

Date: March 31, 2016
Subject: Public and Redacted Versions of Request for Confidential Treatment and Complementary Exhibits
File Number: 0224-EX-PL-2016

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 an Experimental Radio Service License (Experimental License) 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 information that has been redacted from the Experimental License and Exhibits A, B, and C. Google does not seek to withhold from public inspection information in the Experimental License and associated exhibits necessary for interference mitigation, including applicant name, contact information, test location, frequency, output power, effective radiated power, emission characteristics, and modulation.

Exhibit A - Narrative Statement:

Google requests confidential treatment of the following underlined text from Exhibit A that contain confidential and proprietary information regarding the proposed tests/experiments:

Consistent with the standards set forth in Section 5.63 of the Federal Communications Commission's (Commission's) Rules, 47 C.F.R. § 5.63, Google Inc. (Google) requests authorization to conduct demonstrations of [REDACTED] experimental transmitters in the San Francisco Bay Area. The experimental authorization is sought for a period of 24 months. Google outlines below its need for the requested authorization and the reasons why it should be granted expeditiously.

The experimental authorization is needed to test [REDACTED]. Such testing will supplement Google experiments related to [REDACTED] in the 3.5 GHz band in Kansas City.¹ While [REDACTED], Google requests authorization to perform tests necessary for the development of [REDACTED]. [REDACTED]. [REDACTED]. [REDACTED].

To perform this testing, Google requests authorization to operate on the frequencies between 2502 and 2513 MHz in two locations near Google's headquarters: Redwood City and San Bruno, California. Google has selected the 2.5 GHz band because [REDACTED], which will facilitate a more robust test program.

Planned Operations

Testing at each location will be confined to a radius of 1.5 kilometers centered around a point identified in Exhibit B. In each proposed test area, [REDACTED] and [REDACTED] will be deployed at any one time. EIRP will be no more than 24 dBW for the [REDACTED] and 15 dBW for the [REDACTED]. At least some [REDACTED] locations [REDACTED].

Interference Analysis

Google's proposed operations will not cause harmful interference to other users of the 2.5 GHz band. [REDACTED]. [REDACTED]. [REDACTED].²

All of Google's proposed experimental operations will comply with the Commission's Part 27 rules for Miscellaneous Wireless Communications Services, including out-of-license-area emissions and in- and out-of-band emissions limits.³ Google will also provide notice to [REDACTED] and resolve any objection from [REDACTED] prior to deploying new [REDACTED] or changing the parameters of existing [REDACTED]. Google has also committed to notify [REDACTED] immediately if it receives any complaints of interference and to ceasing operations on the leased transmission capacity until such issues are resolved. Because the operations will comply with the Commission's Part 27 rules, no interference to other commercial, civil, federal, or international users is expected.

For the foregoing reasons, Google requests approval of this application.

¹ See File Nos. 0004-EX-ML-2015 (special temporary authority under call sign WH2XNF) and 0095-EX-PL-2016 (pending application for experimental authorization).

² [REDACTED] is included as Exhibit C.

³ See 47 C.F.R. Part 27.

Exhibit B - Technical Information:

Google requests confidential treatment of the following underlined text from Exhibit B that contain confidential and proprietary information regarding the proposed tests/experiments:

Applicant Name: Google Inc.
Applicant FRN: 0016069502

Legal Contact Details

Name of Contact	Stephanie Selmer
Contact Details	Associate Corporate Counsel 25 Massachusetts Avenue NW, Ninth Floor Washington, DC 20001

Technical Contact Details

Name of Contact	Tibor Boros
Contact Details	1600 Amphitheatre Parkway Mountain View, CA 94043 Phone: 650-214-6278 Email: tiboros@google.com

Transmitter Equipment and Station Details*Radio Information*

Equipment	[REDACTED]
Quantity	[REDACTED]
Station Class	Base and Mobile
Areas of Operation	Operation not to exceed 1.5 km from the following geographic centerpoints: <ul style="list-style-type: none"> • Location 1: 37° 30' 45" N, 122° 12' 5" W (Redwood City, CA) • Location 2: 37° 37' 43" N, 122° 25' 35" W (San Bruno, CA)

Frequency	High (MHz)	Low (MHz)
[REDACTED]	2513	2502

Antenna Details

Antenna #1	[REDACTED]
Type	Directional panel
Quantity	[REDACTED]
Gain	17 dBi
Beam Width at Half-Power Point	90°
Orientation in Horizontal Plane	Varies
Orientation in Vertical Plane	Up to 30° mechanical downtilt (which will be adjusted to ensure 47 dBuV/m is met at site and license-area boundaries)

Antenna #2	[REDACTED]
Type	Directional panel
Quantity	[REDACTED]
Gain	8 dBi
Beam Width at Half-Power Point	Varies per [REDACTED] provider specification
Orientation in Horizontal Plane	Varies
Orientation in Vertical Plane	Generally 0° downtilt

Radio	Modulation	Emission Designator	Bandwidth	Maximum Power Out	Maximum EIRP/ERP
[REDACTED]	Digital	5M00W7W	5 MHz	5 W	23.9897 dBW/ 0.1528 kW ⁴
[REDACTED]	Digital	10M0W7W	10 MHz	5 W	23.9897 dBW/ 0.1528 kW ¹

⁴ [REDACTED] EIRP/ERPs calculated for Antenna #1.

[REDACTED]	Digital	5M00W7W	5 MHz	0.4 W	4.0206 dBW/ 0.0015 kW ⁵
[REDACTED]	Digital	10M0W7W	10 MHz	0.4 W	4.0206 dBW/ 0.0015 kW ²
[REDACTED]	Digital	5M00W7W	5 MHz	0.2 W	-6.990 dBW/ 0.0001 kW ⁶
[REDACTED]	Digital	10M0W7W	10 MHz	0.2 W	-6.990 dBW/ 0.0001 kW ³

Exhibit C - [REDACTED]:

Google requests confidential treatment of Exhibit C in its entirety.

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

Exhibits A, B, and C were submitted to the Commission in support of the Experimental License. The Exhibits were filed with the Office of Engineering and Technology on March 31, 2016. For additional information, please see File No. 0224-EX-PL-2016.

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 exhibits supporting the Experimental License discuss tests/experiments that include trade secret information. The Commission has clarified that confidential treatment should be afforded to trade secrets.⁷ Google's tests/experiments and proprietary wireless applications using

⁵ [REDACTED] EIRP/ERPs calculated for Antenna #2.

⁶ For [REDACTED] EIRP/ERP calculations, 0 dBi antennas assumed.

⁷ *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).

particular radio frequency equipment represent a “secret commercially valuable plan” within the meaning of a trade secret as recognized by the Commission.

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 Experimental License 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.

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 exhibits 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 exhibits is not available to the public, and will only be disclosed to third parties pursuant to the restrictive safeguards described above.

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 exhibits to the Experimental License 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, appearing to read 'Step Selmer', written over a light blue horizontal line.

Stephanie Selmer

EXHIBIT A - NARRATIVE STATEMENT

Consistent with the standards set forth in Section 5.63 of the Federal Communications Commission's (Commission's) Rules, 47 C.F.R. § 5.63, Google Inc. (Google) requests authorization to conduct demonstrations of [REDACTED] experimental transmitters in the San Francisco Bay Area. The experimental authorization is sought for a period of 24 months. Google outlines below its need for the requested authorization and the reasons why it should be granted expeditiously.

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All of Google's proposed experimental operations will comply with the Commission's Part 27 rules for Miscellaneous Wireless Communications Services, including out-of-license-area emissions and in- and out-of-band emissions limits.³ Google will also provide notice to [REDACTED] and resolve any objection from [REDACTED] prior to deploying new [REDACTED] or changing the parameters of existing [REDACTED]. Google has also committed to notify [REDACTED] immediately if it receives any complaints of interference and to ceasing operations on the leased transmission capacity until such issues are resolved. Because the operations will comply with the Commission's Part 27 rules, no interference to other commercial, civil, federal, or international users is expected.

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² [REDACTED] is included as Exhibit C.

³ See 47 C.F.R. Part 27.

EXHIBIT B - TECHNICAL INFORMATION

Applicant Name: Google Inc.
Applicant FRN: 0016069502

Legal Contact Details

Name of Contact	Stephanie Selmer
Contact Details	Associate Corporate Counsel 25 Massachusetts Avenue NW, Ninth Floor Washington, DC 20001

Technical Contact Details

Name of Contact	Tibor Boros
Contact Details	1600 Amphitheatre Parkway Mountain View, CA 94043 Phone: 650-214-6278 Email: tiboros@google.com

Transmitter Equipment and Station Details*Radio Information*

Equipment	[REDACTED]
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Orientation in Vertical Plane	Up to 30° mechanical downtilt (which will be adjusted to ensure 47 dBuV/m is met at site and license-area boundaries)

Antenna #2	[REDACTED]
Type	Directional panel
Quantity	[REDACTED]
Gain	8 dBi
Beam Width at Half-Power Point	Varies per [REDACTED] provider specification
Orientation in Horizontal Plane	Varies
Orientation in Vertical Plane	Generally 0° downtilt

Radio	Modulation	Emission Designator	Bandwidth	Maximum Power Out	Maximum EIRP/ERP
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¹ [REDACTED] EIRP/ERPs calculated for Antenna #1.

² [REDACTED] EIRP/ERPs calculated for Antenna #2.

[REDACTED]	Digital	5M00W7W	5 MHz	0.2 W	-6.990 dBW/ 0.0001 kW ³
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³ For [REDACTED] EIRP/ERP calculations, 0 dBi antennas assumed.

EXHIBIT C - [REDACTED]

[REDACTED]