

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of)	
)	
Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions)	GN Docket No. 12-268
)	
Policies Regarding Mobile Spectrum Holdings)	WT Docket No. 12-269
)	
Competitive Bidding Procedures for Broadcast Incentive Auction 1000, Including Auction 1001 and 1002)	AU Docket No. 14-252
)	
Amendment of Parts 15, 73 and 74 of the Commission’s Rules to Provide for the Preservation of One Vacant Channel in the Television Band for Use by White Spaces Devices and Wireless Microphones)	MB Docket No. 15-146
)	

**COMMENTS OF SENNHEISER ELECTRONIC CORPORATION
IN SUPPORT OF NAB PETITION FOR RECONSIDERATION**

Sennheiser Electronic Corporation (“Sennheiser”)¹ hereby comments in support of the Petition for Reconsideration filed by the National Association of Broadcasters (“NAB”) in the above-captioned Federal Communications Commission (“FCC” or “Commission”) proceedings.² Sennheiser supports NAB’s request for reconsideration of the Commission’s determination to relocate television stations into the Duplex Gap in certain markets, as the proposed alternative

¹ Sennheiser, part of Sennheiser Electronic GmbH & Co. KG, which is based in Germany, is a global leader in advanced microphone technology, RF-wireless and infrared sound transmission, headphone transducer technology, and active noise cancellation. Sennheiser has participated extensively in the Commission’s proceedings involving wireless microphones and the 600 MHz and television bands.

² *In the Matter of Promoting Spectrum Access for Wireless Microphone Operations; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Petition for Reconsideration of the National Association of Broadcasters, Docket Nos. 12-268, 12-269, 14-252 and 15-146 (filed Sept. 15, 2015) (“Petition”).

does not sufficiently allow for the reservation of spectrum for hyper-critical wireless microphone use.

DISCUSSION

Wireless microphones require clear, reliable channels in frequencies with good propagation characteristics (*i.e.* the TV bands and 600 MHz spectrum). Given the sensitivity of wireless microphone receivers and their real-time operational requirements, sharing spectrum with white space devices (“WSDs”) undermines the utility of spectrum for wireless microphone operations. This is especially true for wireless microphone licensees that require hyper-critical links for when there is no “second chance,” *i.e.*, breaking news, film production, professional concerts and theater, and historic political and civic events.

During the course of recent proceedings leading up to the Incentive Auction, the Commission first eliminated the two reserved channels in UHF for wireless microphone use and then changed course from its initial proposal to set aside 4 MHz in the Duplex Gap in every market for exclusive use by wireless microphone licensees.³ The Commission proposes instead that, in markets where it reassigns a television station in the Duplex Gap, it will set aside a second “preserved white space” channel for shared use between WSDs and wireless microphones.⁴ While licensed wireless microphone users would be able to register for protection from WSDs on these shared channels, this process does not provide for immediate exclusive use of the channel(s). Rather, the newly adopted rules call for a 30 minute push notification

³ Public Notice, *Procedures for Competitive Bidding in Auction 1000, Including Initial Clearing Target Determination, Qualifying to Bid, and Bidding in Auctions 1001 (Reverse) and 1002 (Forward)*, at ¶ 28 (rel. Aug. 11, 2015) (“We decline to restrict the optimization procedure from assigning TV stations to the uplink, downlink and/or duplex gap portions of the 600 MHz Band in order to carry out the clearing target objectives.”).

⁴ The Commission’s plan calls for each market to have at least one “preserved white space” channel to be shared by wireless microphones and WSDs.

clearance process, *i.e.*, ten minutes for database administrators to notify other administrators plus 20 minutes for all administrators to notify WSDs to clear the channel. The Commission explained:

When these two vacant channels are no longer available for [wireless microphone] exclusive use, [licensed wireless microphone users] will have to contact a database and request channels for immediate use. We conclude that for these occasions, we will require that database administrators “push” information to white space devices in the area where the licensed wireless microphones will be used, notifying them of changes in channel availability, rather than require all white space devices to re-check a database every twenty minutes.⁵

This thirty minute wait is inadequate for fast breaking news, when newscasters need to get on the air and begin reporting news – often emergency and public safety related – as soon as possible.

The Commission’s policy fails to provide for certainty that wireless microphone users will be able to immediately access a channel when needed. The Commission’s about-course greatly impacts the wireless microphone community involved in breaking news. And it will create complexity in planning for wireless microphone professionals who operate around the country and will need to consider different operational requirements for different markets.

For these reasons, Sennheiser agrees with NAB that the Commission should preserve the duplex gap for use by wireless microphones, and unlicensed operations, in all markets.

⁵ *Amendment of Part 15 of the Commission’s Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37, and Amendment of Part 74 of the Commission’s Rules for Low Power Auxiliary Stations in the Repurposed 600 MHz Band and 600 MHz Duplex Gap*, Report and Order, at ¶¶ 273 and 274 (rel. August 11, 2015).

CONCLUSION

Wireless microphone users require clear spectrum for hyper-critical wireless microphone use. Placing television stations in the Duplex Gap will eliminate in those markets the one sliver of spectrum set aside solely for licensed wireless microphone users in the 600 MHz band. The Commission should reconsider this policy.

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September 21, 2015

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Comments of Sennheiser Electronic Corporation in Support of NAB Petition for Reconsideration, was sent by United States mail, first class postage prepaid, on this 21st day of September, 2015, to the following:

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