



August 3, 2015

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

Re: Notice of Oral *Ex Parte* Presentation

Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions, GN Docket No. 12-268

Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Band, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gaps, and Channel 37, ET Docket No. 14-165

Comment Sought on Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auctions 1001 and 1002, AU Docket No. 14-252

Dear Ms. Dortch:

On July 30, 2015, Michael Calabrese of New America's Open Technology Institute (OTI), Phillip Berenbroick of Public Knowledge, Matt Wood and Lauren Wilson of Free Press, and Colin Oldberg of Common Cause (collectively the "public interest advocates"), met with Commissioner Jessica Rosenworcel, her policy advisor Valery Galasso, and her wireless counsel, Johanna Thomas, concerning the above-referenced proceedings.

The public interest advocates reiterated widespread concern in the unlicensed spectrum community about the circulating proposal to relocate broadcast stations in the Duplex Gap in certain key markets, including possibly Los Angeles, which would likely preempt mass markets for next generation Wi-Fi that leverages the unique propagation characteristics of spectrum below 1 GHz. The advocates noted that the Commission's 2014 Framework Order explicitly decided that, under every auction scenario, the band plan would permit an 11 megahertz-wide

Duplex Gap to be used by unlicensed use in every market “nationwide.”¹ Consistent nationwide availability of a 6 megahertz channel for unlicensed use would also foster wireless innovation and grow the economy, since it would facilitate less costly single-frequency devices and applications related to the emerging “Internet of Things.”

The public interest advocates emphasized that the availability of at least three unlicensed channels in every market nationwide is the minimum needed to spur and sustain such innovations. Leading chip makers have stated repeatedly that access to a minimum of three unlicensed channels in every market is necessary to justify the investment needed to integrate the IEEE 802.11af standard for TVWS into Wi-Fi chips for smartphones, tablets and other mobile devices that would benefit from the greater penetration and range of such spectrum. Since the Duplex Gap represented one of these three channels, it remains critical that the incentive auction rules either avoid relocating TV stations in the Duplex Gap or, at a minimum, identify a substitute channel of 6 megahertz in the affected markets where unlicensed devices can operate at a power no less than 40 milliwatts.

The public interest representatives expressed appreciation and strong support for the ongoing efforts of Commissioner Rosenworcel and the auction team to explore whether a “second vacant channel” in the remaining TV band could be available for unlicensed use after the repack in those markets where it becomes necessary to place a TV station in the Duplex Gap. The advocates acknowledged that the Commission would need to seek further comment on this proposal, most likely in tandem with the separate and pending Vacant Channel NPRM. Nevertheless, the advocates explained that the Order the Commission votes on August 6 should at least tentatively approve the allocation of a “second vacant channel” for unlicensed use in any market where a TV station is relocated into the Duplex Gap.

The advocates also proposed that two additional policies be considered to reduce the need to locate TV stations in the Duplex Gap. First, the representatives suggested that uplink or downlink blocks that cannot be auctioned should also not be included in the calculation of the “national average impairment” threshold that determines whether the auction can close at a particular clearing target or must, instead, drop down to a lower clearing target (and hence a smaller auction). The population in blocks that are more than 50% impaired and are not auctioned should not count towards the “national average impairment” calculation because they do not impact the “impairment” that affects wireless carriers, which is the impairment of blocks that are sold in the auction and the resulting ratio of Category 1 and 2 blocks.

Second, the advocates suggested that the Commission consider preserving the option, at the end of the Reverse Auction, to buy out one additional TV station as an alternative to using the Duplex Gap. This option could be limited to a small number of very constrained markets

¹ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, GN Docket No. 12-268, 29 FCC Rcd 6567, ¶¶ 266, 270-271 (rel. June 2, 2014).

identified in advance by the Auction Team, such as Los Angeles. It could also be done on a very straightforward and simplified basis by offering the last TV station to drop out of the Reverse Auction the opportunity to accept the last price that it found acceptable (prior to dropping out). This would not encourage broadcasters to “game” the Reverse Auction, since any station that actually intended to sell their spectrum would need to gamble on the unknown and fairly unlikely odds that (a) the Commission would need one more station to avoid using the Duplex Gap, and (b) that the licensee would be the last station to drop out of the Reverse Auction before it closed.

Concerning the Part 15 NPRM, the public interest advocates stated they are pleased the draft Order will substantially improve the rules in ways that allow more robust use of the “TV White Spaces” by unlicensed devices. The advocates expressed support for the pending provisions that permit the use of 6 megahertz channel at a 40 milliwatts power level in the Duplex Gap, raise power limits in rural areas, permit channel aggregation, authorize the operation of very low-power personal/portable devices below Channel 21, and other improvements.

At the same time, the public interest advocates urged additional improvements, based on their understanding of the draft Order. First, the advocates suggested that the configuration of the Duplex Gap should be 4-6-1 (rather than the proposed 1-4-6) so that there is a 1 megahertz buffer between Wi-Fi and LTE Uplink.

Second, the advocates argued that the proposed exclusion zones around WMTS sites are grossly over-protective and could render Channel 37 unusable for unlicensed devices in large portions of urban areas. Despite the fact that the 300 meter exclusion radius proposed in the NPRM was already twice the distance that Google’s study had demonstrated is needed to protect WMTS operations inside hospitals, the draft Order reportedly increases the separation distance to 380 meters, a 75% increase in the overall size of the exclusion zone. The advocates reiterated that the TV Bands Database is capable of enforcing customized “protection zones” which would be far more spectrum efficient than one-size-fits-all “exclusion zones” that do not take account of real-world terrain or operating conditions. Phillip Berenbroick of Public Knowledge did not participate in the discussion of this issue.

Respectfully submitted,

/s/

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cc: Valery Galasso
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