

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
Unlicensed Operation in the TV Broadcast) ET Docket No. 04-186
Bands)
)

**REPLY COMMENTS OF THE
ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC. AND
THE NATIONAL ASSOCIATION OF BROADCASTERS**

The Association for Maximum Service Television, Inc. (“MSTV”) and the National Association of Broadcasters (“NAB”) hereby reply to the comments filed regarding the TV band database manager proposals (“Proposals”). There is substantial agreement in the record that: (1) database managers must confirm that TV band devices (“TVBDs”) have a valid FCC ID before transmitting channel availability information; (2) database operations must undergo testing in a real world environment before a database manager is designated; (3) database managers must be neutral third parties that remain responsible for offering end-to-end database operations; (4) security measures must include authentication procedures that keep communications between the database and TVBDs secure; and (5) the Proposals, as submitted to the Commission, are incomplete because they fail to respond to the questions raised in the *Public Notice*¹ and to demonstrate that database operations and management comply with the Commission’s rules and policies.

¹ Julius Knapp, Chief, Office of Engineering and Technology, “Office of Engineering and Technology Invites Proposals from Entities Seeking To Be Designated TV Band Device Database Managers,” *Public Notice*, ET Docket No. 04-186 (rel. Nov. 25, 2009) (hereinafter *Public Notice*).

To ensure that the Commission bases its decision on a complete and accurate record, MSTV and NAB urge the Commission to provide applicants an opportunity to amend their Proposals to demonstrate that each is complete and that the above criteria are met. In addition, the Commission should move quickly to establish clear, efficient, and effective procedures for evaluating Proposals in a real world environment prior to making a designation decision and should continue to monitor database management and operations to ensure compliance with the Commission's rules and policies to help protect the public's local television service from unlawful interference.

I. THE RECORD CONFIRMS THAT DATABASE MANAGERS SHOULD TRANSMIT CHANNEL AVAILABILITY INFORMATION ONLY TO TVBDS THAT HAVE BEEN CERTIFIED BY THE COMMISSION.

The majority of commenters addressing the issue agree with MSTV and NAB that the Commission should require database managers to confirm that every TVBD requesting channel availability information has been certified by the Commission.² Like MSTV and NAB, Shure urges the Commission to require Mode II devices acting as “master” devices to “clients” that do not themselves contact the database to pass through data sufficient to allow the database manager to confirm that the client device is certified by the Commission as well.³ MSTV and

² See Comments of Shure Incorporated Regarding Proposals from Entities Seeking To Be Designated TV Band Device Database Managers, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 5–6 (Feb. 12, 2010) (hereinafter “Shure Comments”); Comments of WSdb, LLC, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 10–11 (Feb. 12, 2010) (hereinafter “WSdb Comments”); Comments of Key Bridge Global LLC, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 8 n. 23 (Feb. 12, 2010) (hereinafter “Key Bridge Comments”) (stating that verification is required for all TVBDS, including Mode I devices); Comments of IEEE 802.18, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 2 (Feb. 1, 2010) (hereinafter “IEEE 802.18 Comments”) (requesting that the Commission require database managers to “implement reasonable verification methods”).

³ Shure Comments, at 5.

NAB agree with Shure that this process allows database managers to accurately track, and, if necessary, disallow transmissions of channel availability information to these client devices.⁴

The TVWS Group was the only commenter to oppose a requirement that database managers confirm a TVBD's FCC ID and gave no explanation for their position.⁵

The record is clear that it is both necessary and effective for database managers to verify that each TVBD has a FCC ID before transmitting channel availability information. The Commission's rules require all TVBDs to be certified to ensure that the devices comply with various technical requirements.⁶ However, as Shure explains, this certification process would be "meaningless" if database managers are not required to check for a FCC ID.⁷ MSTV and NAB agree with Shure that absent a FCC ID verification process, the identification and deactivation of recalled or other unlawful devices would be nearly impossible.⁸

As MSTV, NAB, and Shure demonstrate in their comments and many Proposals suggest, confirmation that a TVBD has a FCC ID is a simple process that does not affect database performance or increase the cost of operating the database.⁹ The FCC ID data is readily

⁴ *Id.*

⁵ See Comments of Atheros Communications, Inc., Broadcom Corp., Dell Inc., Hewlett-Packard Co., Marvell Semiconductor, Inc., Microsoft Corp., Motorola, Inc., Nokia Inc., Philips Electronics North America Corp., and The Wireless Internet Service Providers Association ("WISPA"), Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 4 (Feb. 9, 2010).

⁶ See 47 C.F.R. § 15.703(o) (defining a TVBD as an "intentional radiator"); *id.* § 15.705(a) (specifying that the Part C certification requirements for intentional radiators apply to TVBDs).

⁷ Shure Comments, at 5–6.

⁸ *Id.* at 5.

⁹ See, e.g., Comments of the Association for Maximum Service Television, Inc. and the National Association of Broadcasters, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 12 (Feb. 12, 2010) (hereinafter "MSTV/NAB Comments"); Shure Comments, at 6; WSdb, LLC, Proposal to be Designated TV Band Device Database Manager, Unlicensed (continued...)

available to database managers because the Commission’s rules require fixed TVBDs and personal/portable TVBDs operating in Mode II to transmit their FCC ID to the database and, as described above, “master” devices accessing the database on behalf of a “client” device can forward the FCC ID of the client device to the database for validation.¹⁰ Consequently, the database manager can easily and automatically validate each TVBD by checking the FCC ID against the FCC IDs approved in the Commission’s Equipment Authorization database.

II. THE PROPOSALS SHOULD BE SUBJECT TO REAL-WORLD TESTING BEFORE A DATABASE MANAGER IS DESIGNATED.

MSTV and NAB agree with the National Cable & Telecommunications Association (“NCTA”) that field testing in a real world environment is the only reliable way for the Commission to confirm that the technical and operational components of each Proposal comply with the Commission’s rules and policies.¹¹ The need for real-world testing is underscored by the comments submitted by Cavell, Mertz & Associates, Inc., which identify a number of common errors contained in the Commission’s CDBS database.¹² For example, Cavell, Mertz & Associates explain that some records of current licensees are erroneously marked as “archived” in CDBS. Because CDBS is one of the key sources of data used by database managers to determine channel availability, TVBD operations based on this inaccurate CDBS data would interfere with television station operations. MSTV and NAB agree that these

Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 3(b)-23, 5(c)-1 to 5(c)-2 (Jan. 4, 2010); White Spaces Proposal By KB Enterprises LLC and LS Telcom, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 15 (Jan. 4, 2010).

¹⁰ See 47 C.F.R. § 15.713(f)(3)(i), (g); MSTV/NAB Comments, at 14.

¹¹ Comments of the National Cable & Telecommunications Association, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 8 (Feb. 12, 2010) (hereinafter “NCTA Comments”).

¹² Comments of Cavell, Mertz & Associates, Inc., Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 3–8 (Feb. 3, 2010).

errors could result in repeated interference that would significantly disrupt the public's access to local television services. Real-world testing of the Proposals would help ensure that the database is designed to quickly and accurately resolve such errors.

While NCTA stated that real-world testing should confirm, at a minimum, “that multiple database providers consistently calculate the same output results from a given set of inputs and that those output results properly reflect the Commission’s rules,”¹³ MSTV and NAB encourage the Commission to require more robust testing to confirm that the Proposal is compliant with all the Commission’s rules and policies. For example, such testing also should confirm that the database checks that TVBDs have been certified by the Commission, contains a mechanism for automatically black listing devices without a FCC ID, and authenticates communications between the database and TVBDs.

MSTV and NAB agree with NCTA that the most efficient and effective means of conducting real-world testing is for the Commission to form a cross-industry technical advisory group to develop real-world testing procedures.¹⁴ This advisory group should be composed of all interested parties, including representatives of the Commission, TVBD manufacturers, incumbent licensees, and TVBD database managers. This advisory group also could establish procedures to monitor database management and operations to ensure compliance with the Commission’s rules and policies.

¹³ NCTA Comments, at 8.

¹⁴ *Id.*

III. DATABASE MANAGERS MUST BE NEUTRAL AND REMAIN RESPONSIBLE FOR PROVIDING END-TO-END DATABASE OPERATIONS.

The record in this proceeding confirms that database managers should be neutral third parties that remain responsible for providing end-to-end database operations. Many commenters, including Shure¹⁵ and Key Bridge,¹⁶ agree with MSTV and NAB that the Commission should refrain from designating any database manager that has an incentive to discriminate against incumbent licensees, other protected entities, or TVBD manufacturers.¹⁷ Absent complete neutrality, the database manager could discriminate against incumbent services or among TVBD manufacturers, and such bias would be difficult to detect since protected entities, TVBD manufacturers, and consumers are unlikely to have access to much of the information collected and controlled by the database manager. To help ensure that all database operations are performed in a neutral and compliant manner, database managers should be required to remain responsible at all times for offering end-to-end database operations.

IV. DATABASE MANAGERS MUST IMPLEMENT SECURITY PROCEDURES THAT INCLUDE AUTHENTICATION.

No commenter disputed that database managers must implement strong security measures.¹⁸ MSTV and NAB agree with Shure and IEEE 802.18 that such security measures

¹⁵ Shure Comments, at 8–9.

¹⁶ Key Bridge Comments, at 5–7.

¹⁷ MSTV and NAB disagree with the Public Interest Spectrum Coalition’s suggestion that the clearinghouse functions should be managed by a nonprofit entity “representing proponents of unlicensed uses of the TV white space.” Comments of the Public Interest Spectrum Coalition, Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 2 (Feb. 12, 2010). All aspects of database management and operations should be neutral to eliminate any incentive to discriminate.

¹⁸ *See, e.g.*, Shure Comments, at 6–7 (discussing the importance of strong security); Comments of Nokia Inc., Unlicensed Operation in the TV Broadcast Bands, ET Docket No. 04-186, at 6–7; IEEE 802.18 Comments, at 2; WSdb Comments, at 9–11.

should include authentication mechanisms so that communications between the database and TVBDs remain secure.¹⁹ Specifically, database managers should use encryption and require verification of both the TVBD and the database to prevent hackers from falsely listing occupied channels as “available” for TVBD operation. Database managers also should take steps to prevent unauthorized databases from sending false information on channel availability to TVBDs.

V. APPLICANTS SHOULD HAVE AN OPPORTUNITY TO AMEND THEIR PROPOSALS TO DEMONSTRATE THAT THEY COMPLY WITH THE COMMISSION’S RULES AND POLICIES.

The comments submitted by Key Bridge and WSdb echo MSTV’s and NAB’s concern that, as currently drafted, the submitted Proposals lack sufficient detail to determine whether the database manager and its proposed database operations will comply with the Commission’s rules and policies. MSTV and NAB agree with Key Bridge that several Proposals merely restate the requirements outlined in the Commission’s rules and the *Public Notice* and with WSdb that many of the Proposals also are ambiguous or provide little detail about the level of security that will be provided.²⁰ As Key Bridge points out, “if this were a Federal procurement, several proposals would be summarily rejected as non-compliant or effectively incomplete.”²¹

While Key Bridge argues that incomplete Proposals should be disqualified, MSTV and NAB urge the Commission to first provide applicants an opportunity to amend their Proposals to provide additional information. MSTV has had productive conversations with

¹⁹ Shure Comments, at 6–7; IEEE 802.18 Comments, at 2.

²⁰ WSdb Comments, at 10; Key Bridge Comments, at 7–9.

²¹ Key Bridge Comments, at 8.

several of the applicants, and MSTV and NAB believe that an opportunity to amend the Proposals would allow some of the applicants to provide more detail that would assist the Commission in designating a database manager. If, however, an applicant fails to use this opportunity to demonstrate that it, and its database operations, will comply with the Commission's rules and policies, its Proposal should be rejected.

* * *

Because the TV band device database will be the first of its kind to define on-the-spot what frequencies may lawfully be used by fixed and personal/portable unlicensed devices, MSTV and NAB urge the Commission to carefully scrutinize and evaluate the Proposals to ensure that the above criteria are met. In addition, the Commission should move quickly to establish clear and effective procedures for monitoring database management and operations and for enforcing the Commission's rules and policies. Without ongoing monitoring and active enforcement, there will be little incentive for database managers, once designated, to remain vigilant in performing their duties with the utmost care and diligence. The consequence of failure — the public's loss of confidence in and access to local broadcast television and TVBD services — is too significant to ignore.

Respectfully submitted,



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