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ATTORNEYS AT LAW

March 28, 2007

Ex Parte

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

Re: TV White Spaces Proceeding, ET Docket Nos. 04-186, 02-380

Dear Ms. Dortch:

The record in this proceeding makes clear that there are no substantial “policy” issues about whether to allow the use of unlicensed portable and personal devices in the television white spaces. It is unquestionably in the public interest to do so—provided only that the technical issue of protecting incumbent licensees can be solved.

The White Spaces Coalition (which includes Dell, Inc., Earthlink, Inc., Google, Inc., the Hewlett-Packard Co., Intel Corp., Microsoft Corp., and Philips Electronics North America Corp.) believes it is important, however, that there be a robust and complete record addressing the technical issues raised by this proceeding. Many members of the Coalition have a significant interest in preserving access to over-the-air television, and if particular proposals for use of the white spaces present challenges to TV service, the Coalition wants to know about them and address them. Our members do not wish to avoid a technical debate.

To that end, the Coalition must respond to some of the claims made by Association for Maximum Service Television, Inc. and the National Association of Broadcasters (MSTV/NAB).¹ In particular, we feel obligated to discuss the relevance of the experimental data MSTV/NAB have submitted, as well as their allegations as to the inadequacy of 47 CFR § 15.209 emission limits to protect incumbent licensees. Simply put, the analysis provided by MSTV/NAB is not useful since it applies to a device no one is asking the Commission to approve.

¹ See generally Joint Comments of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters (filed Jan. 31, 2007) (“MSTV/NAB Comments”); Joint Reply Comments of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters (filed Mar. 2, 2007) (“MSTV/NAB Reply Comments”), Ex parte letter from Mr. Bruce Franca, VP, Policy and Technology, MSTV to Ms. Marlene H. Dortch dated Mar. 14, 2007 (“MSTV Ex Parte”).

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We are not alone in finding that the analysis provided by MSTV/NAB lacks the necessary rigor to be helpful to the Commission and to others trying to find the right answers in this proceeding. For example, the New America Foundation (“NAF”) already has taken MSTV/NAB to task for their misuse of signal propagation models (which suggest that there will be interference from TV band devices to TV receivers hundreds of miles away).² Indeed, as NAF has explained, the assumptions of those opposed to unlicensed use of the white spaces (*i.e.* MSTV/NAB) are analogous to “a situation in which the unlicensed device using DFS/sensing would have its detector located underground while its transmit antenna is hundreds of feet in the air.”³

THE MSTV/NAB TEST DATA IS IRRELEVANT

MSTV/NAB have submitted many pages of test data to support their position that unlicensed portable and personal devices operating in the white spaces would pose a threat to broadcasters. But virtually all of this data is useless.

MSTV/NAB’s experiments test a device that no one wants to build and that operates under a set of rules that no one wants the FCC to adopt. MSTV/NAB’s experiments, for example, completely fail to take into account interference eliminating capabilities such as those proposed by the Coalition, including:

- The use of Transmission Power Control (“TPC”) with a minimum 25 dB dynamic range
- The use of a power adjustment algorithm which reduces the white space device’s transmit power based on the minimum DTV signal strength received within plus or minus three channels of the channel in which the device wishes to transmit
- The restriction that the white space device will transmit at the minimum power required for reliable communication
- The transmission mask proposed by the Coalition

In short, since MSTV/NAB tested scenarios that were designed to cause interference, it is hardly surprising that they produced results that did cause interference. The truth is that MSTV/NAB’s data is simply useless in predicting the performance of devices operating under the technical rules the Coalition and others are urging the Commission to adopt.

² Technical Reply Comments of New America Foundation (filed Mar. 2, 2007) at 5-6 (“NAF Technical Reply”).

³ *Id.* at 6.

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MSTV/NAB AND THE TRUTH ABOUT OUT-OF-BAND EMISSIONS

In both their reply comments and a recent *ex parte* presentation, MSTV/NAB make much of the alleged inadequacies of the out-of-band emission limits for intentional radiators set forth in 47 CFR § 15.209.⁴ MSTV/NAB basically assert that if white spaces devices emit up to 200 microvolts/meter in TV bands, as permitted by Section 15.209, such devices would cause unacceptable interference to broadcasters. But MSTV/NAB's analysis ignores the identical out-of-band emission limits that apply to unintentional radiators, set forth in Section 15.109. Thus, MSTV/NAB assert that out-of-band emissions from white spaces devices will cause interference to broadcasters, while wholly ignoring the fluorescent lights, air conditioners, electric blankets, battery chargers, and billions of other unintentional radiators that already operate in the TV band using the identical 200 microvolts/meter out-of-band emission limits.

In other words, *billions* of devices today emit radiation in the TV bands in compliance with rules identical to the 47 C.F.R. § 15.209 limit. These devices have existed for decades without causing any problems to broadcasters. Yet, MSTV/NAB say that if white spaces devices have the same limits, it will be the end for broadcasters. This is simply nonsensical.

MSTV/NAB's other comments on out-of-band emissions are similarly incredible. For example, NAB/MSTV asserted in their reply comments that NAF "now admits and confirms that the Commission's Section 15.209 out-of-band limits are inadequate, as stated by NAB and MSTV."⁵ One would thus assume that NAF now agreed with MSTV/NAB's contention that TVs require greater protection from white spaces devices than that specified in Section 15.209. Not so. NAF actually said:

NAF . . . has previously stated that the continued use of 120 kHz measurements and 120 kHz limits for out-of-band emissions to protect TV receivers is anachronistic. TV receivers are vulnerable to the total power in adjacent bands weighted by the frequency response to that band. We urge the Commission to adopt this approach to regulating all wideband emitters near TV bands.⁶

In other words, NAF critiqued the FCC-sanctioned measurement technique used for out-of-band emissions—it did not determine that the Section 15.209 protection limits are inadequate to protect TVs, as MSTV/NAB would have the Commission believe.

MSTV/NAB go on to claim that "NAF funded testing of DTV receivers by the University of Kansas shows that TV band device operation on either co-channel or adjacent channels within a

⁴ MSTV/NAB Reply Comments at 22-24; MSTV Ex Parte Ex. at unnumbered pp. 10-15.

⁵ MSTV Reply at iii.

⁶ NAF Technical Reply at 15-16.

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TV station's contour would result in interference to TV viewers, again confirming NAB's and MSTV's previous analysis and tests."⁷ Again, this is simply not so. In reality, the University of Kansas report determined that "[i]nitial experiments reveal that a relatively high [unlicensed device] channel power level is required before the output negatively impacts a DTV test receiver."⁸ Indeed, *the report concludes that "preliminary experimental results support the claim that properly implemented secondary transmission in the television band is possible without significant impact upon DTV reception."*⁹

Finally, the Coalition has proposed a mask for white spaces devices that would further reduce out-of-band emissions—not because it is necessary, but because we believe it is worth going the extra mile to ensure broadcasters and others that these devices will not cause harmful interference to incumbent licensees.

CONCLUSION

The White Spaces Coalition believes it is possible to have a serious conversation, and indeed a robust debate, about technical issues. Indeed, the public is entitled to no less. But the mischaracterizations and analyses based on the unwarranted assumptions discussed above are not part of a *serious* conversation. The Commission must see past the MSTV/NAB filings and focus on the real technical data available.

Yours truly,



Edmond J. Thomas
Senior Technology Policy Advisor

⁷ MSTV Reply at iii.

⁸ KU Study at 7.

⁹ *Id.* at 10.