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May 8, 2014

VIA ELECTRONIC FILING

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

Re: *EX PARTE* NOTICE

Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268; Revisions to Rules Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band, WT Docket No. 08-166; Public Interest Spectrum Coalition, Petition for Rulemaking Regarding Low Power Auxiliary Stations, Including Wireless Microphones, and the Digital Television Transition, WT Docket No. 08-167; Amendment of Parts 15, 74 and 90 of the Commission's Rules Regarding Low Power Auxiliary Stations, Including Wireless Microphones, ET Docket No. 10-24

Dear Ms. Dortch:

On May 6, 2014, I and a broad coalition of parties representing wireless microphone interests identified on the attached list had a series of meetings with Priscilla Argeris, Legal Advisor, Office of Commissioner Rosenworcel, Commissioner Michael O'Rielly, Courtney Reinhard, Senior Legal Advisor and Chief of Staff, Office of Commissioner O'Rielly, Erin McGrath, Legal Advisor, Office of Commissioner O'Rielly, Commissioner Mignon Clyburn, Adonis E. Hoffman, Chief of Staff, Senior Legal Advisor, Office of Commissioner Clyburn, Louis Peraertz, Legal Advisor, Office of Commissioner Clyburn, Commissioner Ajit Pai, Matthew Berry, Chief of Staff, Office of Commissioner Pai and Brendan Carr, Legal Advisor, Office of Commissioner Pai.

A broad cross-section of wireless microphone stakeholders participated. We expressed appreciation for the steps that the Commission staff has taken to recognize the critical importance of wireless microphone operations to many sectors and responded to the most recent recommendations regarding wireless microphones in the Report and Order in the above-referenced dockets to be discussed at the Commissioners' May 15, 2014 meeting.

On behalf of broadcasters, wireless microphone manufacturers, content providers, professional users, and frequency coordinators, we discussed the essential role that

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wireless microphones play in today's modern productions in broadcasting and cable TV, including breaking news, music, theater, sports, business, and education delivered via traditional broadcasting, cable TV and broadband services.¹ Productions using professional wireless microphones operating in UHF frequencies deliver enormous public safety, economic, cultural, commercial, and educational value to the American public.

In a few short years, the FCC has dramatically reduced UHF frequencies available for wireless microphones disproportionately burdening wireless microphone users and manufacturers. We briefly discussed the impact of multiple changes that have occurred in the Commission's rules starting with the DTV transition, the transition of wireless microphones out of 700 MHz frequencies, and the development of sharing requirements in the Commission's white spaces rules which together have drastically reduced the amount of spectrum exclusively available for wireless microphone operations at the same time that demand for wireless microphone operations has soared. Prior to 2008, wireless microphones had access to all available white space within the 54 UHF channels (324 MHz) of spectrum on an exclusive basis. In 2010, that exclusive spectrum was reduced to two channels (12 MHz) under the white spaces rules. Now the planned broadcaster repacking and auction are purported to reduce the number of channels available for exclusive wireless microphone use to as little as four (4) MHz, i.e., less than one TV channel.

We pointed out that wireless microphone users have extensive embedded equipment operating in the UHF band much of which was recently purchased as a result of the displacement from 700 MHz frequencies and changes following the white spaces proceeding. We requested that any change in Commission rules enable wireless microphones to continue operating in the 600 MHz spectrum to be auctioned for as long as possible.

Wireless microphone operations in news gathering are essential to public safety and first responders. This outcome would pose unacceptable public safety risks and jeopardize other critical productions. Exclusive-use spectrum for wireless microphones is essential for newsgatherers attempting to serve the public by covering breaking news and information. First responders often rely on broadcast and cable news reports for up-to-date location and status information essential to

¹ Also attending our meetings were representatives of news gathering organizations. See Notice of *Ex Parte* Communications, letter to Marlene Dortch, Secretary, Federal Communications Commission, from Jared D. Sher, 21st Century Fox, Inc., Anne Lucey, CBS Corp., Susan Mort, Time Warner Inc. and Kathleen A. Kirby, Radio Television Digital News Association, GN Docket No. 12-268, dated May 7, 2014.

their public safety activities. We noted that news outlets covering breaking news do not know where that news will happen until the very last second, making registration in the database highly impractical. In some cases, such as coverage of the Boston Marathon bombing where the telecommunications network became inaccessible, reliable and quick registration of microphones in the geolocation database is simply not possible.

The entire midband gap should be designated for critical wireless microphone operations, including particularly news gathering. Based on the compelling public safety need to enable continued wireless microphone operation in support of news gathering and other critical uses, this group requested that the entire midband gap (frequencies in between the uplink and downlink portion of spectrum used by wireless services) be designated exclusively for wireless microphone use. Although even this spectrum would fall far short of addressing the overall need, it would represent the bare minimum necessary to maintain continuity of operations for critical services including breaking news events. The Commission will be able to rely on the extensive experience of the wireless microphone community to effectively share and coordinate the use of the midband gap.

Given emissions from wireless services in adjacent spectrum, if the midband gap is determined to be 11 MHz wide, only a limited portion of spectrum in the middle portion, e.g., 6 MHz, will be effectively available for other uses. For this reason, the midband gap should not be shared with unlicensed devices by splitting the midband gap into portions designated for wireless microphone operations and unlicensed operations. The midband gap is simply not large enough to be divided between two services given emissions from adjacent channels. Moreover, critical wireless microphone operations cannot be supported in small swaths of spectrum (e.g., 2 MHz or 4 MHz) and where such spectrum abuts adjacent wireless services, the utility of the spectrum will be greatly reduced. In that respect, we pointed out that Qualcomm has analyzed potential interference issues of unlicensed devices operating in the midband gap. Qualcomm has demonstrated that unlicensed device operations create significant interference and is a “poor choice from both technical and economic perspectives” and, if anything, wireless microphones are the preferred choice for operations in the midband gap.²

Part 74 license eligibility must be expanded to include professional users. In order to ensure a minimum level of production continuity for professional productions, we urged the Commission to expand wireless microphone license

² Letter to Marlene Dortch, Secretary, Federal Communications Commission, from Dean R. Brenner, Senior Vice President, Government Affairs, Qualcomm Incorporated, 15, dated February 19, 2014.

eligibility to include the classes of professional users that rely on wireless microphone operations today. License eligibility criteria should not be tied solely to venue owners and venue operators, venue size or numbers of microphones used as those attributes may be unworkable in practice and do not adequately capture all relevant classes of professional use of wireless microphones. In fact, in addition to venue owners and operators, event producers, responsible engineers (e.g., sound engineers), performers, and professional sound equipment providers (e.g., audio rental houses) are often responsible for frequency control and coordination in different contexts and should be eligible for Part 74 licensing.

The Report and Order should include a near-term timetable and commitment for identifying and allocating additional, suitable spectrum to meet increasing demand for wireless microphones. We gave examples of professional productions which routinely use hundreds of wireless microphone channels making extensive use of UHF spectrum. (We referred to the attached summary of the scope of wireless microphone usage in a sampling of entertainment and sports events illustrating the extensive demand and use of UHF frequencies today.) In response to rapidly increasing demand for wireless microphones and reduction in available UHF spectrum, wireless microphone efficiency continues to advance enabling more microphone use in available spectrum. Today, many events require the use of all available UHF spectrum for wireless microphone operations and operators frequently seek special temporary authority to use spectrum in other allocations for wireless microphones in connection with specific events. Without additional allocations of spectrum, many productions relying on wireless microphones today will simply not be possible after TV station repacking and the resulting reduction in UHF spectrum.

Given the impending reduction of available UHF spectrum and the increasing demand for wireless microphones, we asked the FCC staff to commit in the Report and Order to a near-term timetable for allocating additional, suitable spectrum that can support the current and increasing demand for wireless microphone operations and to complete any necessary rules changes to make such spectrum available by the end of 2014. We requested an expedited process because manufacturers need certainty with respect to additional allocations before commencing the costly, multi-year design and development process necessary to generate products that can take advantage of newly identified spectrum.

In summary and with these considerations in mind, we urged the Commission to:

- designate, at a minimum, the entire midband gap exclusively for professional wireless microphone use to address requirements of critical applications, including particularly news gathering;

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- expand and update FCC Part 74 licensing rules to cover professional users who require interference protection through registration in the geolocation database;
- set forth in the Report and Order, a near-term timetable and commitment for identifying and allocating additional, suitable spectrum to meet increasing demand for wireless microphones. Such allocations should be made final by the end of 2014.

If you have any questions regarding this ex parte notice, please do not hesitate to contact the undersigned.

Very truly yours,

/s/

Catherine Wang

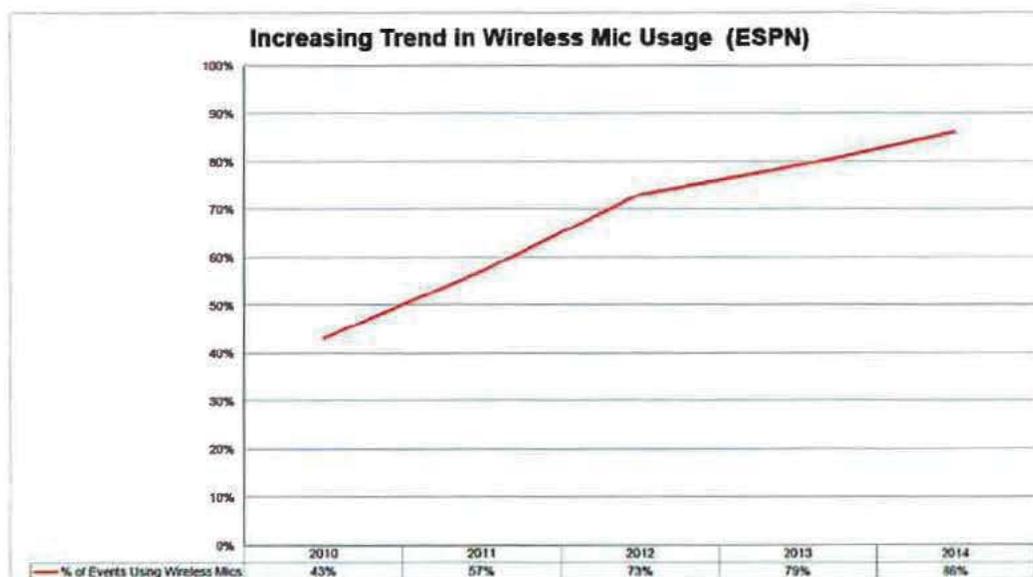
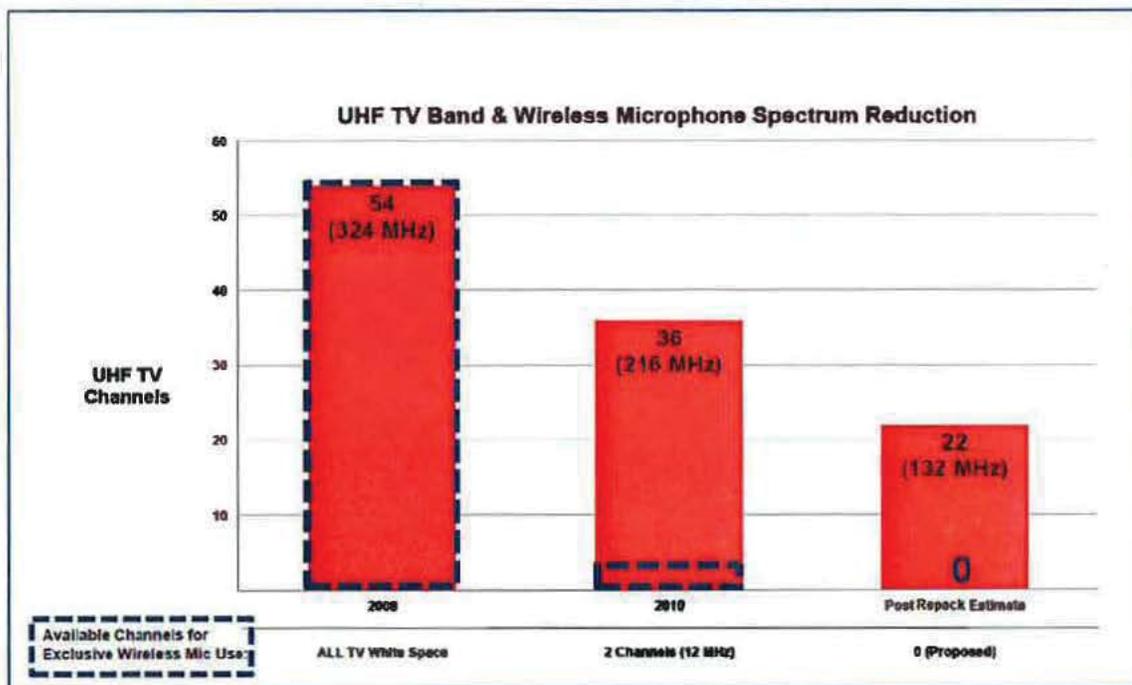
Attachments

cc: Priscilla Argeris
Commissioner Michael O’Rielly
Courtney Reinhard
Erin McGrath
Commissioner Mignon Clyburn
Adonis E. Hoffman
Louis Peraertz
Commissioner Ajit Pai
Matthew Berry
Brendan Carr

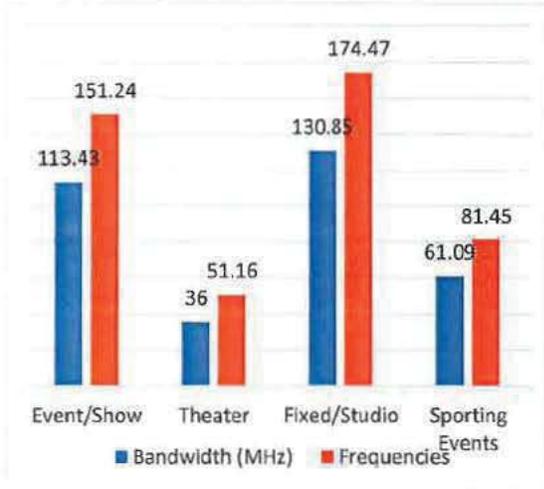
Wireless Microphone Interests

Mark Brunner, Shure Incorporated
Roger Charlesworth, DTV Audio Group
Joe Ciaudelli, Sennheiser Corporation
Henry Cohen, CP Communications
Todd Dupler, The Recording Academy
Susan Fox, The Walt Disney Company
Bruce Franca, National Association of Broadcasters (NAB)
Jackie Green, Audio-Technica
Rick Kaplan, National Association of Broadcasters (NAB)
Amy Klein, ESPN
Jeff Kosseff, Covington & Burling LLP (for National Football League (NFL),
National Hockey League (NHL), Major League Baseball (MLB), National
Association of Stock Car Racing (NASCAR))
Mitchell Lazarus, Fletcher, Heald & Hildreth (for Sennheiser Corporation)
Louis Libin, New York City Frequency Coordinator
Keith Murphy, Viacom
Gerard Waldron, Covington & Burling LLP (for National Football League (NFL),
National Hockey League (NHL), Major League Baseball (MLB), National
Association of Stock Car Racing (NASCAR))
Catherine Wang, Bingham McCutchen LLP (for Shure Incorporated)
Jeff Willis, ESPN

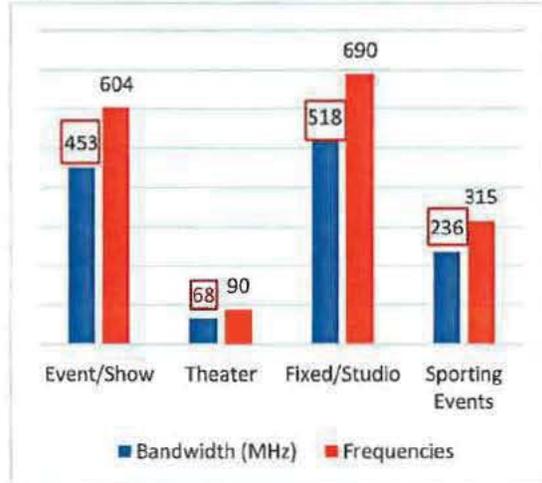
- Each year there are on the order of hundreds of thousands of events requiring wireless coordination across the U.S.
- The spectrum needed for content production far exceeds currently available bandwidth.
- The use of STAs is routinely required in order to address the lack of available spectrum.



Average Usage
Small/Medium/Large Event/Venue



Large Event/Venue Usage*
Requires time sharing and spatial separation



❖ "Mega Events" greatly exceed the usage #s shown on these charts.

➤ How many channels are really coordinated? Taking a small sampling of only some sporting events provides perspective regarding the scope of our use.

Sporting Event	# of games per regular season	frequencies per game	coordinated frequencies/year
NFL	256	125	32,000.00
NBA	2460	75	184,500.00
NHL	1230	75	92,250.00
MLB	4860	75	364,500.00
NCAA FCS and FBS	3024	100	302,400.00
NCAA basketball	10150	75	761,250.00
Total coordinated frequencies/yr			1,736,900.00