

From: Steven Doiron

To: Doug Young
Date: April 10, 2015

Subject: Request for Info - File #0141-EX-RR-2015

Message:

April 10, 2015

Via Electronic Posting

Federal Communications Commission
Experimental Licensing Branch
MS 1300E1
445 Twelfth Street, S.W. Washington, DC 20445

Re: Annual Progress Report of HNS License Sub, LLC Pursuant to Call Sign WE2XEW

Dear Sir or Madam:

This Progress Report of HNS License Sub, LLC ("Hughes") is submitted pursuant to the special conditions associated with Hughes' Experimental Radio Service license in Call Sign WE2XEW.

On January 1, 2006, Hughes obtained an authorization under Call Sign WE2XEW to conduct experimental operations with in-motion earth terminals in the fixed-satellite service ("FSS") frequencies at 14-14.5 GHz and 29.5-30 GHz. The experimental operations conducted under this license respond to potential and actual customer requirements, assess or demonstrate the viability of particular equipment and service configurations that are under development, and/or test different antenna products from various manufacturers in order to assess the performance of these products when integrated into the Hughes VSAT system.

This year's experiments have focused on the study of airborne antennas that could be used for support of Unmanned Aircraft Systems (UAS) operations. A variety of antennas were tested as a means to demonstrate compatibility between new mobility antenna models and Hughes equipment. In each case, the transmission equipment has been decommissioned upon completion of the test. Hughes also uses this license regularly to conduct Vehicle Mounted Earth Station (VMES) demonstrations for potential Hughes equipment customers.

In addition, since the last reporting period, Hughes has been using this experimental license to test prototype systems capable of maintaining a satellite link from a helicopter while in motion. The impact of the rotor blades on the satellite signal requires the use of a variety of compensation algorithms which are being optimized over the airwaves using the experimental license.

Furthermore, Hughes has been developing and testing various transmission waveforms and decoding methods for systems in motion which enhance the robustness of the communication link in the presence of both accidental as well as intentional interference.

Please let me know if you have any questions regarding this required report or if any additional information is needed.

Respectfully submitted,

/s/ Steven Doiron
Steven Doiron
Senior Director, Regulatory Affairs