



NEW AMERICA
FOUNDATION

May 8, 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 6, 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 Adonis Hoffman, Chief of Staff and Senior Legal Advisor to Commissioner Mignon Clyburn, and Louis Peraertz, Wireless Legal Advisor to Commissioner Clyburn.

The PISC representatives conveyed the continuing concern in the public interest community about whether the incentive auction band plan will be a balanced policy that remains faithful to the Commission's longstanding goal – a goal reiterated in the NPRM – to facilitate nationwide markets for unlicensed innovation and connectivity in the low-band spectrum below 700 MHz.

We asserted that the NPRM's stated goal to adopt a balanced policy will be thwarted if the band plan does not ensure multiple channels of unlicensed spectrum useful for wireless *broadband* to close coverage gaps and promote innovation. 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). The advocates also clarified that PISC is not asking the Commission to

use incentive auction revenue to clear a contiguous channel for reallocation to unlicensed use, but that we are asking the Commission to respect Congressional intent by assigning sufficient and technically reasonable guard bands *only* for unlicensed use.

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. Allocating the guard bands to contiguous unlicensed use was a hard-fought compromise specifically intended by Congress in the Spectrum Reform Act of 2012. 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 emphasized that proposals by Part 74 microphone interests to make reservations in the duplex gap that would block 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 (see, e.g., the attached channel allocations for Columbia and Orangeburg, SC), 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.

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 the regions (such as metro New York) where large urban DMAs are relatively close together, 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 rural and smaller city

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.

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.

For example, the two-page appendix attached to this letter shows the current distribution of channels in South Carolina's capital city, Columbia, and in nearby Orangeburg. These charts are based on information from the TV Bands Database and were prepared to inform the potential deployment of a TV White Space network to fill coverage gaps at several historically Black colleges in the area, as well as to and extend basic connectivity to their surrounding communities. I

In Columbia, there are only five broadcast licensees operating above Channel 37 and 16 vacant channels in the UHF channels between 14 and 37 into which they could potentially be relocated. And in Orangeburg there are only four broadcast licensees operating above Channel 37 and 15 vacant channels in the UHF channels between 14 and 37 into which they could potentially be relocated. 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.

From a consumer perspective, the far greater concern in either type of market – from New York City to more exurban Orangeburg – 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 rural TVWS deployments continues in states like South Carolina, 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.

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. PK and OTI believe 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. We stated that new spectrum should not be added to the screen until the Commission adopts a weighting system. We also noted that as a general matter, and especially here, clear rules are preferable to "enhancement factors" and other subjective criteria. Although there is a substantial record on the question of weighting high-, middle- and low-band spectrum, it would be better to delay final adoption and seek further comment than to adopt the screen as proposed.

With respect to the specific rules for the 600 MHz incentive auction, while we acknowledged that the proposal to set aside "reserve" 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 dominant due in part to the advantage of disproportionate holdings of low-band spectrum. Under the proposal as we understand it, in each market both 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.

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 cap should be on non-reserved spectrum available to carriers already controlling one-third or more of the low-band spectrum in a market – and not on new entrants and competitive carriers seeking sufficient sub-1 GHz spectrum to have a hope to compete.

Respectfully submitted,

/s/

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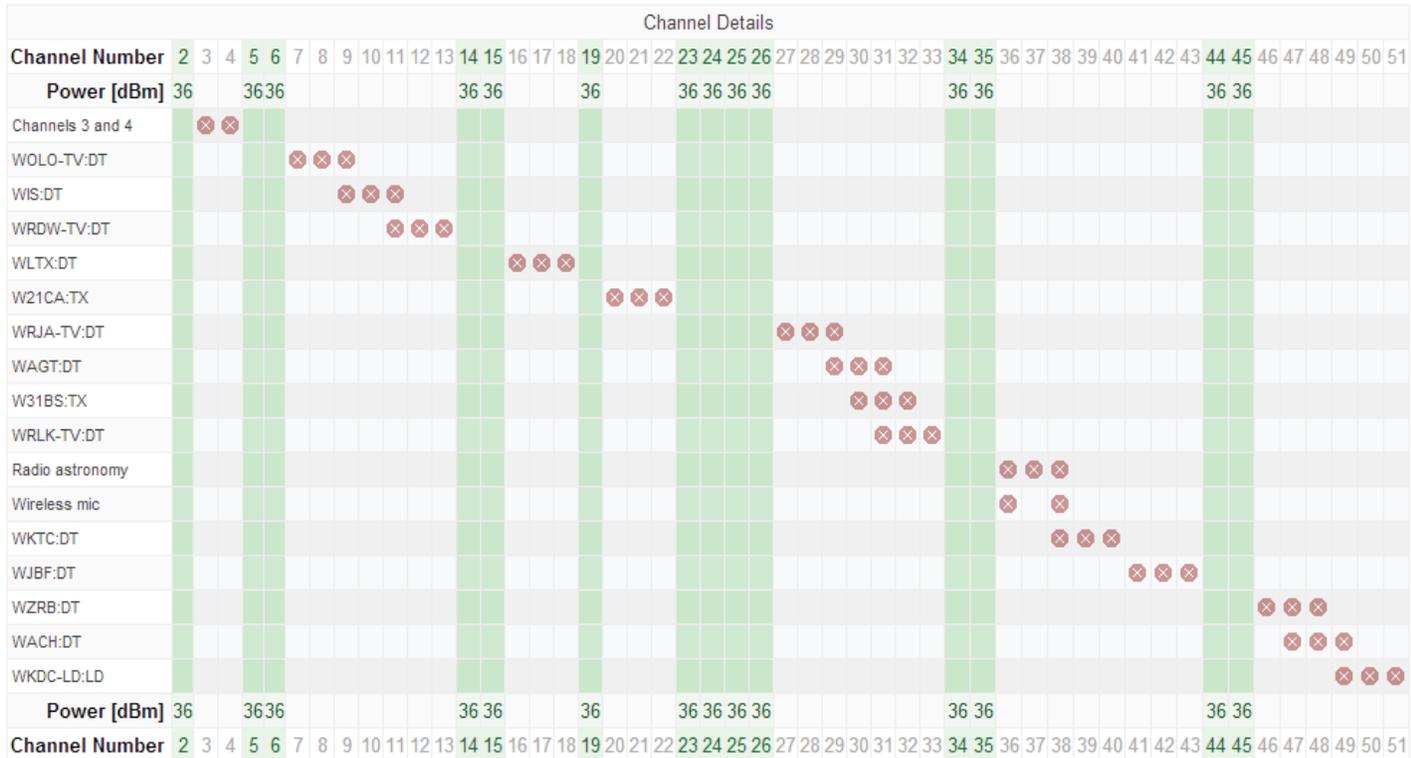
cc: Adonis Hoffman
Louis Peraertz

Appendix

Columbia, South Carolina: Allen University & Benedict College

Full Power (Fixed) Unlicensed Channels (shaded in green):

Available Spectrum: 14 Channels (84 MHz)



Total broadcast band channels: 48

Total channels occupied by broadcast licenses in TV Bands Database: 14

Total channels reserved exclusively for microphones: 2 (chs 36 and 38)

Total unoccupied channels available for full-power (fixed access) unlicensed use: 14*

Total unoccupied channels available for low-power (personal/portable) unlicensed use: 17**

* Note: Fixed TVWS channels must be the middle channel of three consecutive vacant channels.

** Note: Personal/Portable device use is not allowed below channel 21. In Columbia the 17 total channels include 8 fixed TVWS channels above channel 20, plus 9 additional channels immediately adjacent to a broadcast station (on which personal/portable TVBDs are authorized to operate).

