

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of)
)
Harris Corporation Request for additional)
of Experimental License to Allow)
Development and further testing of New Simulcast)
Technologies. .)

To: Chief, Experimental Licensing Branch

**RE: Request for Modification of Experimental License
WC2XZK**

Background

Harris Corporation, Public Safety and Professional Communications Unit (PS&PC), formerly known as Tyco Electronics Wireless Systems Segment, and also formerly known as M/A-COM, Inc., continues to be a major supplier of private land mobile equipment in the United States, particularly to the public safety community. PS&PC has been working with leaders in the public safety arena, particularly since September 11th, 2001, to develop new communications systems that provide quick and easy communications solutions for improved interoperability, operational effectiveness, and increased efficiency in public safety communications. PS&PC, a major supplier of P25 multicast systems and equipment has developed SIMULCAST technologies to better

serve the land mobile radio market, particularly the public safety communications segment.

The purpose of for this additional experimental license is to allow PS&PC to implement needed developmental and systems verification testing capabilities for SIMULCAST equipment in the vicinity of one of its' major research and development facilities in the Lynchburg, VA area.

In accordance with the current PS&PC experimental license (WC2XZK), PS&PC is authorized to conduct experimental operations at one fixed site in the Lynchburg, VA area with an associated mobile operational area in multiple land mobile radio bands. The current authorization allows PS&PC to conduct such experimental operations using multiple technologies due to the fact multiple emission masks are listed in the current PS&PC license.

Authorization Request Specifics & Justification

To implement developmental and system verification test capability for SIMULCAST systems, one must have multiple fixed sites with associated mobile operating areas authorized in the same geographic areas. Multiple fixed sites in the same geographic area with overlapping mobile operational areas enables SIMULtaneous broadCAST of messages on the same channel. This allows proper verification of protocol, reception and handoff characteristics throughout the operating area, but particularly in the overlap and fringe areas with the net result being more efficient use of fewer discrete channel assignments. Without having authorization at multiple fixed sites with related mobile operating areas it is impossible to validate a SIMULCAST system design and/or assess SIMULCAST system capabilities.

The requested additional experimental license seeks to add authorization at two additional sites to the current authorization granted to PS&PC for experimental operations at the Candler's Mountain site (NL 37-20-57; WL 79-10-05) in WC2XZK. The two additional sites are to be located at Johnston Mountain (NL 37-11-51.0, WL 079-21-06.0) and JRP (NL 37-23-59.7; WL 079-13-54.0). The antenna at the Johnson Mountain site will be affixed to an existing 176.5 meter tower (ASR#1020716), owned by Liberty University, Inc. The ASR information on this antenna structure is shown in Attachment A hereto. The uppermost edge of the antenna at the Johnson Mountain site for the additional site requested in this additional experimental license will be located 156.1 meters below the top of the existing tower. The antenna for the JRP site will be affixed to a new (to be constructed) 3-legged metal latticework 45.7 meter tower. The uppermost edge of the antenna at the JRP site will be located approximately 3.1 meters below the top of the 45.7 meter tower. PS&PC is currently processing the appropriate permits with the City of Lynchburg for construction of the new tower at the JRP site, and we anticipate receiving all necessary approvals in the near future. TOWAIR analysis of this new antenna structure indicates this antenna structure does not require filing in the Antenna Structure Registration (ASR) system. See Attachment B for the TOWAIR analysis results on this to be constructed antenna structure.

The request asks for authorization at each of these two additional sites in multiple land mobile radio frequency bands for multiple emission masks similar to the current authorization at Candler's Mountain. PS&PC initially intends to conduct SIMULCAST testing on P25 systems and equipment in the 800 MHz spectrum. However, PS&PC expects to develop SIMULCAST capabilities for other technologies in other land mobile

radio bands in the future in order to best serve its' customer base in an increasingly congested land mobile radio spectrum world. PS&PC requests the additional experimental license cover multiple bands and multiple technologies to minimize the need for modification applications in the future.

Conclusion

PS&PC is developing/has developed SIMULCAST technologies that require development and system verification test capabilities beyond those authorized by the current PS&PC experimental license. PS&PC thus has a need for additional experimental authorization in the Lynchburg, VA area explained herein. Such expanded authorization is critical to PS&PC having the ability to adequately test and provide satisfactory equipment to the land mobile radio market, particularly the public safety communications segment.

In the past, PS&PC has been cautious to assure all experimental operations under the existing authorization have caused no interference to other licensed users in any authorized radio service band. PS&PC will continue to exercise extreme caution when testing these new technologies at the new locations and within the frequency bands requested.

For the above reasons, PS&PS respectfully requests the Commission grant the additional experimental authorization as submitted.

Respectfully submitted,

Robert J. Speidel

Robert J. Speidel, Esq,
Internal Consultant; Regulatory, Standards & Business Development Issues

Attachment A

ASR Registration #1020716

Johnson Mountain

Registration Detail			
Reg Number	1020716	Status	Constructed
File Number	A0500584	Constructed	10/01/1954
FAA Study	97-AEA-0368-OE	EMI	No
FAA Issue Date	04/25/1997	NEPA	No
Antenna Structure			
Structure Type	TOWER - Free standing or Guyed Structure used for Communications Purposes		
Location (in NAD83 Coordinates - Convert to NAD27)			
Lat/Long	37-11-51.0 N 079-21-06.0 W	NEAR RT 626 JOHNSON MT 4.5 MI SW	
City, State	EVINGTON , VA		
Center of AM Array			
Heights (meters)			
Elevation of Site Above Mean Sea Level		Overall Height Above Ground (AGL)	
405.7		176.5	
Overall Height Above Mean Sea Level		Overall Height Above Ground w/o Appurtenances	
582.2		175.6	
Painting and Lighting Specifications			
FAA Chapters 3, 4, 5, 13			
Paint and Light in Accordance with FAA Circular Number 70/7460-1J			
Owner & Contact Information			
FRN	0004990974	Licensee ID	L00110974
Assignor FRN	0007648694	Assignor ID	L01145064
Owner			
Liberty University, Inc. Attention To: Milton S. Ridgeway 1971 University Boulevard Lynchburg , VA 24502		P: (804)582-2607 E: msridgew@liberty.edu	
Contact			
Ridgeway , Milton S 1971 University Boulevard Lynchburg , VA 24502		P: (434)582-2737 E: msridgew@liberty.edu	

Last Action Status			
Status	Constructed	Received	04/27/2006
Purpose	Change Owner	Entered	04/27/2006
Mode	Interactive		
Related Applications			
04/27/2006	A0500584 - Change Owner (OC)		
05/12/1997	A0024728 - New (NE)		
Comments			
Comments			
None			
Automated Letters			
04/28/2006	Ownership Change , Reference 499450		
04/28/2006	Authorization , Reference 499504		

Attachment B

JRP TOWAIR results 11/3/2009

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(100:1): NO FAA REQ-RWY MORE THAN 10499 MTRS & 7790.68 MTRS (7.79070 KM) AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	R	37-20-3.00N	079-12-3.00W	LYNCHBURG RGNL/PRESTON GLENN FLD	CAMPBELL LYNCHBURG, VA	272.5	2164.0999999999999

Your Specifications

NAD83 Coordinates

Latitude	37-23-59.7 north
Longitude	079-13-54.0 west

Measurements (Meters)

Overall Structure Height (AGL)	45.7
Support Structure Height (AGL)	0
Site Elevation (AMSL)	245.4

Structure Type

TOWER - Free standing or Guyed Structure used for Communications Purposes