NEW AMERICA
FOUNDATION

August 19, 2013

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*;*
Policies Regarding Mobile Spectrum Holdings, GN Docket No. 12-269
Commercial Operations in the 3550-3650 MHz Band, GN Docket No. 12-354

Dear Ms. Dortch:

On August 15, 2013, Michael Calabrese of the New America Foundation, Harold Feld of Public Knowledge, and Todd O'Boyle of Common Cause met with Ruth Milkman and other staff from the Wireless Telecommunications Bureau[1] and, separately, with David Goldman, senior legal advisor to Commissioner Jessica Rosenworcel, on behalf of the groups affiliated with the Public Interest Spectrum Coalition (PISC) that filed jointly in the proceedings referenced above.

With respect to the incentive auctions proceeding, the public interest representatives emphasized that the public interest is best served by band plan, auction and repacking policies that strike a balance between broadcast stations, licensed mobile operators *and facilitating robust unlicensed nationwide*. We acknowledged that although last year's Spectrum Act imposed certain statutory guideposts and constraints, we urged the Staff to be mindful of the general statutory obligations that apply to auction design and license assignments: First, Section 309(j)(3), by which Congress established that competition and innovation are primary auction objectives; and second, Section 309(j)(7), by which Congress explicitly prohibits basing a public interest finding on the expectation of federal revenue.

[1] The public interest (PISC) representatives met with Wireless Telecommunications Bureau staff, including Bureau Chief Ruth Milkman, Jim Schlichting, John Leibovitz and Tom Peters.

We outlined the three primary policies identified in PISC's comments – and in the comments of other unlicensed proponents – that we believe are essential to ensure a sufficient amount of unlicensed access (30 MHz or more) in *every* market necessary to promote and sustain markets of national scope and scale for unlicensed chips, devices and services:

- Designation of an unlicensed and *contiguous* duplex gap (and/or guard band) of at least 20 MHz.
- Maintaining two designated channels for wireless microphones, but opening them for shared unlicensed use and requiring microphones to rely first on out-of-market TV co-channels that are not available to unlicensed devices.
- The opening of Channel 37 for unlicensed access subject to TV Bands Database-enforced exclusion areas for astronomy and WMTS.

With respect to wireless microphones, the PISC representatives voiced their continued strong support for maintaining two reserve channels for wireless microphones – at places and times needed – while opening that capacity for shared, unlicensed use to the extent possible. We emphasized there is no need to reserve TV channels *exclusively* for microphone use, since microphone operators have effective access to a large number of vacant TV channels that are not available for unlicensed use and that can meet their needs under ordinary circumstances. These additional channels that are not available for use by unlicensed devices fall into two categories: One is the unoccupied TV channels below Channel 21 that are not available for use by mobile TVBDs and that are available to fixed TVBDs (e.g., fixed wireless base stations and CPE) only in the rare (and mostly rural) locations where three consecutive channels are vacant. The second and far larger category includes channels where microphones have historically operated co-channel to broadcast stations in distant media markets. For example, in New York City a video production facility or Broadway theatre should have little concern about receiving interference from over-the-air TV signals originating in Bridgeport, Connecticut (60 miles away).

Under current rules, co-channel wireless microphone operations must be separated by a distance of at least 113 kilometers (70 miles) from the television transmitter.[2] However, in practice microphone operators feel comfortable operating at considerably shorter separation distances, particularly at indoor venues. For example, as PISC documented in its comments in this proceeding, at the Rockefeller Center in New York City (home to TV production facilities for NBC Universal), while the TV Bands Databases show no channel available for unlicensed use, microphones have at least 18 vacant TV channels that are effectively available for their use. Microphone manufacturer Shure Inc. maintains a microphone channel look-up database online that shows that in addition to channels 22 and 42, which are reserved exclusively in New York, there are 7 non-TVWS channels available with no broadcaster operating within 70 miles (the FCC separation distance); plus an additional 6 channels with no broadcaster operating within 50

[2] *Incentive Auctions NPRM* at ¶ 223, citing 47 C.F.R. § 74.802(b)(3).

miles; and yet another 4 channels with no broadcaster operating within 10 miles.[3] These 22 channels are capable of accommodating as many as 374 microphones in a single location – although Shure's look-up database recommends 7 or 8 per channel (154 to 176 microphones).

Reservations in the TV Bands Databases maintained by Spectrum Bridge and Telcordia show that use of both non-local and even local TV co-channels is a common practice. For example, at its TV production facilities at the Rockefeller Center, NBC Universal regularly reserves non-TVWS channels that are co-channel to distant (and not so distant) TV stations – including five (two of which were channels licensed to local stations) on the date noted in PISC's comments.[4] We also noted that in Washington, D.C., on the date of President Obama's second inauguration, NBC reserved four out-of-market TV co-channels that are both closer than the current 70-mile separation distance and are channels not available in D.C. for unlicensed use. [5]

Although we acknowledged that professional microphone operators need the two reserved channels for certain very large and complicated events (e.g., televised professional sports, major civic events, multi-performance venues such as the Kennedy Center), we believe that on a day-to-day basis microphones can rely first (as they do now) on out-of-market TV co-channels that are *not* available for unlicensed use. We reiterated our proposal, set forth in PISC's comments, that the Commission should authorize microphone operation on a far larger number of out-of-market TV co-channels. Moreover, the Commission should require both unlicensed and Part 74 microphones to first use non-TVWS channels and, when this is not sufficient for a particular event, request reservations on the two reserved channels through the TV Bands Database. Coordination through the TVDB will both facilitate non-interfering use among microphone operators and help to ensure the availability of channels for unlicensed use in every market.

The public interest advocates also reiterated their support for a generally uniform band plan that (at least in the case of an FDD band plan) ensures a contiguous duplex gap and optimizes – but is limited to – paired spectrum useful to competitive carriers. Market variation was never suggested during legislative process that authorized incentive auctions and should not undermine the viability of the unlicensed economy merely to create additional unpaired Supplemental Downlink (SDL) that would be useful only to the two dominant wireless carriers. The groups also noted that at a minimum there should be no unpaired FDD spectrum assigned below Channel 37. The groups did not express a position concerning a preference for TDD.

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[3] http://www.shure.com/americas/support/tools/wireless-frequency-finder

[4] The out of market TV co-channels reserved by NBC-U were Channels 29 (WFME in West Milford, NJ – 14 miles distant), Channel 30 (WFUT in Newark, NJ – 11 miles away), and Channel 51 (WNJN in Montclair, NJ – 13 miles away). Compiled based on publicly available microphone reservation data in the TVDB hosted by SBI, accessed Jan. 21, 2013.

[5] Compiled based on publicly available microphone reservation data in the TVDB hosted by SBI, accessed Jan. 21, 2013. The TV channels corresponded to stations in Baltimore, Frederick, Maryland, and Front Royal, Virginia.

The PISC representatives have also observed that large portions of 600 MHz band spectrum will remain unused in large portions of the country for many years after the incentive auction – and many rural and small town areas may not be built out even at the end of the initial license term. PISC's comments therefore proposed that all new 600 MHz licenses should include a condition that permits unlicensed white space devices to operate on a localized basis until such time as the licensee notifies the Commission and a TVDB administrator that the licensee intends to commence service. This maintains the status quo, since under current rules unoccupied 600 MHz spectrum does not lie fallow but can be *used* for broadband services, subject to automatic protections for incumbents enforced by the TV Bands Database (TVDB). Licensees lose no rights whatsoever and bear a *de minimus* burden to simply inform the Commission and/or one TVDB administrator 30 days (or possibly more) prior to commencing substantial service in a particular local area. Unlicensed devices can be immediately denied permission to operate.

We believe any concern about the inevitable disruption of temporary unlicensed use of a 600 MHz channel – when the licensee commences service – is unlikely (given the clarity of the rules) but in any case can be mitigated in at least two ways: First, by requiring a longer notice period (e.g., 90 days), during which the TVDBs can flag the channel and/or send notices that it will not be available after some future date. Second, by requiring that no licensed but unoccupied white space channel can be utilized except by TV Bands Devices that have been certified to be multi-channel and frequency hopping, as all existing 802.22 equipment is currently, to our knowledge. This would eliminate the risk that a WISP or other unlicensed operation would rely solely on frequencies that will later be removed from the list of available channels for unlicensed use.

The public interest representatives further noted that repacking and relocation will have an enormous impact on the future of the unlicensed economy. We asserted that repacking should be carried out with a goal of optimizing the usefulness of vacant TV band spectrum for rural broadband and other higher-power applications, since under current rules it requires three consecutive White Space channels for WISPs to provide fixed wireless service. We reiterated our support for a proposal by the Wireless Internet Service Providers Association (WISPA) that would permit higher-powered operation on the middle six megahertz of two consecutive vacant TV White Space channels for fixed broadband operations, since this would accommodate a three megahertz guard band on each side of the higher-power broadband transmission.

The PISC representatives further recommended that the Commission adopt a policy of vigorously enforcing its rules to ensure that LPTV, translator and booster stations that are not entitled to interference protection also do not have protected status in the TV Bands Database. While many LPTV stations serve the public interest and enhance diversity, too many are not operating or are occupying far more spectrum than needed for a single digital stream of content. We noted that PISC, in its comments, recommended that the Commission consider requiring secondary broadcast licensees to co-locate and share a single 6 MHz channel where feasible without reducing their free over-the-air broadcast service to the community.

With respect to 600 MHz auctions, the PISC representatives expressed their support for the adoption of a sub-1 GHz spectrum holdings limit a pre-auction rule of general applicability. Low frequency spectrum is uniquely valuable, particularly for entrants and competitive carriers, with an enormous foreclosure value to the two dominant carriers that already hold 80% of the available CMRS spectrum below 1 GHz. We urged completion of the general proceeding on aggregation limits prior to 600 MHz auction rules.

Finally, PISC representatives reminded Wireless Bureau staff that, at the guard band workshop held on May 3, the Bureau committed to an additional workshop on unlicensed use. The public interest advocates suggested that an additional public notice focusing on the impact of the incentive auctions and repacking on unlicensed access and operations could provide useful inputs. We noted that a number of outstanding issues related to the future viability of the band for unlicensed use, including decisions related to wireless microphone operations and secondary broadcast licensees, are not receiving adequate attention or discussion.

With respect to the 3.5 GHz band proceeding, the group reiterated PISC's support for the "Citizen's Broadband Service" concept generally as proposed in the NPRM. More small cell band sharing is the most pro-consumer means of meeting exploding mobile data demand. We reiterated the strong support in PISC's comments and reply comments for the proposed 3-tier access model for federal spectrum sharing based on last year's PCAST recommendations. Most critically, the Commission's proposed 3-tier model – governed by a neutral Database mechanism (Spectrum Access System) – provides a framework for sharing additional Federal bands beyond 3.5 GHz. PISC advocates that a majority of 3550-3700 MHz band should at least initially be available only for General Authorized Access (GAA) to ensure markets of national scope and avoid the fragmentation and big city availability problems that undermine the utility of TV White Spaces. Conversely, only a portion of the band, such as the 50 MHz total proposed in the NPRM, should initially be designated for exclusive secondary licensing (Priority Access) that would preclude a substantial and certain new allocation of unlicensed spectrum. We noted that the proposed geolocation database management system gives the Commission the flexibility to revise this relative allocation in the future depending on actual future use of PA and GAA.

Respectfully submitted,

/s/

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