DRAGONFLY PICTURES INC.
EXPERIMENTAL SPECIAL TEMPORARY
AUTHORITY APPLICATION
FILE NO. 0101-EX-ST-2016
JANUARY 2016

EXHIBIT I
DESCRIPTION OF EXPERIMENT

Consolidated Response to Questions 4 and 5.

Dragonfly Pictures Inc. ("DPI") hereby requests Special Temporary Authority ("STA") to conduct experimental testing of the SeaLancet (RT-1944/U) radio system to characterize performance characteristics in ground based and airborne relay operations. This experimental testing will be performed for U.S. Navy SBIR Contract Number N00024-15-C-4010, Topic Number: N131-039. The objective of the experiment is to gather data on range, link rate, and data throughput of a wireless radio technology. DPI hereby respectfully requests Commission action on this STA by March 15, 2016 in order to facilitate operational internal timelines.

The SeaLancet RT-1944/U radio system, manufactured by RSS Corporation of Melbourne, FL, has been acquired and deployed by the US Navy for command and control of unmanned surface vessels and unmanned underwater vehicles. It is a production system and is being used in the United States at Navy bases in Panama City, FL and Newport, RI. DPI received four (4) radio systems from the US Navy as Government Furnished Equipment (GFE) and will be using these production systems. DPI will not be modifying the radio system.

DPI testing will consist of a Tethered Unmanned Aerial System carrying the air node of up to two (2) SeaLancet (RT-1944/U) radios that will act as a relay to one or more ground nodes. Each SeaLancet system is comprised of the RT-1944/U radio, transmit and receive amplifier, filter and antenna. The filter will be a 20 MHz Band pass at the approved frequencies. This filter eliminates transmit and received radiated signals outside our approved frequencies. Both the air node and the ground nodes will have an Omni pattern antenna. During the testing, the air node will fly at different altitudes and distances while test data is transmitted. RF signal strength and bandwidth performance data will be recorded to determine the actual characteristics of the system. Distances of up to 80 miles and altitudes from 0 to 600 feet will be tested. These measured values will be used to validate models that have been developed to predict the performance of the system over the varying conditions.

DPI acknowledges that all experimental operations conducted in the requested bands will be on a non-interference basis. However, to the extent necessary, DPI will utilize its best efforts to avoid and minimize interference. All network traffic will be simulated traffic only, solely for evaluation purposes and not for the purpose of providing network data communications services to user stations.

Because the equipment is technically incapable of providing station identification, DPI respectfully requests a waiver of the station identification provisions of Section 5.115 of the Commission's rules, 47 C.F.R. § 5.115.

DPI submits that a grant of this STA request is necessary and in the public interest because it will advance national security efforts by contributing and assisting in the further development of a communications system utilized by the DOD.

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