



July 30, 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 28, 2015, Michael Calabrese of New America's Open Technology Institute (OTI), Harold Feld of Public Knowledge, Matt Wood of Free Press, and Todd O'Boyle of Common Cause (collectively the "public interest advocates"), met with Commissioner Mignon Clyburn, her advisor David Strickland, who is also a Senior Policy Advisor, Enforcement Bureau, and Misha Guttentag, Law Clerk, concerning the above-referenced proceedings.

The public interest advocates conveyed the widespread concern in the unlicensed spectrum community about the incentive auction team's recommendation 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

designate an 11 megahertz-wide Duplex Gap for unlicensed use in every market “nationwide.”¹ A consistent nationwide designation of a 6 megahertz channel for unlicensed use could also prove important for innovation and 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 unlicensed access to at least three channels nationwide is the minimum needed to spur and sustain such innovations. With such low-band spectrum available for unlicensed use, leading chip makers have promised investments 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, find 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 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 should be considered as a means of avoiding the need to locate TV stations in the Duplex Gap. First, the representatives suggested that uplink or downlink blocks that cannot be auctioned should not be included in the calculation of the “national average impairment” threshold that determines if 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 increase the “national average impairment” calculation because they do not impact the “impairment” that wireless carriers have focused on, which is the impairment of blocks sold in the auction and the resulting ratio of Category 1 and 2 blocks.

Second, the advocates suggested that the Commission should consider reserving 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 could be an option reserved for a very small number of very constrained

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).

markets 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 broadcast station to drop out of the Reverse Auction the opportunity to accept the last price that it was willing to accept (prior to dropping out). The advocates said they did not believe this would 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 they would be the last station to drop out of the Reverse Auction before it closed.

With respect to the Part 15 NPRM, the public interest advocates stated that they are pleased the draft Order will greatly improving 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 unlicensed 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 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 exclusion zones around WMTS sites are grossly over-protective and could render Channel 37 unusable for unlicensed devices in large portions of urban areas. The representatives noted that 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.

Finally, with respect to the incentive auction reserve, the public interest advocates reiterated their strong support for a single and simplified trigger of \$2.00 MHz/POP for the spectrum reserve to come into play. At the time the Commission adopted the “double trigger,” numerous estimates suggested that closing costs might be lower than the \$1.25 MHz/POP reserve price. The Commission therefore adopted the additional “double trigger” of \$1.25 in the top markets in the event that the closing cost for the auction fell on the lower end of these estimates.

In the wake of the AWS-3 auction, the situation is markedly different. The Forward Auction seems likely to raise far more than the Commission would need to pay broadcasters in the Reverse Auction. Moreover, auction economists have shown that the double-trigger can be gamed by the two dominant carriers. Verizon and AT&T will have both the incentive and the ability to selectively drive prices to foreclosure levels in the most critical top markets. If, as a result, the reserve is not triggered until well after the MHz/POP value exceeds the fair market value – and hits levels indicative of foreclosure pricing – this will defeat the entire purpose of the reserve. To achieve the purpose of the reserve and ensure that companies with little low-band spectrum pay fair market value rather than prices inflated by rivals seeking to foreclose competitors, the Commission should adopt a traditional reserve price trigger that will avoid any undue windfall while preventing such foreclosure.

The OTI representative mentioned a variation of a single \$2.00 MHz/POP trigger that could be considered as a means of preventing foreclosure pricing in the top 40 markets, while ensuring that all winning bidders contribute fairly to the cost of the auction and that the closing rule conditions will be satisfied. Once bids exceed \$2.00 MHz/POP in a top 40 market, the separation of bidding for the reserve spectrum could be triggered in that market only, with the reserve triggered on a nationwide basis only after the bidding exceeds \$2.00 MHz/POP in all 40 of the top markets (not just on average). Compared to either the draft Order – which risks foreclosure pricing strategies – or a single average \$2.00 MHz/POP trigger, this alternative market-by-market \$2.00 trigger could both minimize the risk of *both* anti-competitive foreclosure *and* of not meeting the closing rule conditions at a particular clearing target.

Respectfully submitted,

/s/

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