

HARRIS CORPORATION
SPECIAL TEMPORARY AUTHORITY APPLICATION
1770-1830 MHz Band
February 2003

DESCRIPTION OF EXPERIMENT

Response to Question 4:

Harris Corporation ("Applicant") is requesting an STA to permit operation of the equipment specified in section 8 of this application. Applicant and Lockheed Martin have entered into a contract with the United States military to conduct certain experimental operations in, above and around federal facilities in Manassas and Quantico, Virginia. The Contract Number is MDA 972-99-9-0004, originally contracted with DARPA and now under NAVSEA control. The government contact is Ernie Joile. Harris submits that a grant of this STA request is necessary in the public interest because the proposed operations will forward national security interests by permitting experimentation with new surveillance technologies.

Harris has previously submitted an STA application in connection with the same project. See STA File No. 0050-EX-ST-2003, Form STA Confirmation Number EL12990) (the "First Application"). The First Application, which remains pending, seeks authority to operate on a special temporary basis in the 2422-2472 MHz band. This application proposes the same operating parameters as the First Application, with the exception that this application seeks authority to operate on a special temporary basis in the 1770-1830 MHz band with a 10 MHz bandwidth. In all other respects this application is equivalent to the First Application.

Response to Question 5:

The purpose of the proposed experimental testing is to establish a performance baseline for using 802.11b devices in connection with aeronautical surveillance and photography by the United States military. The experiment will consist of an airplane taking off from various military installations and flying within a 32 kilometer radius around the Lockheed Martin fixed base point of 38° 44' 05"N and 77° 30' 05"W, at an approximate height of 2000 to 5000 feet. The airplane will photograph targets on the ground and relay the data back to the Lockheed Martin plant. The experiment consists of two transceivers, one located on the airplane and one located at the Lockheed Martin plant. The relevant information is as follows:

Aircraft Transceiver

- Data Rate: 5.5 Mbps Tx, 1 Mbps Rx
- Max Transmit Power = 8 watts ERP
- Max Antenna Gain = 0 dBi
- Antenna Pattern = Omni
- Area of Operation
 - Latitude: 38° 29' 00" to 38° 44' 00"
 - Longitude: 77° 43' 00" to 77° 17' 00"

Plant Transceiver

- Data Rate: 1 Mbps Tx, 5.5 Mbps Rx
- Max Transmit Power = 8 watts ERP
- Max Antenna Gain = 18 dBi
- Antenna Pattern = 65° Az, 5.5° El
- Location
 - Latitude: 38° 44'
 - Longitude: 77° 30'

As indicated, the signal bandwidth is 10 MHz (802.11b), and the proposed frequencies are set forth in the application.

Response to Question 8:

	<u>Manufacturer</u>	<u>Model Number</u>	<u>No. of Units</u>	<u>Experimental?</u>
1.	Bud (#TR-6102)	86F922	2	No
2.	Vicor	VI-RJ 0Y01 CZYY	2	No
3.	Vicor	VI-M 01 CV	2	No
4.	Mechatronics	G8015M12B-RG	2	No
5.	Ampro	LB3-P6D-Q-01	2	No
6.	Ampro	RAM-P6-Q-04	2	No
7.	SMART Mod. Tech.	SM9FLACF1024M5X	2	No
8.	Avantech	PCM-3115	2	No
9.	Linksys	WPC11	2	No
10.	Tampa Microwave	FCM_2.4_1.8	2	No
11.	Stealth Microwave	SM0825-40 (wHS)	2	No
12.	JFW Industries	50R-137-SMA	2	No
13.	JFW Industries	50R-248-SMA	2	No
14.	Vicor	P/N 01000	24	No
15.	JFW Industries	50FHB-010-10 N	2	No
16.	Lambda	JWS150-12/A	2	No
17.	Solarcraft Power	xPower 300	2	No
18.	PROXIM	7015	2	No

19.	Harris Corp.	Core Transceiver	1		Yes
	(consists of combined Items 1-18 above)				
20.	UB Corp.	AO2223	1		No
21.	Radio Waves	SEC-25V-60-17	1		No

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