NEW AMERICA
FOUNDATION

May 9, 2014

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, Docket No. 12-269

Dear Ms. Dortch:

On May 8, 2014, Michael Calabrese of the New America Foundation and Harold Feld of Public Knowledge, on behalf of the Public Interest Spectrum Coalition (PISC), met with David Goldman, Legal Advisor to Commissioner Jessica Rosenworcel.

Incentive Auctions and Unlicensed Access

The PISC representatives conveyed strong support for changes to the incentive auction band plan that would facilitate nationwide markets for unlicensed innovation and connectivity in the low-band spectrum below 700 MHz. We stated that each of the changes each of the changes enumerated just below are essential to fulfilling the NPRM's stated goal to adopt a balanced policy that ensures both a successful auction *and* multiple channels of unlicensed spectrum useful for wireless *broadband* to close coverage gaps and promote innovation. As Commissioner Rosenworcel stated in her prescient speech at the WifiForward conference on Tuesday:

> So I think it is time for an unlicensed spectrum game plan. It should no longer be an afterthought in our spectrum policy. . . . It takes high-band, mid-band, and low-band spectrum. . . . Low-band spectrum can go far and wide, and as a result is ideal for larger-scale Wi-Fi deployments and machine-to-machine communications. To build powerful wireless communications systems, you need a playbook that includes all three.

Retaining at least one of the two existing reserve channels for reservation by Part 74 licensees – and allowing shared access by unlicensed devices when and where reservations are not made (including by unlicensed wireless mics) – is squarely within the Commission's authority. Although the Middle Class Tax and Job Relief and Job Creation Act of 2012 restricts the Commission's discretion with respect to allocating spectrum cleared by the purchase of spectrum rights from TV broadcasters through the reverse auction (Section 6402), the statute explicitly does not limit the Commission's authority or discretion with respect to the assignment or reallocation of spectrum that is currently not assigned to broadcast stations or spectrum that remains within the TV band allocation post-auction (Section 6403).

PISC has repeatedly stated that a balanced policy more in keeping with the intent of the statute and compromise it represents would include the following policies necessary to avoid killing the anticipated benefits of a nationwide market for unlicensed broadband connectivity, chips, devices and services incorporating the now-completed 802.11af standard:

- **The Order should find that a duplex gap of least 11-to-12 MHz wide is technically reasonable.** This is clearly supported in the record and the minimum necessary to accommodate a 6 MHz unlicensed channel consistent with current TVWS rules. Indeed, there is nothing in the record to support a duplex gap of less than 10-to-18 MHz. There is also widespread support in the record for a core common band plan with a duplex gap that is consistent in size regardless of the amount of spectrum auctioned.

- **The Order should definitively restrict use of the duplex gap and lower guard band to unlicensed devices, as Congress intended**, **with no ability of Part 74 wireless microphone licensees (including broadcast ENG) to make reservations that block use of this very limited contiguous unlicensed band.** While we agree that the use of microphones for broadcast news reporters in the field is important, the very narrow 200 kilohertz channels required can be accommodated in locally-vacant TV channels that are *not* available for unlicensed use, as explained further below. In addition, the Commission could examine in a microphone FNPRM whether the portion of the duplex gap that is *not* available for unlicensed use can be used exclusively (if need be) for broadcast ENG.

- **Maintain one or both channels currently designated for wireless microphones** – to ensure microphone operators licensed under Part 74 have a go-to channel – and designate the channel(s) post-auction. The channel should be available for unlicensed devices where and when it's not in use, subject to protecting microphones that make reservations via the TV Bands Database.

- **Permit unlicensed access to Channel 37 subject to TV Bands Database** – enforced by the minimum exclusion areas necessary to protect radio astronomy and WMTS.

The advocates also clarified that PISC is asking the Commission to respect Congressional intent by assigning sufficient and technically reasonable guard bands *only* for unlicensed use. We stated that proposals by Part 74 microphone interests to reserve 200 KHz channels in the duplex gap that would block 6 MHz of unlicensed use are unnecessary to ensure that electronic news gathering and other critical microphone operations have safe channels in the ongoing TV band. First, as noted above, as part of the repacking process the Commission can assign at least one and preferably two of the remaining channels in each market for wireless microphone reservations. In most markets Channel 36 is already designated as a microphone channel, although there is no need for this shared microphone/unlicensed channel to be contiguous nationwide.

Second, Part 74 microphone operators can rely and do rely regularly on the many unused local TV channels that are *not* available for use by unlicensed devices. Since it is not possible, given the broadcast viewership protections in the statute, for the Commission to repack TV stations in a market on every single channel, we asserted that there will certainly continue to be a number of locally-vacant channels in every market nationwide where Part 74 microphones can be permitted to make reservations for safe use of their low-power microphones. The *TV White Spaces Second MO&O* made general reference to these additional channels several times:

> The two reserved TV channels will accommodate a minimum of at least 16 wireless microphones, and the additional channels that are not available for TVBDs at most locations will accommodate many additional wireless microphones. . . . Such entities may consult with a TV bands database to identify the reserved channels at their location, as well as the TV channels that may not be available for TV band devices.[1]

Wireless microphones have historically operated co-channel to broadcast stations in distant media markets and continue to do so. For example, in New York City a video production facility or Broadway theater should have little concern about receiving interference from over-the-air TV signals originating in Bridgeport, Connecticut (60 miles away) or possibly even Newark, New Jersey (11 miles). Indoor venues are particularly shielded from distant TV signals. PISC documented in its initial comments in this proceeding that at the Rockefeller Center in New York City (home to TV production facilities for NBC Universal), the Shure Inc. microphone channel look-up database shows that in addition to channels 22 and 42, which are reserved exclusively for microphones, there are 10 non-TVWS channels available with no broadcaster operating within 70 miles (the FCC separation distance governing mic use); plus an additional 6 channels with no broadcaster operating within 50 miles; and yet another 4 channels with no broadcaster operating within 10 miles.[2] At these distances, 200 KHz microphones operating at powers under 200 mW offer no risk of interference to television viewers in surrounding markets. In contrast, the TV Bands Databases show only one vacant channel available for unlicensed use.

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[1] *TV White Spaces Second MO&O* , at ¶ 14-15.

[2] *See* http://www.shure.com/americas/support/tools/wireless-frequency-finder; Comments of the Public Interest Spectrum Coalition, Docket No. 12-268, *et al.* (Jan. 25, 2013) at 32-37.

Part 74 mic operators will continue to have some number of these locally-vacant TV co-channels available post-auction, particularly along the eastern seaboard and in other regions where cities and broadcast DMAs are relatively close together. And outside of those regions where large urban DMAs are relatively close together (such as metro New York), there is no chance of a shortage of vacant TV channels post-auction. This is also relevant to our proposal that one or both of the channels currently reserved for wireless mics be maintained in the ongoing broadcasting band. There is clearly no basis for claims that a set-aside channel for wireless microphone reservations and opportunistic unlicensed broadband devices would deprive any current broadcast station, primary or secondary, of a channel slot. In rural and smaller city DMAs, as well as in DMAs far from other metropolitan areas (e.g., Denver), there will inevitably be a considerable number of vacant channels post-auction.

From a consumer perspective, the far greater concern in both congested urban markets and in rural or small city markets is that a failure to ensure a sufficient amount of unlicensed spectrum *in every market nationwide* will cripple the development of White Space technology, particularly the 802.11af Wi-Fi standard. Even if a limited market for WISP and other wide-area deployments in rural areas, the costs will be much higher and future innovation much slower than it would be if chip and equipment companies had the certainty and incentives inherent in nationwide availability of four or more channels of unlicensed access.

Spectrum Holdings Limits

With respect to the specific rules for the 600 MHz incentive auction, we reiterated the points made in PISC's separate filing earlier that afternoon.[3] While PISC supports the Chairman's proposed framework, we reiterated that the current reported proposals for both of the above-captioned dockets do not go nearly far enough to truly promote competition. With respect to the Incentive Auction, the Commission should consider capping the amount of low-band spectrum that the dominant providers can capture (the so-called "unreserved" spectrum) rather than capping the spectrum reserved to promote competition. In light of the dramatic expansion of the spectrum screen contemplated by the Commission in the Mobile Spectrum Holdings proceeding, further opening the door to future acquisitions and consolidation by AT&T and Verizon, **the current proposal to hold approximately 30 MHz (depending on the amount of spectrum that is reclaimed) in reserve for non-dominant carriers constitutes the *bare minimum* needed to promote competition.**

While we acknowledged that the proposed trigger for a "reserved" spectrum in each market for carriers without substantial holdings is intended to promote competition, we warned that it might have the unintended effect of simply locking in the status quo. Today, two carriers are

[3] *Ex Parte* Letter from Public Interest Spectrum Coalition to Marlene H. Dortch, Docket Nos. 12-268 & 12-269, at 1 (May 8, 2014).

dominant due in part to the advantage of disproportionate holdings of low-band spectrum. Under the proposal as we understand it, in every market AT&T and Verizon would be able to gain substantial spectrum, regardless of any screen, with less than half of the spectrum in each market reserved for competitors. For example, a 30 megahertz "reserve" in a 35-by-35 megahertz auction would permit the two dominant carriers to acquire *at least* 40 of the 70 megahertz – leaving the overall foreclosure of sub-1 GHz spectrum largely unchanged from today. And yet AT&T and Verizon insist that they need an unreserved band of at least 40 MH under any circumstances, so that they may each be sure of capturing 20 MHz of new low-band spectrum. Yet in that scenario they would insist that the entire remaining wireless industry should compete against each other for a total 20 MHz reserve, or none at all.

A better approach would be to ensure that all carriers can bid in each market, but to structure the auction so that the dominant carriers bid against each other – driving revenues higher while also promoting competition. To that end, **the Commission should, at a minimum, designate only 20 or at most 30 megahertz as "non-reserved" spectrum with the rest "reserved" to enhance competition.**

The PISC representatives also voiced concern that the one-third eligibility limit would be counterproductive if it applied to smaller rural and regional carriers, such as US Cellular in certain markets, that do not have a dominant competitive position on a national basis – and therefore are already at a disadvantage (with respect to scale, access to devices and interoperability) when competing against any of the four national carriers. **Therefore, as the Department of Justice has recommended, the Commission should enhance the Chairman's proposed framework by adding a national eligibility requirement for reserved spectrum in addition to a local eligibility requirement.** A dual eligibility requirement would more accurately reflect market power while still allowing AT&T and Verizon to bid on reserved blocks of spectrum in areas where they do not hold excessive low-band spectrum.

The PISC representatives also expressed concerns with reports on the current proposals for an updated transaction screen on spectrum holdings and limits on bidders in the 600 MHz incentive auction. We asserted it would be counterproductive to add new spectrum to the screen without applying a weight that recognizes that different frequencies have substantially different utility and impacts on competition. New spectrum should not be added to the screen until the Commission adopts a weighting system. Although there is a substantial record on the question of weighting high-, middle- and low-band spectrum, it would be far better to delay final adoption and seek further comment than to adopt the screen as proposed.

Respectfully submitted,

/s/
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