

**HARRIS CORPORATION
EXPERIMENTAL SPECIAL TEMPORARY
AUTHORITY APPLICATION
FILE NO. 0369-EX-ST-2009
AUGUST 2009**

**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 using the equipment identified herein operating in the 4.94-4.99 GHz band.

The purpose for this experimental STA request is to provide application support and further testing for equipment in connection with the development efforts pursuant to the United States Army for the Warfighter Information Network – Tactical ("WIN-T") program. Due to the critical nature of the proposed testing, Harris hereby respectfully requests Commission action on this STA by August 15, 2009 in order to facilitate operational timelines.

The testing as requested within this application will consist of 6 Highband Network Radio ("HNR") nodes, operating at various facilities located on the Harris Palm Bay campus. Five HNR nodes will utilize fixed temporary mounted masts at the following Harris Palm Bay campus locations: Building 5- located at 1000 Perimeter Drive, Palm Bay, FL; Building 15- located at 1369 Troutman Blvd, NE, Palm Bay, FL; Building 19- located at 1335 Troutman Blvd, NE, Palm Bay, FL; Cafeteria- located at 2426 Palm Bay Road, NE, Palm Bay, FL; and a fixed office trailer located at 1400 Robert J Conlan Blvd NE, Palm Bay, FL. The proposed temporary masts will not extend the overall height of the structures to which they will be mounted by more than 6 meters. The mobile node will be a High Mobility Multipurpose Wheeled Vehicle ("HMMWV") with an HNR mounted on an extendable (10 meter) mast. This node will be operating while in motion. It will operate at the same power and has the same emission characteristics as the base stations.

Equipment used in this experiment will consist of the HNRe2 Highband Network Radio, manufactured by Harris. The HNRe2 is comprised of four elements: 1) the Baseband Processing Unit; 2) the Highband RF Unit ("HRFU") (consisting of an upconverter, a High-Powered Amplifier ("HPA"), a Switched Beam Antenna ("SBA"), a Low-Noise Amplifier ("LNA"), and a downconverter); 3) an Inertial Navigation Unit ("INU"); and 4) a GPS device. The INU and GPS will be used only at the mobile node.

Contribution to radio technology includes delivering a mobile ad-hoc network to the U.S. Armed Forces. This mobile ad-hoc networking capability will greatly increase the functionality of the military by providing true Networked Communications On The Move to facilitate the timely availability of sophisticated Situational Awareness to the commanders as well as individual ground troops.

Harris acknowledges that any experimental operations conducted in this band will be on a non-interference basis. However, to the extent necessary Harris will use 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.

The **stop buzzer contact** for this project is Greg Wilson, Systems Engineer at Harris, tel: (321) 727-6940, mobile: (321) 505-2092, e-mail: gregory.wilson@harris.com.