

Persistent Systems, LLC
Request for Grant of Special Temporary Authority
File No. 0872-EX-ST-2020

NARRATIVE EXPLANATION OF OPERATION

Persistent Systems, LLC requests a grant of special temporary authorization for airborne and ground terminal testing and demonstration of a MANET portable Unit 5 data link system (MPU5) for the United States Army. The Army has requested a demonstration of the system for evaluation in their mobile and airborne operations. The testing and demonstration will be for a period of one week only, during the period June 29, 2020 and July 31, 2020.

This flight test event will be under the auspices of the United States Army. The demonstration is for the purpose of providing sufficient data about the operation and capabilities of the system's air to ground communications system for aircraft data and telemetry. The aircraft will operate at altitudes between 1500 and 4500 feet AGL. All aircraft flights will be conducted in accordance with FAA rules and airspace restrictions in the vicinity of Long Neck, Delaware and within a 35-degree radius.

The aircraft and ground antennas will be omnidirectional with a gain of 2.15 dB. Additionally, there will be a test of Persistent Systems' ground antennas with maximum gain figures of 10 dBi and 18 dBi. The center frequencies proposed are 1357 MHz, 2377 MHz, 4450 MHz and 4950 MHz, each using a 10M0D1D emission. The airborne units will transmit with ERPs of 4.60 watts at 4.4 and 4.9 GHz; 7.67 watts at 2.3 GHz, and 7.67 watts at 1.3 GHz. The fixed, ground units will transmit with ERPs of 58 watts (using a sector antenna) or 1157 watts (using a directional antenna) at 4.4 and 4.9 GHz; 384.7 watts (using a directional antenna) at 2.3 GHz, and 61 watts (using a directional antenna) at 1.3 GHz.

Antenna heights for terrestrial antennas will all be less than 6 meters AGL.

AFTRCC Coordination for the channel 2377 MHz has been applied for and coordination will be filed when received. It is understood that all operation pursuant to this STA is on a strict non-interference basis to Flight Test telecommunications and only terrestrial operation is proposed. Throughout the testing period, complete shutdown of all antennas can be accomplished immediately. Should any interference be reported, all testing and evaluations will cease immediately and will not resume unless and until all such interference is resolved to the reasonable satisfaction of the complainant.

The *stop buzzer contact for this operation is Mr. Jon Castelli*, whose mobile number is 410-598-4105. Other questions should be directed to undersigned communications counsel, who can be reached as follows:

Christopher D. Imlay
Booth, Freret & Imlay, LLC
14356 Cape May Road
Silver Spring, MD 20904-6011
(301) 384-5525 office telephone
(301) 384-6384 facsimile
(301) 351-3795 mobile
chris@imlaylaw.com
chris.imlay@gmail.com