

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of	)	
	)	
Unlicensed Operation in the TV Broadcast Bands	)	ET Docket No. 04-186
	)	
Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band	)	ET Docket No. 02-380
	)	
To: Secretary, FCC		
For: The Commission		

**REPLY COMMENTS OF  
CAPITOL BROADCASTING COMPANY, INC.**

Capitol Broadcasting Company, Inc. ("Capitol")<sup>1</sup> hereby submits its Reply Comments in the above-captioned proceeding and fully supports the Joint Comments (the "Joint Comments") of the Association for Maximum Service Television. ("MSTV") and the National Association of Broadcasters ("NAB") filed on January 31, 2007.<sup>2</sup> Capitol, in particular, urges the Federal Communications Commission ("FCC") to adopt the "Minimum Protections" detailed in Section II of the Joint Comments prior to permitting operation by new low power devices in the TV band. In support whereof, it is respectfully stated as follows:

Capitol, the first commercial entity to receive an experimental authorization for the construction of a digital television station, built the first digital television station, and it has an established record of leadership in the development and implementation of digital television, as well as in high definition television. Capitol's WRAL-TV was one of the leaders among local television stations in implementing all digital news operations and producing high definition

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<sup>1</sup> Capitol is the licensee, by itself or through various wholly-owned subsidiaries, of WRAL-TV and WRAZ(TV), Raleigh, North Carolina, WJZY(TV), Belmont, North Carolina and WMYT(TV), Rock Hill, South Carolina.

<sup>2</sup> Capitol is a member of MSTV and the NAB.

programming. Given its substantial investment in building and operating digital television stations and the recognition of the increased benefits this technology provides to its viewing public, Capitol considers it vital to protect the broadcast of digital television signals in the TV band.

In addition to supporting the Joint Comments, Capitol would like to emphasize a few points. In the *First Report and Order and Further Notice of Proposed Rulemaking* ("FRO&FNPRM"),<sup>3</sup> the FCC is concerned with whether new low power devices can operate in the TV band without causing harmful interference to television and other authorized services.<sup>4</sup> Moreover, the FCC recognizes that low power devices cannot be permitted to operate in the TV band until after the digital conversion.<sup>5</sup> Capitol fully agrees with the FCC that the introduction of new devices in the TV band cannot occur prior to the completion of the DTV transition on February 17, 2009.<sup>6</sup> The DTV transition must first be completed in order to determine the actual, and not simulated, propagation characteristics of the digital television signals in the TV band before low power devices could operate in this band. For various reasons, all television stations cannot presently operate with their proposed maximum facilities, and therefore actual on- the-ground interference could be more of a problem than presently forecast.

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<sup>3</sup> *Unlicensed Operation in the TV Broadcast Bands*, First Report and Order and Further Notice of Proposed Rulemaking, FCC 06-156, 21 FCC Rcd 12266 (rel. Oct. 18, 2006) ("FRO&FNPRM").

<sup>4</sup> The other authorized services which should be afforded interference protection include, among other licensed operations, the vital broadcast auxiliary operations provided over wireless microphones used in program production and Electronic News Gathering ("ENG"). We agree with the comments of Shure Incorporated (Comments, p. 2) that these operations are indispensable and integral to the programming production and that the technical requirements for new low power devices should require that these wireless microphone systems, like the other incumbent licensed uses of TV spectrum, be protected from harmful interference.

<sup>5</sup> FRO&FNPRM, ¶ 13.

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

The Joint Comments include technical information to demonstrate the interference that can be caused to present operators in the TV band by permitting new low power devices to operate in this band. Interference to the direct reception of television signals is one of the hazards that will directly affect the public. On the other hand, those who seek to use the TV band for these new low power devices have not demonstrated that the potential interference shown by the Joint Comments will not occur, and, in fact, several of these entities only recently discussed prototype devices for testing with staff members of the FCC.<sup>7</sup> Unless it can be firmly established that present users of the TV band will not encounter interference from the proposed new low power devices operating in the same band, the proposed low power use cannot be approved by the FCC. The FCC itself recognizes that it must ensure that new devices operating in the TV band do not cause harmful interference.<sup>8</sup>

If the FCC were to authorize these new low power devices in the TV band, these devices must be licensed and only permitted to operate from fixed locations. If these devices were to be unlicensed and permitted for mobile use, should interference occur, it will be near impossible to determine the source of the interference or the user. Without the availability of the source and user, steps cannot be taken to resolve the interference either by shutting down the source or reaching a resolution with the user which would permit both to operate. Members of the public are intended as the users of the proposed unlicensed, mobile units, and under such a system, it will be exceedingly difficult to resolve situations when actual interference occurs.

In the Joint Comments, a list of principles is set forth for incorporation in any rules that permit new devices to operate in the TV band. Capitol fully supports these principles:

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<sup>7</sup> Letter from Edmond Thomas to Marlene H. Dortch, Esq., Secretary (dated Feb. 5, 2006 [sic]) (reporting meeting of February 2, 2007).

<sup>8</sup> FRO&FNPRM, ¶ 13.

- *As the FCC has rightly decided, no TV band devices should be permitted to operate before the DTV transition*
- *As the FCC tentatively concluded, any operation of TV band devices should be limited to fixed operations only. Personal and portable operations should not be permitted*
- *Protection of DTV operations should be based on Desired-to-Undesired (D/U) ratios*
- *To avoid interference to TV viewers, all TV band devices must operate outside the protected contour on both co- and adjacent channels. Such devices should not operate inside a stations contour on either the co-channel or first adjacent channels.*
- *The sensing threshold proposed in the FNPRM does not provide adequate co-channel protection and misinterprets IEEE approach*
- *The proposed out-of-band emission limits (§ 15.209) are inadequate to protect DTV viewers and must be amended*
- *The FCC must conduct testing to ensure that the final rules sufficiently protect television viewers*
- *The FCC must enact a rigorous enforcement program*
- *Any new devices allowed to operate in the broadcast spectrum should be exclusively licensed; no unlicensed operation should be allowed.*

Capitol submits that, until the digital conversion is concluded and the proponents of permitting low power devices in the TV band have demonstrated that interference will not be a problem, the FCC cannot approve the operation of low power devices in the TV band.

Respectfully submitted,

CAPITOL BROADCASTING  
COMPANY, INC.



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