December 12, 2011

TV TechCheck

NAB NATIONAL ASSOCIATION OF BROADCASTERS

The Weekly NAB Newsletter for Television Broadcast Engineers

FCC Announces Start of Telcordia Database Trial

The FCC took another step forward in implementing TV White Spaces (TVWS) with the initiation of the 45-day public trial of Telcordia Technologies Inc.'s TV database system on December 7, 2011. (See http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-11-1956A1.pdf.)

Telcordia is one of ten entities that the FCC has tentatively approved to be TV White Space Database Administrators, and is the second to receive FCC approval to begin a 45-day public test period for its database. (The other operators include Airity Inc. [formerly WSdb LLC], Comsearch, Frequency Finder Inc., Google, Key Bridge Global LLC, LS Telcom AG [formerly KB Enterprises LLC and LS Telcom], Microsoft Corporation, Neustar Inc., and Spectrum Bridge Inc.)

The first database tested was Spectrum Bridge's, which was completed on November 2, 2011. It is now expected that the FCC may soon move forward with some approval of Spectrum Bridge's database for public use, along with authorization of one or more TV band devices. Meanwhile, the FCC's Office of Engineering and Technology (OET) has stated that it has examined Telcordia's database system and found it ready for its turn at testing by the public.

By way of background, the FCC's Part 15 TV White Space rules (47 C.F.R. § 15.701 et seq.) require that unlicensed TV band devices contact an FCC-authorized database system to obtain a list of channels that are available for its operation (i.e., channels not occupied by authorized radio services and that conform to interference protection criteria stated in the White Space rules) at its specific geographic location. The database will then return a list of the channels available to the device in its reported location. As part of its authorization process for TV band database systems, the FCC stated that each database will be subject to a public trial period of not less than 45 days, to ensure that the database is providing accurate results before it is allowed to be made available for regular public use.

The current 45-day limited trial is intended to allow the public to access and test Telcordia's database system, to ensure that the database correctly identifies channels that are available for unlicensed devices that operate in the TV band. The testing process is also intended to verify that the database properly registers all facilities that are entitled to protection, such as licensed wireless microphones and other low power auxiliary operations, and that all such authorized services and registered facilities are provided the appropriate protection as specified in the rules.

Protected services include broadcast television stations (including full power, Class A and LPTV stations and translators), fixed broadcast auxiliary service (BAS) links (regular licensed and temporary), receive sites (and received channels) of TV translators, LPTV, Class A TV and multichannel video programming distributors (MVPDs), private land mobile radio service and commercial mobile radio service operations, offshore radio telephone service operations, radio astronomy operations at specific sites, and low power auxiliary service operations (principally, licensed and certain approved unlicensed wireless microphone venue sites).

For most of these services, the necessary protection data will either be extracted by Telcordia from the Commission's databases or is specified in the rules. Operators of such services or channels do not need to take any action to obtain protection from TV band devices. Database operators are obliged to permanently enter this data into their databases themselves. The major exceptions, however, are MVPD receive sites, translator receive sites, sites where licensed wireless microphones and other low power auxiliary devices are used, and approved unlicensed wireless microphone venues. Operators of these facilities must register their sites and the expected time period of use in one of the approved databases in order to obtain protection from interference by unlicensed TVWS devices. Long-term temporary registrations, such as those for wireless microphones at a studio or remote site, need to be renewed and re-entered annually. Each database operator will in turn share registration data it receives with all other approved database operators.

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Note that because licensed wireless microphones are included in this process, all broadcasters (i.e., both TV *and* radio stations) should be aware of and take part in this process. (See *TV TechCheck*, June 20, 2011 here.)

Initial Review

The Telcordia system uses Google maps and allows the user to scroll to any location on the map, as well as enter specific locations or coordinates. The system also provides a contour-mapping view of protected services, and allows a user to view only the contours of selected channels.

The following is an example view from the Telcordia system, showing channel availability for the Baltimore, MD area:

The contour view for that same location looks like this, with green indicating channel availability:

Clicking on the *Details* tab provides information on why channels are not available for unlicensed operations:

For example, channel 8 above is not available at the selected location (Baltimore, MD) because of co-channel restrictions from WGAL (Lancaster, PA), and adjacent channel restrictions from WJLA-TV on channel 7 and WUSA on channel 9 (both Washington, DC).

Try It Yourself

The FCC encourages all interested parties to test the database and provide appropriate feedback to Telcordia. The database can be accessed at **https://prism.telcordia.com/tvws/home/trial.**

The FCC is encouraging participants to test the following elements of the database's user interface:

- the channel availability calculator
- the MVPD receive site (cable headend and satellite receive site) registration utility
- the broadcast auxiliary temporary receive site registration utility
- the fixed TVWS device registration utility
- the wireless microphone registration utility

Users are encouraged to report any inaccuracies or other issues with any aspect of the database system to Telcordia through the response facility on the trial's website. Telcordia will respond to such reports with an explanation and notification of any responsive actions it may take, as appropriate. During the trial, Telcordia may apply any corrective measures it determines are needed, and will advise participants of any such changes through the trial's website.

NAB Technology also encourages all broadcasters to test the database, and if any problems are encountered to report them to Bruce Franca (bfranca@nab.org) or other NAB Technology Staff (in addition to sending that information to Telcordia, as noted above). This will enable NAB to better prepare an industry response to Telcordia's trial and required final report.

NAB Accepting Nominations for 2012 NAB Engineering Achievement Awards

NAB is currently accepting nominations for the 2012 NAB Engineering Achievement Awards. Established in 1959, the NAB Engineering Achievement Awards are presented each year to individuals for their outstanding accomplishments in the broadcast industry. In 1991, NAB began giving awards separately for achievements in radio and television. The award winners will be recognized at the Technology Luncheon at 2012 NAB Show on April 18 in Las Vegas, Nev.

Additional information and a nomination form are available on NAB's website. The deadline for nominations is January 23, 2012.

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