

**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: The Commission

**EX PARTE COMMENTS OF  
THE ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC.**

The Association for Maximum Service Television, Inc. (“MSTV”) files these *ex parte* comments in support of the recent filing by Shure Incorporated (“Shure”), which critiqued the “Trial Report” filed on June 24, 2010 by Spectrum Bridge, Inc. (“Spectrum Bridge”).<sup>1</sup> Spectrum Bridge does not provide details on important aspects of the trials described in the Trial Report and it fails to support the sweeping changes that it recommends (including the elimination of the spectrum sensing requirement).

The Trial Report fails to provide important details concerning the four experimental operations summarized therein. As noted by Shure, Spectrum Bridge did not provide information with respect to its testing procedures and parameters, the specific equipment used and configuration of that equipment, the implementation of the database registration and

---

<sup>1</sup> See Ex Parte Comments of Shure, ET Docket Nos. 04-186 and 02-380 (July 13, 2010) (“Shure Comments”) and Ex Parte filing of Spectrum Bridge, ET Docket No. 04-186 (June 24, 2010) (“Trial Report”).

query process, and a number of other basic yet critical aspects of the tests.<sup>2</sup> It cannot be determined how Spectrum Bridge, which conducted its experiments outside of highly populated areas, came to the conclusion that its operations did not cause harmful interference.

Nor can the experimental operations described in the Trial Report be used to justify the sweeping changes to the rules that Spectrum Bridge urges. For example, Spectrum Bridge tested high-powered, fixed devices operating at 4 Watts.<sup>3</sup> Yet it urges the Commission to amend its rules in order to allow such devices to operate at up to 20 Watts, a power level that would substantially increase the risk of interference to the reception of over-the-air television by viewers (and by multichannel video programming providers' headends/receive facilities) as well as interference to other spectrum users and uses, such as wireless microphones.<sup>4</sup> And Spectrum Bridge did not test sensing technology at all. Yet it uses the Trial Report to argue that the Commission should repeal the spectrum sensing requirement.

MSTV questions Spectrum Bridge's assertion in the Trial Report that spectrum sensing adds insurmountable costs and is infeasible.<sup>5</sup> Manufacturers have been developing and testing spectrum sensing technology for TV band devices for years, with FCC Office of Engineering and Technology ("OET") tests of such devices dating back to 2007.<sup>6</sup> The White

---

<sup>2</sup> See Shure Comments at 3.

<sup>3</sup> See Trial Report at 4 ("The Trial networks are all based on the High Power Fixed (4 Watt) definition described in the R&O").

<sup>4</sup> Further, Spectrum Bridge says that "20W seems reasonable based on the current spectral mask," *id.* at 14, but later in the Trial Report, it argues for a reduction in the out-of-band emissions limits, *id.* at 17, suggesting that it will target even higher power limits.

<sup>5</sup> See *id.* at 15.

<sup>6</sup> See OET, "Initial Evaluation of the Performance of Prototype TV-Band White Space Devices," OET Report FCC/OET 07-TR-1006 (July 31, 2007). Microsoft and Philips submitted devices with sensing capability for the first phase of testing, and for the second phase of testing, completed by OET in 2008, five manufacturers had submitted devices for testing. See OET (continued...)

Spaces Coalition confirmed in 2007 its members' confidence that "reliable spectrum sensing can be successfully implemented."<sup>7</sup> In 2008, Philips provided a report to the Commission on its "fully operational white space broadband system – which sensed incumbent signals."<sup>8</sup> Indeed, as recently as last month, Philips met with Commission staff to discuss "the benefits of retaining the sensing requirements," without citing any concerns about cost or feasibility.<sup>9</sup> And Cambridge Consultants recently announced that it had developed a "low-cost 'spectral sensing' cognitive radio technology platform."<sup>10</sup>

Spectrum Bridge's argument with respect to database "enhancements" is also flawed. In support of its argument that spectrum sensing should not be required, Spectrum Bridge states that it has "demonstrated numerous enhancements to the basic Database concept," such as variable time certificates (lasting for a week in "remote" areas and several hours in urban areas). Setting aside the fact that a certificate lasting for up to a week is hardly an "enhancement" to efforts to prevent interference,<sup>11</sup> spectrum sensing is still an important tool to prevent harmful interference by TV band devices to incumbent operations.

---

"Evaluation of the Performance of Prototype TV-Band White Space Devices Phase II," OET Report FCC/OET 08-TR-1005 (October 15, 2008). The second phase tested devices submitted by Adaptrum, I2R, Microsoft, Motorola, and Philips.

<sup>7</sup> Comments of the White Space Coalition on the OET White Space Device Prototype Testing Report, ET Docket No. 04-186, at 3 (Aug. 15, 2007). The White Spaces Coalition includes Dell, EarthLink, Google, the Hewlett-Packard Company, Intel, Microsoft, Philips, and Samsung.

<sup>8</sup> Philips Ex Parte Presentation, ET Docket No. 04-186 (June 24, 2008).

<sup>9</sup> Philips Ex Parte Presentation, ET Docket No. 04-186 (June 30, 2010).

<sup>10</sup> Press Release, "Incognito: A Revolution in Whitespace Technology" (Nov. 11, 2009).

<sup>11</sup> Frequent database checks (ideally, on a real-time basis) are needed to protect licensed services critical to providing coverage of events such as breaking news, public safety emergencies, and severe weather. The timing and location of these events is not more predictable in rural areas.

First, as MSTV has pointed out both in comments to this proceeding and outside of this proceeding, Spectrum Bridge's database implementations and results are flawed.<sup>12</sup> Databases administered by other parties likely will have similar errors and "learning curves." Such errors would not necessarily lead to harmful interference if spectrum sensing also is required, as proposed by Philips and others.

Second, the "enhancements" described by Spectrum Bridge are not required to be implemented. The fact that these techniques are not required undermines the argument that they would support a repeal of the spectrum sensing requirement.

MSTV does not argue that given sufficient time, testing, and effort, a database system could be developed that would provide adequate interference protection, controls, and security. The current rules, however, are based on a combination of the sensing approach and the geolocation/database approach. The existing rules for any one of these approaches were not meant to stand alone nor are they adequate to protect incumbent operations, including providing protection to TV viewers and licensed wireless microphone operations. Therefore, both a database and spectrum sensing are required in order to ensure the level of interference protection established by the Commission.

---

<sup>12</sup> *See, e.g.*, Comments of MSTV and the National Association of Broadcasters, ET Docket No. 04-186 (Feb. 12, 2010), at 17-19 (pointing out that Spectrum Bridge's database would permit prohibited adjacent channel operations in Dallas, for example, and noting that MSTV had already brought other errors to Spectrum Bridge's attention).

Respectfully submitted,

/s/

---

David L. Donovan  
Bruce Franca  
Victor Tawil  
ASSOCIATION FOR MAXIMUM SERVICE  
TELEVISION, INC.  
4100 Wisconsin Avenue, NW  
Washington, D.C. 20016  
(202) 966-1956



---

Jennifer A. Johnson  
Eve R. Pogoriler  
COVINGTON & BURLING LLP  
1201 Pennsylvania Avenue, N.W.  
Washington, DC 20004-2401  
(202) 662-6000  
*Counsel for the Association for Maximum  
Service Television, Inc.*

July 16, 2010