

**HARRIS CORPORATION
EXPERIMENTAL SPECIAL TEMPORARY
AUTHORITY APPLICATION
FILE NO. 0547-EX-ST-2010
NOVEMBER 2010**

**EXHIBIT I
DESCRIPTION OF EXPERIMENT**

Consolidated Response to Questions 4 and 5.

Harris Corporation ("Harris") 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. The objective of the experiment is to gather data on range, link rate, and data throughput of a wireless radio technology. Harris hereby respectfully requests Commission action on this STA by December 13, 2010 in order to facilitate operational internal timelines.

Testing will consist of an air node carrying up to 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. The air node will have a small blade antenna on the underside of the plane while the ground node will either have a Directional or 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 100 miles and altitudes from 3000 feet to over 10,000 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.

Harris acknowledges that all experimental operations conducted in the requested bands will be on a non-interference basis. However, to the extent necessary, Harris 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, Harris respectfully requests a waiver of the station identification provisions of Section 5.115 of the Commission's rules, 47 C.F.R. § 5.115.

Harris 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.

The **stop buzzer contact** for this project is Scott Stewart, System Engineer at Harris, tel: 321-729-7941, mobile: (321) 591-9857, e-mail: sstewa02@harris.com.