

# COVINGTON & BURLING LLP

1201 PENNSYLVANIA AVENUE NW  
WASHINGTON, DC 20004-2401  
TEL 202.662.6000  
FAX 202.662.6291  
WWW.COV.COM

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September 17, 2010

## **BY ELECTRONIC FILING**

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

**Re: Notice of Ex Parte Communications  
ET Docket Nos. 04-186 and 02-380**

Dear Ms. Dortch:

On Thursday, September 16, 2010 at 4:00 PM, Mr. David Donovan, for the Association for Maximum Service Television, Inc. (MSTV); Ms. Jane Mago for the National Association of Broadcasters (NAB); and Mr. Jonathan Blake on behalf of both organizations, met with Ms. Eloise Gore, Acting Media Advisor to the Honorable Mignon Clyburn. The meeting focused on specific issues pertaining to the interference from unlicensed TV band devices to licensed wireless microphones used by local stations in the process of providing live local news coverage.

Ms. Gore stated that advocates of unlicensed devices have been claiming that there is no evidence in the record demonstrating that unlicensed TV band devices will cause interference to wireless microphones, and asked whether that is the case. We responded that extensive FCC Columbia laboratory testing and analysis concluded that unlicensed TV band devices cause interference to wireless microphones. OET tests conducted in 2007 demonstrated that even the low power TV band device prototypes (transmitting at less than 100 mW) cause interference to wireless microphones.<sup>1</sup> The executive summary to the Report stated:

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<sup>1</sup> Office of Engineering and Technology, OET Report, *Initial Evaluation of the Performance of Prototype TV- Band White Space Devices*, FCC/OET 07-TR-1006 (July 31 2007), at 66-70. See Attachment 1.

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Our tests also found that the transmitter in the prototype device is capable of causing interference to TV broadcasting and *wireless microphones*.<sup>2</sup>

In addition, we noted in the meeting that studies submitted into the record by Shure Incorporated (“Shure”) demonstrate that unlicensed TV band devices could interfere with wireless microphones. For example, on December 13, 2006, Shure submitted a presentation for the record documenting interference to wireless microphones.<sup>3</sup> Additional analyses were submitted in 2007 demonstrating that personal/portable and fixed unlicensed TV band devices have sufficient power to create harmful interference for wireless microphone receivers, even when protected by a 1 kilometer zone.<sup>4</sup>

Ms. Gore asked why there is no interference among unlicensed wireless microphones used in theaters. We responded that interference is avoided because of intense coordination among the professional sound engineers on-site who make sure the wireless microphones do not interfere with each other, or receive interference from outside sources such as TV signals. This highly professional coordination also takes place during concerts, political rallies, and similar events. Such coordination is virtually impossible where consumers are using unlicensed TV whitespace devices that may be operating on the same frequencies used by the wireless microphones used in theaters and elsewhere. Thus, the lack of interference among unlicensed wireless microphones used at specific venues with professional sound engineers does not support the proposition that there will be no interference among consumer grade unlicensed TV whitespace devices and wireless microphones.

Ms. Gore inquired about the wireless microphone field tests that were conducted at FedEx Field. The results of these tests were reported by the Office of Engineering and Technology in its final engineering report. Importantly, the tests were designed to examine the ability of TV whitespace devices to “sense” the presence of wireless microphones. As noted in the OET Phase II Engineering Report:

Field tests were conducted to evaluate the performance of WSDs in detecting wireless microphones under real-world conditions. Arrangements were made with the National Football League (NFL), and the ESPN Network (ESPN) to

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<sup>2</sup> Id. at x, emphasis added. This OET report is in the record. Nonetheless, for ease of reference, and at Ms. Gore’s request, the relevant portions of the report, referred to and briefly displayed in our meeting, are attached hereto.

<sup>3</sup> Ex Parte Presentation of Shure, ET Docket No. 04-186 (Dec. 13, 2006). See Attachment 2.

<sup>4</sup> Ex Parte Presentation of Shure, ET Docket No. 04-186 (Sep. 14, 2007). See excerpt (Page 12), attached hereto as Attachment 3.

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perform tests before and during a pre-season football game at FedEx Field.<sup>5</sup>

Thus, the FCC did **not** conduct interference testing at FedEx Field. The testing was limited to whether a TV whitespace device was capable of sensing wireless microphones. The same is true with respect to the field tests conducted at the Majestic Theater in New York.<sup>6</sup> Assertions that these field tests demonstrate that unlicensed devices do not cause interference to wireless microphones are in error. Indeed, the whitespaces prototype devices did not have transmission capability, thereby making it difficult to even test for interference.

MSTV and NAB also pointed out that as a matter of law and good public policy, and consistent with past Commission precedent, the burden of showing no interference to existing licensees from secondary, unlicensed devices falls on advocates of these secondary uses—a burden that the advocates of white spaces devices have not met.

Further, we pointed out the specific interference problems among licensed wireless microphones (used in news coverage and emergencies), unlicensed wireless microphones, and unlicensed TV whitespace devices. Today, broadcast engineers are able to coordinate licensed wireless microphone use with each other. Each station has specific, pre-coordinated “home” channels—an arrangement that allows multiple news crews to go to the scene of a news event or emergency and avoid the risk of interference. Additional coordination is done at the scene.

We noted that the ability to coordinate licensed wireless microphones for news coverage will be lost if the current white spaces proposal is enacted, because the two channels set aside for licensed and unlicensed wireless microphones often will be wholly inadequate to meet licensed wireless microphone usage at news events. *First*, to avoid interference to new services that will be offered in the 700 MHz band, the FCC removed all wireless microphones (licensed and unlicensed) from that band and authorized them to operate on TV frequencies.<sup>7</sup> Thus, the total number of unlicensed microphones operating in the TV band will increase by orders of magnitude. *Second*, today licensed wireless microphones use numerous channels in the TV band. In the

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<sup>5</sup> Office of Engineering and Technology, OET Report, *Evaluation of the Performance of Prototype Whitespaces Devices Phase II*, FCC/OET 08-TR-1005 (October 15, 2008), at 130. See Attachment 4.

<sup>6</sup> *Id.*

<sup>7</sup> Revisions to Rules Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band; Public Interest Spectrum Coalition, Petition for Rulemaking Regarding Low Power Auxiliary Stations, Including Wireless Microphones, and the Digital Television Transition; Amendment of Parts 15, 74 and 90 of the Commission’s Rules Regarding Low Power Auxiliary Stations, Including Wireless Microphones, WT Docket Nos. 08-166, 08-167, ET Docket No. 10-24, *Report and Order and Further Notice of Proposed Rulemaking*, 25 FCC Rcd 643 (rel. January 15, 2010).

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future, channels 21-51 will be occupied by millions of unlicensed consumer devices (and channels 14 -20 will continue to be shared with public safety and land mobile operations in major markets), making it impossible for licensed wireless microphones to coordinate and causing them to shift, by and large, to the two reserved channels. *Third*, as we understand it, under the white spaces proposal being considered by the FCC in these dockets, all wireless microphones must first use the two reserved channels before using other channels. Congestion will increase, as it can be expected that unlicensed wireless microphones will be designed and marketed to operate on these particular “reserved” frequencies. Taken together these factors ensure that the proposed two-channel set aside will be unable to meet the needs of wireless microphone users and that local and network newsgathering will be seriously compromised.

The coordination challenges facing broadcast engineers today will become impossible as all wireless microphones attempt to squeeze into two reserved channels. The proposal will prevent a local station from fulfilling providing live, local news to its community. We observed that the proposal is inconsistent with fundamental FCC concerns regarding the continued viability of local journalism.<sup>8</sup> Accordingly, to ameliorate this concern, we urged that the proposed set-aside of two channels in every market for wireless microphones be limited to *licensed* wireless microphones.

Respectfully submitted,



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Eve R. Pogoriler  
Covington & Burling LLP  
1201 Pennsylvania Avenue, NW  
Washington, DC 20004-2401  
(202) 662-6000

*Counsel for MSTV & NAB*

cc (by email):

Eloise Gore (FCC)  
David Donovan (MSTV)  
Jane Mago (NAB)  
Jonathan Blake (Counsel)

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<sup>8</sup> See Public Notice, “FCC Launches Examination of the Future of Media and Information Needs of Communities in a Digital Age,” GN Docket No. 10-25, 25 FCC Rcd 384 (rel. Jan. 21, 2010).