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**REDACTED FOR PUBLIC INSPECTION**

July 19, 2019

**Via Hand Delivery**

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 Twelfth Street SW  
Washington, DC 20554

**Re: Performance Certification Results for a 3.5 GHz Spectrum Access System  
Provided for Testing by Google LLC (GN Docket No. 15-319)**

Dear Ms. Dortch:

On July 18, 2019, the United States Department of Commerce, National Telecommunications and Information Administration, Institute for Telecommunications Sciences (ITS) issued the attached report that presents results of certification tests performed on Google's Spectrum Access System (SAS) and ITS's observations about the testing. ITS performed the certification work pursuant to a Cooperative Research and Development Agreement with Google (CN-ITS-18-0009). Google submits this report in support of its pending application for certification of its SAS for use in initial commercial deployment of 3.5 GHz spectrum sharing systems,<sup>1</sup> and towards subsequent full commercial service. As noted in the report, ITS concluded that Google's SAS passed all tests and "faithfully implemented the [Wireless Innovation Forum (WInnForum)] move list algorithm" that protects federal incumbent assets in this band.<sup>2</sup>

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<sup>1</sup> *Wireless Telecomms. Bureau and Office of Eng'g and Tech. Establish Procedure and Deadline for Filing Spectrum Access System Initial Commercial Deployment Proposals*, Public Notice, 33 FCC Rcd 7390 (2018).

<sup>2</sup> See Attachment A at 95.

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Google congratulates ITS on completion of its testing efforts to ensure SAS compliance with Part 96 rules.<sup>3</sup> ITS's deep and active involvement in WinnForum has been integral to the development of the SAS protocols and requirements, test specifications, and test code. Throughout the course of nearly 14 months of testing, ITS independently designed and executed nearly 1000 tests covering all aspects of SAS operation. Thorough testing is critical to building confidence in innovative spectrum sharing technology, and the success of CBRS has been dependent on the continued involvement of ITS during all stages of development.

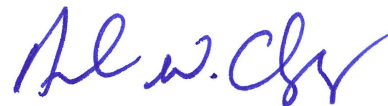
Google also extends its appreciation to the DoD for being an active observer in the WinnForum standards development process. DoD's guidance in the development of the standards and test code has been integral to successfully ensuring full protection of federal incumbent systems in the band.

Please contact us if additional information is required.

Respectfully submitted,



Megan Anne Stull  
Counsel



Andrew W. Clegg  
Spectrum Engineering Lead  
Google LLC

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<sup>3</sup> Keith Gremban, *Final Tests Completed on 3.5 GHz Spectrum Sharing Model*, NTIA (July 19, 2019), <https://www.ntia.doc.gov/blog/2019/final-tests-completed-35-ghz-spectrum-sharing-model>.

## **ATTACHMENT A**

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