

Persistent Systems, LLC  
Request for Grant of Special Temporary Authority  
For testing of tracking system  
Auto Tracker with MPU5 For Department of Defense Application  
File No. 1557-EX-ST-2023

#### NARRATIVE EXPLANATION OF OPERATION

Persistent Systems, LLC requests a grant of special temporary authorization for terrestrial and aeronautical (UAV) range testing of a portable data link system (MPU5 Wave Relay) at a testing event for a tracking system. The purpose of the testing is to support UAS programs of record for validation prior to testing at a Department of Defense facility. The sole purpose of the system is to support DoD operations. The testing will be during the period August 23 through September 8, 2023 (which includes the period of setup and all tests and dismantling). The testing will include the use of a UAV along the Oregon Coast. The FAA UAS Test Range in Tilmook, Oregon is prepared for these UAV flights. The UAV will be operating off the coast in a warning area. The tracking antenna will be at a remote terrestrial location in the north of the test range. This will be in the northern sector as marked in the attached map. The "southern sector" map notes an alternative location which will not be used unless the northern sector proves unavailable for any reason.

To accommodate this range test, the requested STA is necessary for the test event. A single frequency centered at 4500 MHz is specified, with a 20-megahertz occupied bandwidth using a 20M0D1D emission and a directional antenna and a single ground transmitter and a single UAV transmitter is requested. Antenna height of the directional tracking antenna will be less than 6 meters above ground level. The UAV antenna will be omnidirectional. The area of the ground based tracking antenna will be within a 200 km area centered at 45 degrees, 25 minutes, 6 seconds north latitude, and minus 123 degrees, 48 minutes, 22 seconds west longitude. The UAV will be located in an area centered at 45 degrees, 31 minutes, 45 seconds north latitude, and minus 124 degrees, 17 minutes, 50 seconds west longitude

The Stop Buzzer contact at the events will be Mr. Ben Wring of Persistent Systems, who can be reached directly at (646) 627-8214. 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.

Other questions should be directed to undersigned communications counsel, who can be reached as follows:

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