Raytheon Missile Systems
Exhibit to Experimental License Modification Application
Call Sign: WF2XQR
File Number: 0226-EX-CM-2018

Explanation of Experimentation, Need for Spectrum, Advancement of Radio Art

Overview:

Raytheon Missile Systems (Raytheon) builds and tests various missiles which are developed for the US military and other US-government approved customers. Those missiles are tested by Raytheon in a number of ways including testing the command and control radio systems on the missiles and testing of the telemetry systems which send data back to control points to deliver key information on the missile flight and the health of the missile systems while in flight. The results of this testing advance the technologies built into the systems.

In this application, Raytheon is seeking authority to renew its ongoing testing of radio systems which will provide enhanced and more efficient telemetry systems which are essential to monitoring the flight of the missiles.

At the 2007 World Radio Conference, there was tentative international agreement to allocate additional spectrum in the "C Band" for aeronautical telemetry use. The spectrum expected to be used for aeronautical telemetry in the US includes 4400 to 4940 MHz, 5091 to 5150 MHz, and 5925 to 6700 MHz. Raytheon is developing advanced systems, and it needs to continue experimenting with these radio systems that will deliver key telemetry data for using this spectrum.

Synopsis:

- Spectrum requested: 5019-5150 MHz requested in this application
- Power levels: currently licensed power levels
- Purpose: Development of C band aeronautical mobile telemetry technology

Purpose of Modification:

Raytheon is seeking to modify its experimental license WF2XQR to add back the spectrum from 5091-5150, which was not included in the recent renewal. This spectrum has recently completed FAA coordination, and as a result, we are requesting that the spectrum be put back into this license.

Stop Buzzer Point of Contact:

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Conclusion:

In sum, the goal of the testing is to maximize the efficiency of new aeronautical mobile telemetry equipment that must be designed and built for AMT users who will be forced to move into the C band spectrum. The experiments ongoing under experimental license WF2XQR are designed to optimize performance and throughput, including HD video, with the goal of advancing the use of telemetry spectrum for more operations.

If there are any questions, please contact Anne Linton Cortez, Counsel, 520-360-0925, alc@conspecinternational.com.

FAA Coordination Numbers:

(2)	alc@conspecinternational.com	TRK 183067	08-15-18	TUCSON	AZ		AR	10-23-18	NFEAC08/15/2018(2)	?	
(1)	alc@conspecinternational.com	TRK 183066	08-15-18	TUCSON	AZ		AR	10-23-18	NFEAC08/15/2018(1)	?	