



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, Harold Feld of Public Knowledge, and Matt Wood of Free Press, on behalf of the Public Interest Spectrum Coalition (PISC), met with Commissioner Michael O’Rielly and his Legal Advisor for wireless issues, Erin McGrath.

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 urged adoption of the changes enumerated to fulfill 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.

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 to avoid losing 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.

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 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).

The advocates emphasized 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 communities. In contrast, the TV Bands Databases show only one vacant channel available for unlicensed use.

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 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. 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,

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.

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 under that scenario there might still be a limited market for WISP and other wide-area deployments in rural areas, the costs would 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.

Respectfully submitted,

/s/

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cc: Erin McGrath