

**Persistent Systems, LLC**  
**Form 442 Experimental License Application**  
**File No. 0390-EX-CN-2019**

**NARRATIVE EXPLANATION OF OPERATION AND NATURE OF APPLICANT**

Persistent Systems, LLC, a Limited Liability Company based in New York City, is an American manufacturer of high speed, secure data networking equipment for both military/defense and industrial, non-government applications. Principally, Persistent manufactures scalable mobile networking systems based on Wave Relay MANET (Mobile Ad Hoc Networking) Technology. Persistent's products permit voice, video, and situational awareness to mobile users with no reliance on fixed infrastructure. For more than a decade, Persistent has been a pioneer in developing advanced MANET technology and commercializing it in the Defense and Industrial sectors.

Persistent has ongoing R&D activities to develop MANET products for Army, Navy Air Force and other Defense Department deployment, and for the Department of Homeland Security, which necessitate a longer period of testing and deployment at its facilities in New York City and at Fort Collins, Colorado than would be available pursuant to a grant of Special Temporary Authority. Experimental licenses to allow development and proof-of-concept testing of equipment manufactured by Persistent have been granted in the past few years for similar purposes.

The purpose of this application is to permit research and development of Sector Antenna systems for Persistent's products for deployment at military and other Federal facilities on Federal Government S-Band and Lower C-Band frequencies. Specifically, the Sector Antennas that are being developed now are under development for both the United States Air Force and for the Department of Homeland Security (and specifically for Customs and Border Protection).

Entirely terrestrial operation is proposed to be conducted with respect to radio modules in the band 2200-2290 MHz which will be for MANET systems and component products for military and DHS deployment only, using the sector antennas under test. The center frequencies 2277.00 MHz and 4700 MHz (with a 20 megahertz occupied bandwidth emission) are the preferred frequencies within the band 2200-2290 MHz to provide a consistent benchmark for testing and evaluation in this environment. Those are not necessarily the frequencies or bands on which the agencies will ultimately use the Sector Antennas. However, the bandwidth of the sector antennas under test include the entirety of 2200-2290 MHz and the channel 4700 MHz. Frequency changes can be conducted remotely should the need to do so arise to avoid interference. All operation will cease immediately in case of any reported interference and not resume until the complaint is resolved to the reasonable satisfaction of the complainant.

The stop buzzer contact for this operation is Mr. Ty Mellon, Systems Engineer at Persistent Systems, LLC in New York, who can be reached directly at 646-518-8958. His e-mail address is [tmellon@persistentsystems.com](mailto:tmellon@persistentsystems.com).

Other inquiries can be directed to communications counsel for the applicant:

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