



April 5, 2016

Via Electronic Filing

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

Re: Notice of Ex Parte Communication: Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band, GN Docket No. 12-354; Terrestrial Use of the 2473-2495 MHz Band for Low-Power Mobile Broadband Networks, IB Docket No. 13-213; Amendments to Rules for the Ancillary Terrestrial Component of Mobile Satellite Service Systems, RM-11685

Dear Ms. Dortch:

On April 1, 2016, Dr. Preston Marshall, Dr. Andrew Clegg, and I, all from Google Inc., met with Commissioner Rosenworcel and her Legal Advisor Johanna Thomas. On April 4, 2016, we met separately with Commissioner Pai and his Wireless Legal Advisor Brendan Carr; Edward Smith, Wireless Legal Advisor to Chairman Wheeler; Daudeline Meme, Wireless Legal Advisor to Commissioner Clyburn; and Erin McGrath, Legal Advisor to Commissioner O'Rielly. In each of these meetings we discussed the Citizens Broadband Radio Service (CBRS) rules for the 3.5 GHz band, as well as Globalstar's proposed Terrestrial Low Power Service (TLPS) that would occupy Wi-Fi Channel 14.

In these meetings, the Google representatives noted current interest being shown in CBRS by wireless carriers, equipment manufacturers, and chip suppliers, as well as the productive role the Wireless Innovation Forum (WinnForum) is playing in developing consensus among a large and diverse group of CBRS stakeholders. There are, for instance, 55 organizations currently developing 3.5 GHz band standards within the WinnForum's Spectrum Sharing Committee.

We expressed Google's support for CTIA's request to reconsider out of band emissions (OOBE) limits for CBRS devices, noting that LTE devices are available for the 3.5 GHz band and making them more readily usable for CBRS will speed and lower the cost of CBRS deployments. We pointed out that Google's propagation testing indicates the OOBE requirements can be relaxed as proposed by CTIA without material increased risk of harmful interference.¹ Dr. Marshall, Dr. Clegg, and I made these same points in a

¹ See Petition for Reconsideration of CTIA—The Wireless Association, GN Docket No. 12-354, at 5-6 (filed July 23, 2015).

telephone conversation on April 1, 2016, with Chris Helzer, Chief Engineer of the Wireless Telecommunications Bureau.

In our meetings with commissioners and their advisors, we further noted that basing spectrum access system calculations on the actual locations of CBRS access points is critically important to effective spectrum management. And we supported the engineering-based definition of "use," under which priority access license (PAL) holders receive a conservative level of protection for their actual operations, but are not entitled to exclude general authorized access (GAA) users from vacant spectrum.

Regarding IB Docket. No. 13-213 and RM-11685, we reiterated our support for the Commission to investigate increasing 2.4 GHz band Wi-Fi capacity by activating Wi-Fi Channel 14, while protecting Globalstar's licensed satellite operations. We observed that if the Commission were to allow Globalstar to test deployment of a proprietary Wi-Fi-type service in unlicensed 2.4 GHz spectrum on a preferential basis (which the Commission should not do), then such a trial should both protect and advance options for future use of Wi-Fi Channel 14 by the general public. At a minimum, Globalstar should be required to (a) publish all protocol(s) its Network Operating System (NOS) uses to authorize spectrum used by TLPS devices in Channel 14 and (b) demonstrate that the NOS is capable of exchanging with non-TLPS devices all information needed for spectrum use in Channel 14, without reliance on non-public protocols or standards.

Pursuant to the Commission's rules, this notice is being filed in the above-referenced dockets for inclusion in the public record. Please contact me should you have any questions.

Respectfully submitted,



Austin C. Schlick
Director, Communications Law
Google Inc.

cc: *Via electronic mail*
Meeting participants