



CP Communications

May 3, 2016

Via Electronic Filing

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

Re: Notice of Ex Parte Communication: *Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37; Amendment of Part 74 of the Commission's Rules for Low Power Auxiliary Stations in the Repurposed 600 MHz Band and 600 MHz Duplex Gap*; ET Docket No. 14-165; *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268
Ex Parte Filing of Google, Inc., April 29, 2016

Dear Ms. Dortch:

CP Communications, LLC ("CP") wishes to respond to an *ex parte* filing by Google, Inc. ("Google") dated April 29, 2016 relating to the discussion on April 28, 2016 with Alan Norman, Andy Lee, and Austin Schlick from Google with Geraldine Matise, Matthew Hussey, Paul Murray, and Hugh Van Tuyl of the Office of Engineering and Technology regarding pending petitions for reconsideration of the Commission's "push notification" requirement for unlicensed devices operating in television white spaces (TVWS) ("*Ex Parte Filing*").

CP is a leading source for the rental of wireless production equipment -- including wireless microphones, wireless in-ear monitors, wireless intercom and wireless cueing -- to the broadcast, theatrical, live event, film, corporate, entertainment and other industries. CP also sets up, manages, and supervises the operation of wireless equipment for its customers. CP's systems, both licensed and unlicensed, make extensive use of the UHF television band. CP thus has a significant stake in the Commission's final decisions regarding disposition of repurposed television broadcast spectrum.



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We wish to clarify and correct statements in the *Ex Parte Filing* that we believe are significantly inaccurate. These statements are likely to give those not familiar with all sides of the Part 15 and Part 74 spectrum issues an inaccurate impression of both the physics of the spectrum in question and the history the issues at hand.

Google states in the *Ex Parte Filing*, “The rule should require the TVWS devices operating on those [fast polling] channels to contact the database every 20 minutes while retaining **the proven daily re-check requirement** for all other channels.” See, *Ex Parte Filing* at p.1 (our emphasis added). This statement does not take into account that (a) there have been found to be significant errors in the geo-location databases with respect to TVWS device locations and channel assignments; (b) there are virtually no personal/portable TVWS in the marketplace today; (c) in several instances, pre-existing Part 74 wireless microphone registrations have disappeared from the databases without explanation; and (d) there are currently very few TVWS devices querying the databases (if at all), so the stresses of hundreds of thousands, if not millions, of devices polling those servers has not even been attempted. Under these circumstances, the geo-location database ecosystem as a whole is far from “proven”. If anything, the problems experienced to date with just a relatively small number of TVWS devices in the field give every indication of serious problems ahead once TVWS devices enter the market in substantial numbers.

Google goes on to state in the *Ex Parte Filing*, “The Commission historically has made two clear channels available on short notice to wireless microphones—the two channels reserved full-time for wireless microphones.” See, *Ex Parte Filing* at p. 2. However, these two reserved channels have been in existence only since 2010, and they were established only because of the introduction of TVWS devices. Under these circumstances, the word “historically” seems inappropriate. For the 50 years prior to 2010, Part 74 operations did not have co-channel secondary users, and thus had no need for “reserved” channels.

Finally, Google’s statement in the *Ex Parte Filing*, “Google’s proposal would leave wireless microphone operators no worse off than before, which is a very favorable outcome for them . . .” See, *Ex Parte Filing* at p. 2 is arguably the most inaccurate assessment of the forthcoming spectrum paradigm. Given that unlicensed wireless microphones will have no safe harbor spectrum going forward, and the 4 MHz for licensed microphones in the duplex gap will generally have a rather high noise floor making that spectrum very unreliable in most urban markets, especially given wireless microphones will be limited to only 20mW RF power output, the only “favorable outcome” is for TVWS stakeholders, not the content creators using wireless microphones.

It is important that the Commission and all parties in this very important proceeding understand how wireless microphones, wireless intercom, wireless in-ear-monitors and wireless queuing, and the physics of radio frequency operations, work in the real world. Such understanding is paramount to the continuing success of many companies’ operations, including Google, both for



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its corporate events and in their many YouTube studios throughout the U.S. Google's position does not realistically provide for the successful future accommodation of the needs of users of wireless microphones and related systems.

Respectfully submitted,

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