation (NGSC) for an experimental Special Temporary Authority (STA) to evaluate point-to-point telemetry transmitted at low power from flight to a ground level communications node to test a wireless link.

This will evaluate use of an experimental transmitter coupled with a developmental patch radiator antenna. Polarization is linear and beamwidth is 90 degrees. Operation will be designed for a single fixed center frequency on a 5 megahertz channel center with a 10 megahertz bandwidth. Desired center frequencies are 2235 MHz, 2240 MHz, 2245 MHz, 2250 MHz, 2255 MHz, 2260 MHz, 2265 MHz, and 2270 MHz. The transmit antennas are characterized in a flat panel then formed and bonded to an airframe, at which point the center frequency characteristics shift slightly. Ideally, the approval of multiple discrete center frequencies will allow for this hardware variation during operation. There is some limited flexibility to tune the antennas once formed to shift up or down if one or more requested frequencies are denied. Final coordination will be accomplished with any affected parties prior to test to eliminate conflicts.