



March 13, 2019

Federal Communications Commission
Office of Engineering and Technology
Experimental Licensing Branch
445 12th St., S.W.
Room 7-A322
Washington, DC 20554

Dear Sir or Madam:

We would like to submit this exhibit as a narrative statement describing in detail the purpose of our Request for Experimental License under the FCC Experimental Radio Station Authorization.

Nissan Technical Center - North America, Inc. (NTCNA) is the North American engineering center for Nissan Motor Company, Ltd. (Nissan). NTCNA is responsible for the testing and development of navigation systems installed into all Nissan vehicles sold in the United States. As part of this testing & development, NTCNA needs to evaluate the GPS reception and performance for both new & existing navigation systems. Our experimental test plan is to first re-radiate GPS signals inside the NTCNA facility, causing the test vehicles to receive the correct GPS signal inside the specific testing area. Upon vehicle reception of these signals we can confirm navigation system performance & quality as related to:

- Antenna performance
- Setting the clock via GPS signal
- Locator performance
- Routing performance.

It is required to conduct these tests inside our facility since most of the vehicles we evaluate are confidential in nature and can not be driven outside except under tight security measures.

In addition, we have confirmed the maximum equivalent isotropically radiated power (EIRP) to be less than the specified -140 dBm/24 MHz, as received by an isotropic antenna at a distance of 100 feet from the building where the test is conducted. These signal calculations were derived from the 2 sources listed below:

- A) Link budget calculation by NAVTECH GPS Supply
http://www.navtechgps.com/pdf/GpsNetworking_LinkBudget.pdf &
- B) A presentation made by president of GPS Networking Steven Waite
http://www.ntia.doc.gov/osmhome/irac/gps_networking_irac_presentation.ppt

We appreciate the consideration for application for the Experimental License. Should you have any further questions, please contact me at the number listed below and I will be glad to provide any additional information you may need.

Sincerely,

A handwritten signature in cursive script that reads "Patrick J. Auth".

Patrick J Auth
Senior Project Engineer - ITS Testing

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