Persistent Systems, LLC
Request for Grant of Special Temporary Authority
File No. 0939-EX-ST-2018

NARRATIVE EXPLANATION OF OPERATION AND FREQUENCY COORDINATION

Persistent Systems, LLC requests a grant of special temporary authorization for aeronautical mobile (i.e. air to ground) testing of a data downlink system for use with airborne and ground terminal users. Customers have requested testing of the Persistent Systems Data Link for evaluation of this technology for terrestrial mobile and airborne operations. Testing of this system was permitted by the Commission in a previously-granted STA (See, WM9XGX, File No. 0102-EX-ST-2018). That STA was used for demonstrations in terrestrial mode. The instant application seeks essentially the same facilities at the same location but with the intention of demonstrating and testing the system's aeronautical mobile functionality and high-speed data capabilities over a somewhat greater radius around the same centerpoint. It is the intention of the applicant that this new STA will supersede and replace those permitted by 0102-EX-ST-2018.

Though the center frequency 2277.00 MHz (with a 20 megahertz occupied bandwidth emission) is the preferred frequency to provide a consistent benchmark for testing and evaluation the frequency agility of the system includes 2200-2290 MHz in 5 MHz steps. Frequency change can be conducted remotely should the need to do so arise. Planned aeronautical mobile is planned over a 100-mile radius from the center of the testing area. That location is 5042 Technology PKWY, Fort Collins, CO (40.517153°N, -105.014967°W). Testing will cover systems operation, real-time sensor/ telemetry data, and high definition full motion video to and from individual data links. Throughout the testing period, frequency changes and/ or complete shutdown of all radiating sources from the Wave Relay units can be accomplished from the ground within 30 minutes of notification. The maximum elevation of the transmitter will be 12,000 feet AGL.

Per the terms of 0102-EX-ST-2018, all aeronautical mobile operations will be coordinated in advance with the NASA GSFC Spectrum Manager, Mr. Scott Galbraith at least 3 days prior to commencement of operations pursuant to this STA and should any concern arise, no aeronautical mobile testing will occur until any conflicts are resolved with NASA.

The stop buzzer contact for this operation is Mr. Dustin Latour, at 703-201-6294.