

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

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

To: Secretary, Federal Communications Commission

**COMMENTS OF THE NATIONAL ASSOCIATION OF BROADCASTERS
ON TEST OF SPECTRUM BRIDGE TV BANDS DATABASE**

The National Association of Broadcasters (“NAB”)¹ respectfully submits its Comments on the first public trial of a TV bands database system, which tested the operations of the database administered by Spectrum Bridge Inc. (“Spectrum Bridge”).² The TV bands database system is unique and important. It will support an unprecedented process whereby unlicensed devices—including both personal/portable devices and high-powered fixed devices—will operate on channels within the TV bands that are identified as available for “white space” operations. The database system is a critical piece of the framework created by the Commission to ensure that primary users in the television bands can operate without harmful interference. Thus, NAB commends the Office of Engineering and Technology (“OET”) on undertaking measures to ensure the proper operation of the TV bands databases before they go live, including by establishing the 45-day public trial period to enable members of the public to test the

¹ NAB is a nonprofit trade association that advocates on behalf of local radio and television stations and broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the Courts.

² See Public Notice, “Office of Engineering and Technology Requests Comment on the Public Testing of Spectrum Bridge Inc.’s TV Bands Database System,” ET Docket No. 04-186, DA 11-1872 (rel. Nov. 10, 2011).

databases and provide comments on any concerns with respect to their accuracy or functionality, and by establishing the open workshop process at OET's Laboratory Division.³

NAB also commends Spectrum Bridge on its responsiveness to issues and problems that arose during the public trial and on the improvements that it made to its database since it first launched. As observed by NAB, the Spectrum Bridge database did not appear to have major problems with the accuracy of determining available channels for unlicensed TV bands devices ("TVBDs"). Spectrum Bridge appears to have addressed and corrected certain accuracy issues that had been observed in the months prior to the public trial with respect to its "Show My Whitespace" feature.

Nevertheless, other problems did arise during the testing process, as described below, and the overall results with respect to functionality and ease of registering protected operations were mixed. Accordingly, an additional testing period is necessary to ensure that Spectrum Bridge corrects these problems.⁴ The specific problems and concerns that warrant an additional testing period, of perhaps 15-20 days (a full 45 days does not appear necessary), are as follows:

First, it appears that during the initial testing period users encountered a high number of problems relative to the number of trial registrations entered into the database.

Spectrum Bridge received 65 unique "tickets" containing "comments, concerns, and issues

³ *Order*, ET Docket Nos. 04-186 and 02-380, 26 FCC Rcd 554, at para. 15 (2011).

⁴ *See* Public Notice, "Office of Engineering and Technology Announces the Opening of Public Testing for Spectrum Bridge's TV Bands Database System," ET Docket No. 04-186, DA 11-1534 (rel. Sept. 14, 2011) ("Public Notice"), at 2 (noting that "if the results of the trial indicate that additional testing is necessary, OET may extend the trial period").

related to the trial” for 551 registrations, a rate of nearly 12%.⁵ Furthermore, it is unlikely that every single user who encountered a problem filled out a ticket reporting his or her “personal contact information, user input and resolution.”⁶ For example, NAB staff experienced numerous problems with attempting to register protected entities that occurred prior to the user reaching the screen where a ticket could be initiated; thus, they were unable to report these incidents through the system. Accordingly, the actual problem rate encountered by users was probably higher than reported.

Second, although Spectrum Bridge characterized none of the tickets as critical,⁷ some, in fact, concerned very important issues, such as the inability to register certain operations for protection.⁸ These included the inability to register for protection a valid wireless microphone call sign, an error in the location of protection operations, and the inability to register a studio location. Complete and accurate *input* into the database is vital to the complete and accurate *output* of the database’s channel availability calculator and, therefore, to its utility in successfully protecting operations. Thus, even if testing has shown that the database’s channel availability calculator functions properly, its output will be flawed when an operator is unable to register its location and channel to trigger protection. If these issues are not fixed, operations that should be protected will experience destructive interference — and that is a “critical” issue by any standard.

⁵ Spectrum Bridge, “Summary Report of the Spectrum Bridge TVWS Database Public Trial Report,” ET Docket No. 04-186 (Nov. 7, 2011) (“Summary Report”), at 1.

⁶ *Id.*

⁷ *Id.* at 2.

⁸ *Id.* at 3 and Attachment 3.

Third, testing was incomplete in certain respects. For example, it is unclear whether the final implementation of the system's interactions with FCC databases with respect to call signs was tested completely during the 45-day trial. The system did not initially recognize valid low power auxiliary call signs that were active but pending renewal.⁹ Further, Spectrum Bridge stated that "[w]hile an entry is required in the call sign field, it does not matter what is entered in this field as it is not validated at this time."¹⁰ In addition, interaction with the FCC's database and processes for unlicensed microphone registration was not tested because the registration process has not been finalized yet. Testing these interactions during an additional trial period is necessary to ensure that the system will operate properly when it goes live.

Fourth, Spectrum Bridge made a number of changes and improvements to its system during the course of the trial period to address issues raised by users, and also stated that certain changes would be available in "the next update," a "future update," or considered in a "future enhancement."¹¹ It is unclear whether and how the FCC will ensure that the changes that were made partway through the testing process will be tested fully and incorporated into the final system, or how changes and enhancements made to the database after the system goes live will be tested and implemented.

Finally, it is imperative that any changes in the white spaces rules that would affect the protection zones of licensed operations and the calculation of channels available for TVBDs be fully tested. For example, Spectrum Bridge recently filed comments suggesting that the Commission revise the white spaces rules to adopt a new method of calculating variable

⁹ NAB staff discovered this issue during the public trial period and notified both the FCC and Spectrum Bridge.

¹⁰ Summary Report at Attachment 3, page 4.

¹¹ Summary Report at Attachment 3.

protection zones, which would directly impact the channels identified as available for TVBDs in specific areas.¹² NAB has no desire to delay the roll-out of TVBDs to consumers, and throughout this process has sought to play a constructive role in helping to craft rules and procedures that will enable white space devices to be used without causing harmful interference to protected TV bands operations. Yet, if the Commission decides to fundamentally alter the white spaces rules in a manner that would impact how the TV bands databases calculate channel availability and the protection zones of licensed operations, NAB believes that it would be necessary to test the databases anew—alterations to these rules would render the current testing results irrelevant. Because database administrators would be required to develop and implement new algorithms, new 45-day public testing periods to ensure accurate operation would be needed.¹³

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¹² See Spectrum Bridge Comments and Updates on Petitions for Reconsideration, ET Docket No. 04-186 (Nov. 14, 2011). NAB has separately submitted a filing outlining its concerns with this proposal. See NAB Written *Ex Parte* Communication, ET Docket No. 04-186 (Nov. 21, 2011).

¹³ A shorter period likely would be appropriate with respect to testing the database functionality for unlicensed wireless microphone registration, as this process does not involve new and unique calculations, but rather is an extension of the licensed microphone registration process. In addition, while a complete 45-day trial period would be necessary to detect errors in the channel calculation methodology with respect to licensed operations, a shorter period would be appropriate for detecting issues with respect to the registration process of unlicensed wireless microphones, as errors in that process would affect only the individual unlicensed microphone operations and should be relatively simple to detect and correct.

NAB will continue to work with all parties to ensure the successful completion of this critical database system.

Respectfully submitted,

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