

Date: September 1, 2017

Subject: Public and Redacted Versions of Request for Confidential Treatment and Complementary Exhibit

To Whom It May Concern:

Google Inc. (Google), pursuant to 5 U.S.C. § 552 and Sections 0.457 and 0.459 of the Commission's Rules, 47 C.F.R. §§ 0.457, 0.459, hereby requests that certain information complementary to its above-referenced application for Special Temporary Authority (STA) be treated as confidential and not subject to public inspection. The designated information constitutes confidential and proprietary information that, if subject to public disclosure, would cause significant commercial, economic, and competitive harm. As described below, Google's request satisfies the standards for grant of such requests set forth in Sections 0.457 and 0.459 of the Commission's Rules.

In accordance with Section 0.459(b) and in support of this request, Google provides the following information:

1. Identification of the Information for Which Confidential Treatment is Sought:

Google's request for confidential treatment is limited to the following information that has been redacted from the STA and complementary exhibit (Exhibit). Google does not seek to withhold from public inspection information necessary for interference mitigation, including applicant name, contact information, test location, frequency, output power, effective radiated power, emission characteristics and modulation.

Exhibit - Special Temporary Authority Justification:

Google requests confidential treatment of the following underlined text that contains confidential and proprietary information regarding the proposed tests/experiments:

Narrative Statement

Consistent with the standards set forth in Section 5.61 of the Federal Communications Commission's (FCC's or Commission's) Rules, 47 C.F.R. § 5.61, Google Inc. (Google) outlines below its need for the requested Special Temporary Authority (STA) and the compelling reasons why this STA should be granted expeditiously.

Google requests that the STA be granted for a period of 60 days. The STA is needed to test the transmission of broadband data from racecars to

transportable/fixed base stations located at racetrack facilities in connection with three automobile racing events.

The dates and locations of the proposed testing are as follows:

Dates	Location
October 6-16, 2017	Lincoln, AL
October 20-30, 2017	Ridgeway, VA
November 3-13, 2017	Avondale, AZ

Should any interference be reported, the proposed tests will cease immediately unless and until the interference is resolved to the satisfaction of the complainant.

The proposed experimental operations accordingly will be conducted without harmful interference to other authorized users. For the foregoing reasons, Google requests approval of this application.

Legal Contact	Technical Contact
Michael Purdy Corporate Counsel 25 Massachusetts Avenue NW, 9th Floor Washington, DC 20001 mroypurdy@google.com	Dr. Andrew Clegg 1875 Explorer Street, 10th Floor Reston, VA 20190 (202) 370-5644 aclegg@google.com

Transmitter Equipment and Station Details

Radio Information

Equipment	[REDACTED]
Quantity	[REDACTED]
Dates and Areas of Operation	Operation not to exceed 3 km from the following geographic centerpoints: <ul style="list-style-type: none"> ● October 6-16, 2017 33° 34' 01" N, 86° 03' 58" W ● October 20-30, 2017 36° 38' 03" N, 79° 51' 06" W ● November 3-13, 2017 33° 22' 30" N, 112° 18' 40" W

Frequency	Low (MHz)	High (MHz)
[REDACTED]	3400	3600

Antenna Details

Antennas	[REDACTED]
Type	Directional panels & omnidirectional verticals
Gain	0 - 17 dBi
Beam Width at Half-Power Point	30 - 360
Orientation in Horizontal Plane	Various (0-360 azimuth)
Orientation in Vertical Plane	Various (+10 to -45)

Transmitter #1: Transportable/Fixed

Radio	Modulation	Emission Designator	Bandwidth (MHz)	Max Output Power (W)	Max ERP (kW) ¹
[REDACTED]	LTE (OFDM)	10M0W7D	10	20	0.122
[REDACTED]	LTE (OFDM)	20M0W7D	20	40	0.244
[REDACTED]	LTE (OFDM)	40M0W7D	40	80	0.487
[REDACTED]	LTE (OFDM)	80M0W7D	80	160	0.976

Transmitter #2: Mobile

Radio	Modulation	Emission Designator	Bandwidth (MHz)	Max Output Power (W)	Max ERP (kW) ²
[REDACTED]	LTE (OFDM)	10M0F9W	10	2	0.0012
[REDACTED]	LTE (OFDM)	20M0F9W	20	4	0.0024
[REDACTED]	LTE (OFDM)	40M0F9W	40	8	0.0049
[REDACTED]	LTE (OFDM)	80M0F9W	80	16	0.0098

¹ Because the proposed testing will not involve using the maximum output power combined with the maximum antenna gain, the maximum ERP for the transportable/fixed transmitter was calculated based on the maximum output power and a 10 dBi antenna gain.

² The maximum ERP for the mobile transmitter was calculated based on no antenna gain (0 dBi).

2. Identification of the Commission proceeding in which the information was submitted or a description of the circumstances giving rise to the submission.

The above-referenced Exhibit was submitted to the Commission in support of the STA. The Exhibit was filed with the Office of Engineering and Technology on September 1, 2017. For additional information, please see File No. 1257-EX-ST-2017.

3. Explanation of the degree to which the information is commercial or financial or contains a trade secret or is privileged.

The information requested to be kept confidential has significant commercial value. The details of the STA tests/experiments may include trade secret information. The Commission has clarified that confidential treatment should be afforded to trade secrets.³ Google's tests/experiments and proprietary wireless applications using particular radio frequency equipment represent a "secret commercially valuable plan" within the meaning of a trade secret as recognized by the Commission.

In addition, agreements entered into between Google and any parties that provided equipment for testing or will provide analysis of test results require that confidential information of the parties be held in strict confidence, and that such information not be disclosed to any third party (with limited exceptions not applicable to this request). The manufacturer name and model number constitutes confidential trade secrets, technical information, and business information under the agreements.

4. Explanation of the degree to which the information concerns a service that is competitive.

The services and technologies that are the subject of this STA have not yet been fully developed but are expected to lead to material developments in markets subject to competition from multiple U.S. and non-U.S. third parties.

5. Explanation of how disclosure of the information could result in substantial competitive harm.

The technology under development is highly sensitive and confidential in nature. The release of such information would provide valuable insight into Google's technology innovations and potential business plans and strategies. Public disclosure would jeopardize the value of the technology under examination by enabling others to utilize Google's information to develop similar products in a similar time frame.

³ *Examination of Current Policy Concerning the Treatment of Confidential Information Submitted to the Commission*, Report and Order, GC Docket No. 96-55, at para. 3, (released Aug. 4, 1998) (defining "trade secrets" for purpose of Commission rules on confidential treatment).

6. Identification of any measures taken by the requesting party to prevent unauthorized disclosure.

Google has taken steps to keep confidential the information set forth in the confidential Exhibit by limiting the number of people involved in the tests/experiments to only those on a "need to know" basis, and by requiring any third parties involved in the testing process to execute robust nondisclosure agreements.

7. Identification of whether the information is available to the public and the extent of any previous disclosures of the information to any third parties.

The information contained in the confidential Exhibit is not available to the public, and has only been disclosed to third parties pursuant to restrictive safeguards.

Google voluntarily provides the information to the Commission at this time with the expectation that it will be treated confidentially in accordance with the Commission's rules. See *Critical Mass Energy Project v. Nuclear Regulatory Comm'n*, 975 F.2d 871, 879 (D.C. Cir. 1992) (commercial information provided on a voluntary basis "is 'confidential' for the purpose of Freedom of Information Act (FOIA) Exemption 4 if it is of a kind that would customarily not be released to the public by the person from whom it was obtained.").

8. Justification of the requested period of confidentiality.

Google expects that confidential treatment will be necessary for the length of the proposed experiment and thereafter in order to protect its evolving business and technology strategies.

9. Any other information that would be useful in assessing whether this request should be submitted.

The information subject to this request for confidentiality should not be made available for public disclosure at any time. There is nothing material that public review of this information would add to the Commission's analysis of Google's request for an experimental authorization.

Moreover, public disclosure of the sensitive information in the confidential Exhibit to the STA after the Commission has ruled on the Request for Confidentiality is not necessary for the Commission to fulfill its regulatory responsibilities.

Consistent with 47 C.F.R. § 0.459(d)(l), Google requests notification if release of the information subject to this request is requested pursuant to the FOIA or otherwise, so that Google may have an opportunity to oppose grant of any such request.

Sincerely yours,

A handwritten signature in blue ink that reads "Michael R. Purdy". The signature is written in a cursive style with a long horizontal stroke at the end.

Michael R. Purdy

EXHIBIT - SPECIAL TEMPORARY AUTHORITY JUSTIFICATION**Narrative Statement**

Consistent with the standards set forth in Section 5.61 of the Federal Communications Commission's (FCC's or Commission's) Rules, 47 C.F.R. § 5.61, Google Inc. (Google) outlines below its need for the requested Special Temporary Authority (STA) and the compelling reasons why this STA should be granted expeditiously.

Google requests that the STA be granted for a period of 60 days. The STA is needed to test the transmission of broadband data from racecars to transportable/fixed base stations located at racetrack facilities in connection with three automobile racing events.

The dates and locations of the proposed testing are as follows:

Dates	Location
October 6-16, 2017	Lincoln, AL
October 20-30, 2017	Ridgeway, VA
November 3-13, 2017	Avondale, AZ

Should any interference be reported, the proposed tests will cease immediately unless and until the interference is resolved to the satisfaction of the complainant.

The proposed experimental operations accordingly will be conducted without harmful interference to other authorized users. For the foregoing reasons, Google requests approval of this application.

Legal Contact	Technical Contact
Michael Purdy Corporate Counsel 25 Massachusetts Avenue NW, 9th Floor Washington, DC 20001 mroypurdy@google.com	Dr. Andrew Clegg 1875 Explorer Street, 10th Floor Reston, VA 20190 (202) 370-5644 aclegg@google.com

Transmitter Equipment and Station Details*Radio Information*

Equipment	[REDACTED]
Quantity	[REDACTED]
Dates and Areas of Operation	<p>Operation not to exceed 3 km from the following geographic centerpoints:</p> <ul style="list-style-type: none"> • October 6-16, 2017 33° 34' 01" N, 86° 03' 58" W • October 20-30, 2017 36° 38' 03" N, 79° 51' 06" W • November 3-13, 2017 33° 22' 30" N, 112° 18' 40" W

Frequency	Low (MHz)	High (MHz)
[REDACTED]	3400	3600

Antenna Details

Antennas	[REDACTED]
Type	Directional panels & omnidirectional verticals
Gain	0 - 17 dBi
Beam Width at Half-Power Point	30 - 360
Orientation in Horizontal Plane	Various (0-360 azimuth)
Orientation in Vertical Plane	Various (+10 to -45)

Transmitter #1: Transportable/Fixed

Radio	Modulation	Emission Designator	Bandwidth (MHz)	Max Output Power (W)	Max ERP (kW)¹
[REDACTED]	LTE (OFDM)	10M0W7D	10	20	0.122
[REDACTED]	LTE (OFDM)	20M0W7D	20	40	0.244
[REDACTED]	LTE (OFDM)	40M0W7D	40	80	0.487
[REDACTED]	LTE (OFDM)	80M0W7D	80	160	0.976

Transmitter #2: Mobile

Radio	Modulation	Emission Designator	Bandwidth (MHz)	Max Output Power (W)	Max ERP (kW)²
[REDACTED]	LTE (OFDM)	10M0F9W	10	2	0.0012
[REDACTED]	LTE (OFDM)	20M0F9W	20	4	0.0024
[REDACTED]	LTE (OFDM)	40M0F9W	40	8	0.0049
[REDACTED]	LTE (OFDM)	80M0F9W	80	16	0.0098

¹ Because the proposed testing will not involve using the maximum output power combined with the maximum antenna gain, the maximum ERP for the transportable/fixed transmitter was calculated based on the maximum output power and a 10 dBi antenna gain.

² The maximum ERP for the mobile transmitter was calculated based on no antenna gain (0 dBi).