

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of:

Unlicensed Operation in the TV Broadcast
Bands

ET Docket No. 04-186

**SUMMARY REPORT OF THE 45-DAY PUBLIC TRIAL OF THE
TELCORDIA TECHNOLOGIES TV BAND DATABASE SYSTEM**

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January 30, 2012

INTRODUCTION

Telcordia Technologies, Inc. (hereafter Telcordia) herein provides a Summary Report of the 45-Day public trial of the Telcordia TV Band Database system.

On December 2, 2011, the Federal Communications Commission (FCC) Office of Engineering Technology (OET) released a Public Notice (hereafter Notice) announcing the “Opening of Public Testing for Telcordia Technologies, Inc’s TV Band Database System.¹” The Notice stated that this was a limited trial that was intended to “allow the public to access and test Telcordia’s database system to ensure that it correctly identifies channels that are available for unlicensed radio transmitting devices that operate in the TV band (unlicensed TV band devices), properly registers those facilities entitled to protection, and provides protection to authorized services and registered facilities as specified in the rules.”

During the trial the Notice encouraged participants to test:

- 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 wireless microphone registration utility

“to ensure that each of these elements of the database system is working properly and providing the interference protection required under our rules.”

¹ DA 11-1956 Public Notice; “Office of Engineering and Technology Announces the Opening of Public Testing for Telcordia Technologies, Inc’s TV Band Database System.” 2 December, 2011.

In addition, participants were encouraged to report any inaccuracies or other issue with any aspect of the database system through the response facility on the website. Telcordia implemented a “comment” mechanism to provide for this feedback.

The Notice required that “after the close of the trial, Telcordia will provide a summary report to OET that identifies: (1) problems reported and their disposition; and (2) descriptions of changes made to the channel availability calculator or registration systems.” The remainder of this report and the related Annexes contain the required data regarding the trial.

1. SUMMARY OF TRIAL RESULTS

The Telcordia U.S. 45-Day Public Trial site was active from just before 12:01 AM on December 7, 2011 and through midnight Friday January 20, 2012 it had received 1384 visits from 599 unique visitors with 8,128 individual pages viewed. The site has been visited from 5 continents and 24 countries with the vast majority of the visits from the United States. Please see Annex A for more detail on the Visitors to the Trial site and Annex B for details on the locations the trial site was visited from.

There were a total of 942 page views of the Channel Availability/Contour Visualization tool. This was the most visited part of the trial site. For more detail on the site content visited see Annex C.

60 User accounts were created for the 45-day public trial. Users have created 60 Registrant records and 43 Owner/Operator records. As was noted on the trial registration site, the

Registrant record captures required contact information for persons that would be creating registrations within that user account, and Owner-Operator records represent companies or individuals that are owned, operated, or are otherwise responsible for the device that is being registered.

Those Registrants created the following count of device/protected entity registrations:

- 47 Low Power Auxiliary Device (LPAD) registrations (both licensed and unlicensed)
- 9 Multichannel Video Programming Distributor (MVPD) registrations
- 11 Temporary Broadcast Auxiliary Service (TBAS) registrations.

For more detail on the registrations please see Annex F.

Access to the trial registration site was disabled at 11:59 PM 1/20/2010 as directed by the FCC, public access to the Channel Availability/Contour Visualization tool has been retained.

2. COMMENTS FROM THE PUBLIC TRIAL

Thirteen comments were received via the comment facility on the trial web site. Of the 13 comments, none found errors in the Telcordia implementation of the FCC Rules and all Comments that have been received have a status of Closed.

Two of the comments found “discrepancies” between the Telcordia TV Band Database and the Spectrum Bridge Show Me My Whitespace database. However, after investigation, it was determined that the version of the Spectrum Bridge database that was being used for comparison

was not the official version that was the subject of their 45-day FCC trial. Spectrum Bridge made available its trial version of the database to the public, and the “discrepancies” were resolved. A response was provided to the commenting parties explaining the situation and inviting them to make the comparison again. No further comparison “discrepancies” were reported by the public after that time (December 13, 2011).

Five of the comments suggested usability improvements to the display of information from the system on the web site. Many of those suggested improvements were implemented to provide a better user experience where they could be implemented without impacting the functioning of the actual database system. The commenting parties were informed of the improvements that were implemented and no further usability comments were received after January 3, 2011.

Two of the comments noted that while protection for a registered wireless microphone was working properly, the channel availability for wireless microphones for subsequent registrations at that location did not seem to reflect all available channels. Since the channel availability calculator was primarily to be used to calculate available channels for White Space devices, not wireless microphones per se, some improvements were made to make this process easier for wireless microphone registrants to see the available channels at a location for use. In particular, the Channel Availability /Contour Visibility tool was modified to continue to show a channel as available to wireless microphones after a wireless microphone already registered for that channel at a particular time/location while continuing to display the channel as unavailable to white space

devices. The improvements were communicated to the commenting parties and no subsequent comments were submitted.

One commenter requested changes to the MVPD registration capability to include TV Translators. Telcordia responded by referring to the FCC clarification in the third workshop slides noting that the FCC will provide the appropriate registration facility.

One commenter had trouble creating a login and password. Issue could not be recreated. Follow-up with the user resolved the issue by clearing the cache in their browser. No further instances were reported.

One commenter noted that it wanted to test with Telcordia but did not provide any contact information and the final commenter provided feedback that the Channel Availability/Contour Visualization function was an “excellent tool.”

In addition, five sets of comments were received via the support-whitespaces@telcordia.com email address. One email was determined to be looking at commercial arrangements not related to the trial. The other four of the comment e-mail threads suggested improvements to the usability of either the contour visualization/channel availability calculator or the registration forms. Some related improvements were made and all of the email comments are resolved.

One voice mail comment was made to the number published for trial support. The call was returned the same day determining that the caller was interested in white space commercial opportunities and the message was not related to a trial issue.

For the details of the comments and responses (with personally identifying information removed) please see Annex E.

3. CHANGES MADE TO THE CHANNEL AVAILABILITY CALCULATOR OR REGISTRATION SYSTEM

The following changes were made during the course of the trial.

- Cosmetic “usability” changes to the look and feel of the contour visualization tool as a result of the comments received. Including modifying Channel Availability /Contour Visibility tool to continue to show a channel as available to wireless microphones after a wireless microphone already registered for that channel at a particular time/location while continuing to display the channel as unavailable to white space devices.
- Dec. 12, 2011: Additional text guiding newly registered users through account registration, including the requirement to set up their "Registrant" record and at least one "Owner" record.
- Jan. 6, 2012: LP-Aux registration now supports channel registration on any combination - up to all -- TV channels 2 through 51. All seven days of the week can be simultaneously checked for "Days of the Week" recurrence.

All changes that were made as a result of a comment were communicated to commenting parties via email in addition to the release notes that were posted on the trial website. No changes were made during the last two week of the trial.

CONCLUSION

Telcordia respectfully reports that its trial was successful. The trial allowed the public to test that, per the Notice, Telcordia “correctly identifies channels that are available for unlicensed radio transmitting devices that operate in the TV band (unlicensed TV band devices), properly registers those facilities entitled to protection, and provides protection to authorized services and registered facilities as specified in the rules.” The trial site had 1,384 visits with 8,128 individual page views coming from 5 continents and 24 different countries. Of the comments that were received, none reported issues with the Telcordia TV Band White Space Database implementation of the rules, and all comments were addressed by the end of the trial. Telcordia looks forward to demonstrating interoperability with the other TV Bands database administrator that has completed a trial and moving to commercial implementation of our TV Band White Space Database System.

Respectfully submitted,

/s/ John P. Malyar

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Telcordia Technologies, Inc.

Date: January 23, 2012

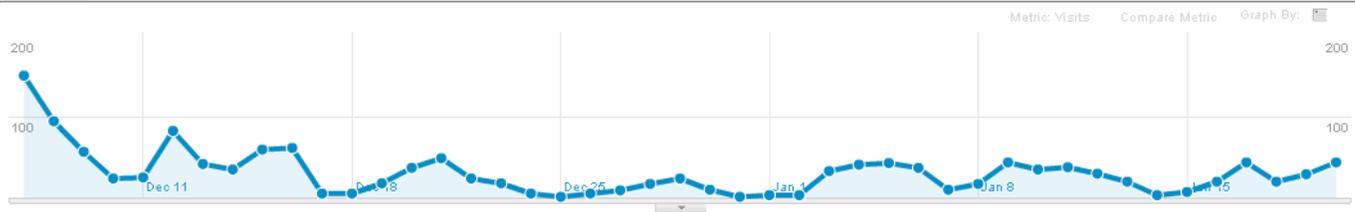
Annex A – Visitors Overview from Google Analytics

Visitors Overview

Dec 7, 2011 - Jan 20, 2012

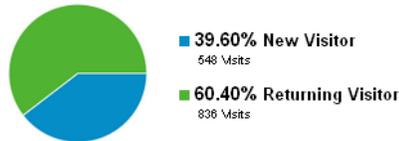
100.00% of total visits

Overview



599 people visited this site

- 1,384 Visits
- 599 Unique Visitors
- 8,128 Pageviews
- 5.87 Pages/Visit
- 00:05:30 Avg. Time on Site
- 30.13% Bounce Rate
- 39.52% % New Visits



Browser	Visits	% Visits
Chrome	644	46.53%
Internet Explorer	434	31.36%
Firefox	218	15.75%
Safari	66	4.77%
Android Browser	10	0.72%
Opera	4	0.29%
IE with Chrome Frame	3	0.22%
Mozilla Compatible Agent	3	0.22%
BlackBerry9700	1	0.07%
Opera Mini	1	0.07%

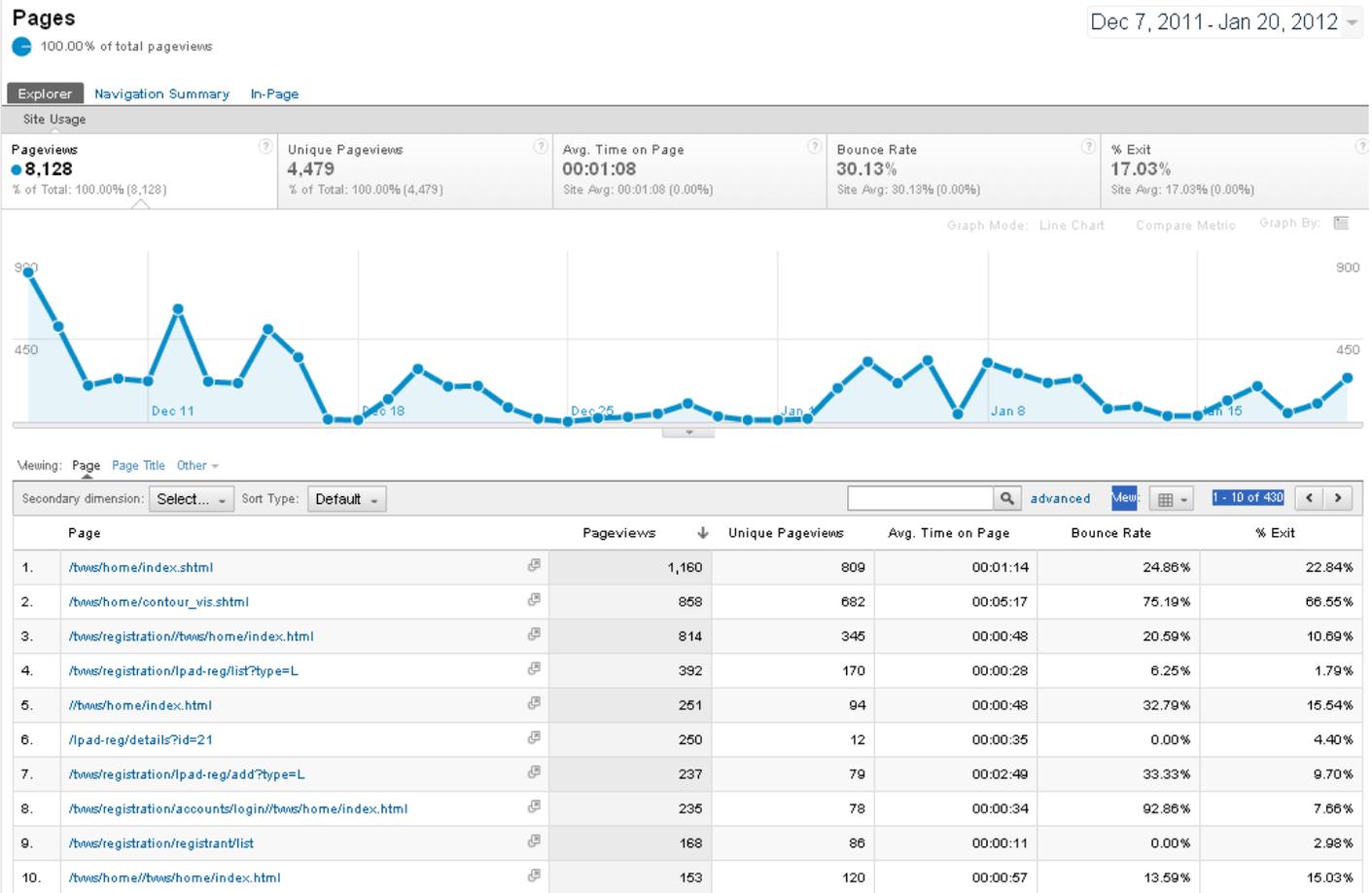
Annex B – Location from Google Analytics

 100.00% of total visits

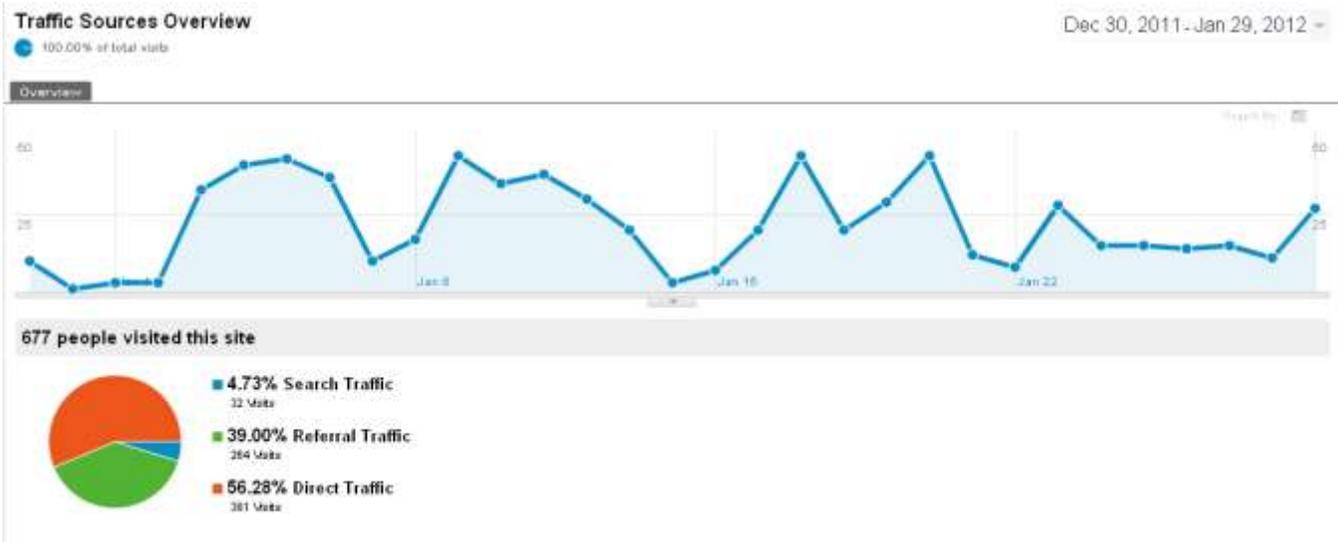
	Country/Territory	Visits	Pages/Visit	Avg. Time on Site	% New Visits
1.	United States	1,206	5.87	00:05:15	38.97%
2.	China	98	8.20	00:10:01	16.33%
3.	Japan	18	2.94	00:06:01	61.11%
4.	United Kingdom	10	2.50	00:01:49	60.00%
5.	Canada	9	2.78	00:01:33	88.89%
6.	Italy	6	2.00	00:01:28	100.00%
7.	France	5	1.20	00:00:05	20.00%
8.	Portugal	5	15.40	00:21:15	80.00%
9.	Sweden	4	1.75	00:00:28	100.00%
10.	Germany	3	3.33	00:03:19	66.67%
11.	Taiwan	3	1.00	00:00:00	100.00%
12.	Brazil	2	1.00	00:00:00	100.00%
13.	India	2	1.00	00:00:00	100.00%
14.	South Korea	2	1.50	00:00:22	100.00%
15.	Argentina	1	1.00	00:00:00	100.00%
16.	Czech Republic	1	3.00	00:00:56	100.00%
17.	Dominican Republic	1	1.00	00:00:00	100.00%
18.	Finland	1	5.00	00:07:41	100.00%

19.	Ghana	1	1.00	00:00:00	100.00%
20.	Greece	1	1.00	00:00:00	100.00%
21.	Iran	1	1.00	00:00:00	100.00%
22.	Norway	1	4.00	00:13:24	100.00%
23.	Russia	1	2.00	00:04:49	100.00%
24.	Singapore	1	1.00	00:00:00	100.00%
25.	(not set)	1	1.00	00:00:00	100.00%

Annex C – Site Content Access from Google Analytics



Annex D – Traffic Sources from Google Analytics



Annex E - Comments

Note: The comments are recorded verbatim except that indentifying (e.g., names, company, call sign etc) information has been removed.

TABLE 1 – COMMENTS RECEIVED VIA THE WEBSITE

Status	Comment	Created date	Response	Follow Up Comment/Response
Closed (no action)	Wow - I have been following the TVWS stuff over the past few years, but to see graphically the availability of spectrum in so many locations is very impressive. Thank you for letting the public get access to this! Although the rules are finalized and there has been limited rollout of devices, is it expected that there will be continued legal wrangling that prevents general deployment in this space?	Jan. 5, 2012, 10:40 a.m.	No response required	
Closed (resolved)	Regarding the large map page to select the location of the prospective transmitter (which is a great feature), It would be more helpful to see frequencies associated with the channel number, not just a channel number.	Jan. 3, 2012, 1:41 p.m.	Responded with the following email text: Thank you for participating in the 45-Day trial and for providing your comment: We are required by FCC rule to provide Channel Availability to the public. The relationship between the channels and the frequencies is maintained by the FCC for the TV Bands. We will consider this for further usability improvements in the future and appreciate your input and participation in the trial.	
Closed (resolved)	I assume that you can register a TV translator receive site using the MVPD (cable headend) registration function. It seemed to work and create a registration. However, the current language is confusing and seems limited to MVPD sites. I would suggest that the language should be changed to indicate that this is for more than MVPD but for all TV receive sites.	Dec. 29, 2011, 1:30 p.m.	Investigated do not think the request is per the FCC OET guidance at workshop and sent the following email text: We do not believe it is appropriate to update the registration form to include this additional language. It is our understanding that the FCC intends to provide the registration facility for low power TV receive sites and that they do not want the Database Administrators to accept registrations for these entities. Please look at the 3rd TVWS DBA Workshop slides provided by the OET slides 18 -24 regarding this assumption. Please let us know if this closes your concern. Thanks again for your participation in the 45 Day Public Trial and your comments. Will re-open if we get further direction/comment.	
Closed (no action)	I want to have a test for your system.	Dec. 28, 2011, 8:43 p.m.	No contact information (email or phone) or full name was provided. With no way to contact commenting party, the comment is Closed with no action.	

Closed (resolved)	Looks like the reserve channels for wireless microphones also change if those channels are selected for licensed microphone use.	Dec. 13, 2011, 1:35 p.m.	<p>The channel for reserved microphones is now selected regardless of any LPAUX (Low Power Auxiliary e.g., wireless microphone) registration on that channel.</p> <p>An email was sent describing the change stating: The two channels reserved for microphone usage nearest to channel 37 will no longer be affected by LP-Aux registrations. We removed the presence of an LP-Aux contour from the selection criteria when selecting the two reserved channels. Let us know if you have any further questions or concerns.</p>	
Closed (resolved)	Notice the list of available microphone channels changes when a wireless microphone registration is active. Understand that TVWS available channel list should change -- not sure why microphone channel list changes - since the database doesn't protect wireless microphone operation from other wireless microphones? Could confuse someone that chanel is not available for wireless microphones when it actually is.	Dec. 13, 2011, 10:47 a.m.	<p>We were displaying that a channel was unavailable at a location for any device when a microphone registered to use that channel. Given the comments we received, we thought it was in the best interest to not remove the channel from the list when the first microphone is protected and we will now assume that the frequency coordination within the 6MHz channel is being managed externally of the TVWS Database Administrator and therefore the channel remains available for wireless microphone use even though a use of that channel at that time and location is already registered. An email was sent to the commenting party.</p>	
Closed (resolved)	i am not able to scroll past channel 19 to see 20-69	Dec. 13, 2011, 3:22 p.m.	Issue fixed on all supported browsers 12/14/2011. Email reply sent 12/19/2011	
Closed (resolved)	When looking at the Telcordia database contours for ch. 25, it would appear that this channel is available at 40.75632, -74.98530, when using a 40mw portable TVBD. However, a look at the Spectrum Bridge database for this same site shows that that channel is NOT available. Should the different databases provide consistent results?	Dec. 13, 2011, 4:32 p.m.	<p>An investigation resulted in a realization that the database being compared to was not the Spectrum Bridge trial database. Comment was resolved and the following email text was sent:</p> <p>The results should be the same across the two Databases. We believe our results were correct. Spectrum Bridge has recently reloaded their Database to be consistent with what they supported during their 45 Day Public Trial. After the Trial ended they removed their link to their Production database and replaced it with an "educational purposes" version that was not current. They have since fixed this. Please feel free at your earliest convenience to go back and compare the sites. Thanks again for your participation and comments.</p>	
Closed (resolved)	Q. Is it possible to (ADD) additional entries to the "OWNER" data field ? I would like to have the ability to manage and easily identify various remote-broadcast facilities around the United States. . . . LP-Aux users will enter multiple locations and events it would be helpful to allow additional entries within the "OWNERS data fields" to properly identify the event registration.	Dec. 8, 2011, 10:05 a.m.	<p>Email sent with that included the following:</p> <p>The system currently allows a User, to create as many Registrant and Owner/Operator objects as it needs. So you could create Owner Objects as outlined above and associate the event registration with the appropriate Registrant-Owner combination. . .</p> <p>We understand the ability to register your protections is important to you and your profession. Thank you again for your participation and comments.</p>	

Closed (resolved)	Tried registering but receive invalid value. What are the parameters for Name and Password????	Dec. 8, 2011, 9:14 a.m.	Worked with User on phone. Issue could not be recreated using the same user name and password. Had user clear browser cache and open/close browser and user was able to create login and password as desired.	
Closed (resolved)	Greetings, #1 Wanted to call your attention to Lat/Long entries.. When entering Lat/Long obtained from Google Earth your system changed my direct numeric entry. It then prompted an error and listed my entry for a location outside of the United States. . . . My feeling is that most people will take location data from Google Earth or off of existing licenses... Just need to make sure that your system will properly accept coordinates in varied formatting. #2 I was not able to create a Licensed LP-Aux Registration for (for a "7-Day" recurring operation. Received error message; * Ensure this value has at most 45 characters (It has 49).. When I changed the days to Monday thru Saturday your system accepted my entry.	Dec. 8, 2011, 9:38 a.m.	<p>Responded with the following email: With regard to the latitude/longitude, we have updated to the forms to note the specific format currently required and note that the user can select the point using Google Maps from the Draw Region/link if preferred. We will consider your additional usability comments for a future release. With regard to creating an event for every day of the week. This can currently be done by using the "Fixed Interval Between Events" option and selecting 1-Day as the interval between events. You can then either select your end date or the number of events. This allows you to create protection every day for either a certain number of days or until a certain end date. We will make this clearer on the form itself and look to enhancing the usability to be able to select all 7 days from the check boxes as well.</p> <p>We understand the ability to register your protections is important to you. Thank you again for your participation and comments.</p>	<p>Thanks for your reply messages.... Will now enter additional registrations for upcoming news related events.</p> <p>Response: Just a reminder that this is a 45-Day trial, and while we encourage you to enter as many test registrations as desired, all registrations will be deleted at the end of the trial. Thanks again for your comments and feedback.</p> <p>Feedback: My intent is to assist you and provide a true environment of the daily wireless usage of major broadcasters. The more you guys see the better the glimpse into the future will be.</p> <p>Response: Ok, understood; thank you.</p> <p>Feedback: I would also tell you that your customer service is 10,000 times better than what was shown by the other guys in . . . VERY DISAPPOINTED with them !</p> <p>Additional Response: Email sent notifying of upgrade permitting selection of all 7 days via the check boxes.</p>
Closed (resolved)	No formatting guidelines are provided for coordinates or address entry.	Dec. 7, 2011, 2:30 p.m.	<p>Email sent as follows: Thank you for your comment regarding the Telcordia US TV White Space 45-day Trial.</p> <p>1)We have added a description of the latitude/longitude format: "(Decimal degrees with N/E positive, S/W negative)" and added "US" in front of "zip code". 2)We have similarly clarified the text in the Help tab that is available in the right hand frame.</p> <p>We did not add format requirements to the address description at this time as Google maps (the underlying tool) will accept nearly any address format, we are still considering enhancements in that area.</p>	<p>Thank you for your prompt response.</p> <p>I question the decision to use decimal degree format for the coordinates as it's not common. In fact, a very common method for acquiring coordinates today is to reference Google Earth or a handheld GPS, both of which use degrees/minutes/seconds format. Requiring decimal format will require a registrant to convert and that introduces additional opportunities for error. I would ask/suggest the more common degrees/minutes/seconds format be used with the lat and lon separated by a comma or slash.</p>
Closed (resolved)	1. The difference between "registrant" and "owner/operator" is not sufficiently explained. In my case it was the same, which seemed redundant. Also, there was no indication of which fields on the forms are required and which are optional. 2. When I finished the "Add Registrant" screen, there was no indication of what I should do next; the page just sat there. I finally went back to the "Trial Registrations" page and found the link to "Add Owner/Operator". 3. To the typical wireless mic user, the options on the registration page will be confusing (e.g.	Dec. 7, 2011, 5 p.m.	<p>Responded with the following email: Thank you for your comments regarding the usability of the solution. We have implemented some clarifications on the main registration page and the forms. Fields in bold font are required. After you save an object, the system returns the registered record so that you can review it in case it needs further edits. There is a selection for Wireless Mic Operator under the "Your Role" of the Comment Form within the "License Holder/Protected Entity Operator" section since Unlicensed Microphone Operators are Protected</p>	

	<p>"Unlicensed LP-Aux registration" - what does that mean?) Given that one purpose of the page is to allow wireless microphone users to register, it is interesting that the term "wireless microphone" does not appear anywhere. 4. Again, when I'm finished, then what? The page doesn't tell me anything. Am I done? Is it approved? When will I know? How will you contact me? There need to be some instructions, or at least a "Finish" button. 5. On this comment form, I noticed that in the "Your Role" dropdown menu, there is no option to identify myself as an Unlicensed Wireless Mic Operator - only Licensed. I assume that this is because you were asked to add unlicensed users into the mix late in the game.</p>		<p>Entity Operators. We will consider further enhancements to the usability of the solution in line with your suggestions in a future release of the solution.</p> <p>We understand the ability to register your protections is important to you. Thank you again for your participation and comments.</p>	
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TABLE 2 – COMMENTS RECEIVED VIA E-MAIL

Status	Comment	Created date	Response	Follow Up Comment/Response
Closed (Resolved)	Would like to discuss using your database in the future for white space Internet access services once FCC rules are finalized.	Tue 1/10/2012 6:32 PM	Email determined this was a commercial business discussion not a trial issue.	
Closed (Resolved)	<p>I am a broadcaster trying to reserve a channel for my studio mic operation and have some comments.</p> <p>1. If possible an option of entering coordinates in degrees, minutes and seconds as well as decimal degrees would really be nice on the registration page</p> <p>2. When registering a LPA (i.e. wireless mic) you ask for a call sign. Is that the call sign of the main station or of the auxiliary? You may want to clarify that on the entry page</p> <p>3. I am trying to register my studio mics for 24 hour, 7 day a week 365 days a year operation. I think I figured it out, finally. I entered one event for a duration of 365 days. Is that correct? I was having a difficult time trying to enter it as a daily recurrence.</p>	Wed 12/14/2011 5:53 PM	<p>Thank you for your comments. Regarding using degrees, minutes, seconds we will evaluate this request as a possible future feature enhancement. Currently we have provided the "Use Map" capability as a job aid to support the automatic population of the selected location values in the correct decimal degree format. Regarding the "call sign" the value should be the license holder's valid "call sign" that is applicable to the microphone registration. Lastly regarding the 24X7 365 days I would selected the option that you choose. That is enter a start date and time as a "once" and have the duration go for 365 days.</p> <p>Please let us know if you have any further questions or comments. Again we appreciate your comments and your participation in the Public 45 Day Trial.</p>	<p>I am still a little confused on the call sign question. Let me use my station in Las Vegas as an example.</p> <p>The full power TV station has a call sign of XXXX-TV. XXXX-TV holds a low-power microphone authorization that has a call sign of WPMK337.</p> <p>Which call sign should I enter?</p> <p>Response: Believe you could use either. Both from a TV Band Database perspective would be valid.</p>
Closed	Initial question via phone referral from OET office regarding selection of a single contour on the contour visualization tool.	Wednesday, December 07, 2011	<p>We made a change to the trial site to address your concern about the contour info popup. The popup now has this text at the top:</p> <p>Info for Topmost Contour: (Contours behind this one can be accessed using "Filter by Chan").</p> <p>We are hoping that this will clarify the identification of contours. We also changed the text in the help section to clarify this a little better. Please try it out and let us know what you think. You will need to refresh your browser and possibly clear the cache to see the change. Sometimes browsers do not refresh the javascript in the page unless you clear the cache.</p> <p>Also, if you could enter this and any future concerns or questions into our "Comments" form or email our support email address, it will help us track the issues and document the exact text of the concern for the final report required at the end of our trial.</p>	<p>I saw that language when I was looking at some individual channels in the market and was wondering if you had made a change. I do think the new language is very helpful and should hopefully clarify things for folks. Thanks for being so responsive. I didn't even get a chance to call John! Again, congratulations on starting the test and best of luck. The system looks good.</p> <p>Response: Thank you for your interest and comments. Regarding reviewing the information in general you may also want to look at the Tab on the top right-hand side under "Results" called "Details". It provides information in a different format regarding what entities exist on a channel at the marker location. You may also find that capability of interest.</p>
Closed (Resolved)	<p>Question: Could I enter the longitude and latitude to run your software?</p> <p>How? Thanks!</p>	Friday, December 09, 2011 1:22 PM	<p>In the "Enter location" button you can enter the latitude, longitude pair in Decimal Degrees in the same place where you type the street address.</p> <p>Also for your information we will be changing the "Enter location" button shortly which will provide the same functionality but hopefully will be a more</p>	

			user friendly based on your experience and some other comments. So don't be alarmed if you see a new look and feel with some of the buttons on the Channel Calculator.	
Closed (Resolved)	<p>Dear Telecordia,</p> <p>So far your user interface for Licensed wireless microphone users is difficult. Having registered, when going to the attached page for Licensed Use registration, UI would not let me enter an "Owner" name, and after trying to enter my geographical coordinates in two different accepted formats for longitude and latitude, the UI would not accept them. You specify the date format, but not the geo coordinates. Also, the UI would not let me enter all of the channels I use for my professional use. I operate on channels 19,20,25,26,27,28,29,30,31,32,33,43,44,45 under my license (WQNJ498) and two channels as an unlicensed user (15,17). This is how I make my living, and I am dead serious about exercising my rights as a licensed user. I will try again later in the day, but compared to Spectrum Bridge's interface, your UI leaves a lot to be desired. This email has been cc'd to the FCC.</p>	<p>Wednesday, December 07, 2011 3:49 AM</p>	<p>Thank you for participating in the trial and providing feedback regarding the Solution. We are reviewing the items listed and will provide a complete response to your concerns. Minimally we will add the example text regarding the geo coordinates and verify the ability to add all possible channels for microphone operation. The format is $\pm DD.dddd$. The example is on our other registration forms but it is missing from the LP-Aux.</p> <p>Regarding the usability of the interface your comments are appreciated. We were thinking that by providing the job aid "Draw Region" for either selecting the point or processing the quadrilateral would mainly be used and automatically populates the actual LAT/LON values in the correct format for the user.</p> <p>We understand the ability to register your protections is important to you and your profession. Thank you again for your participation and comments.</p>	<p>Thank you for your quick response. On the second go-round, I was successful in registering the fourteen channels I operate under license, and the two channels I operate as an unlicensed user. Three applications took less than ten minutes. Not too bad.</p> <p>Further Response: Regarding the usability of the interface your comments are appreciated. We were thinking that by providing the job aid "Draw Region" for either selecting the point or processing the quadrilateral would mainly be used and automatically populates the actual LAT/LON values in the correct format for the user.</p> <p>I feel that you are correct in assuming that the "Draw Region" job aid will be a very useful tool (I tested it in both "Point" and "Quad" modes), yet DDD notation is the least accessible form. Anyone using Google Earth (DMS notation) or a GPS (DMM notation) is SOL. I understand it requires a tasty bit of code, but that is what you guys do... Please make the location format user selectable.</p> <p>TV Channels:</p> <p>Even after I begrudgingly accepted the fact that the UI would not accept ALL of my channels, I still received the "Invalid TV Channel (must be integer)" error message, until I realized that the UI had truncated my "pasted" entry after a comma, and the entry failed validation. Since every possible channel is a two digit integer, if the maximum allowable characters was reduced by one, this issue could be alleviated. Please recognize the fact that the vast majority of Production Sound Mixers use more than ten UHF channels regularly. In my humble opinion as an amateur database designer, I would suggest that three rows of twelve radio buttons would make this data entry "goof-proof."</p> <p>This registration process today now covers my "Home Base", ie. the studios where most of my work occurs. I understand that when going on location, I must register the coordinates of my location work more than 24 hours</p>

			<p>before shooting, in order to allow blocking of "fixed location" TVBDs which only have to touch the database once every 24 hours. My question is will your UI be able to store all of my regular data for quick entry (editable, of course, for last minute contingencies) under my user name.</p> <p>I also understand that Telecordia is only the second horse out of the gate, and the bravery implied. I would hope that after the sixth or seventh Database Administrator Applicant goes online with their trial, the interfaces will be pretty tight, with an ad hoc standard emerging. If the applicants can't share standards and practices during this trial period, what hope have we as Licensed users that your respective databases will share our user data...</p> <p>Good Luck with the trial.</p> <p>Response: Thank you. We will be collecting all comments/suggestions and they will be shared with our engineering and development teams for input to the Solution. Currently your registrant information and owner information is persistent and can be used in future registrations. The details of a previous registration is there for modification but currently cannot be used as a template but we can consider something such as that. Maybe in the near future we can schedule a call and if you are so inclined can provide more insight to how to improve our usability of our LP-Aux registrations.</p> <p>Response: 2nd follow up email sent with release for all channels could be entered in a single registration.</p>
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TABLE 3 – COMMENTS RECEIVED VIA VOICE MAIL

Status	Comment	Created date	Response	Follow Up Comment/Response
Closed (Resolved)	Caller looking for a wireless broadband service using white spaces.	Sat Dec 10 19:55:43	Returned call on the same day noted that commercial implementation were in the future referred him to the website.	

Annex F – Registrations

All ownership/user identification information has been removed.

L=Licensed
 U=Unlicensed
 P=Point registrations
 Q=Quadrilateral registrations
 Xmit=Transmit

TABLE 1 - LIST OF LICENSED LP-AUX REGISTRATIONS

ID:	Lic:	Reg:	Location:	Start:	Duration:
29	L	Q	34.15138, -118.37125	2011-12-07 07:00 PT	14 hours
30	L	Q	34.15138, -118.37125	2011-12-07 07:00 PT	14 hours
33	L	Q	33.99916, -118.44892	2011-12-07 06:00 PT	14 hours
36	L	P	40.6885, -74.00886	2011-12-09 00:01 ET	364 days
37	L	P	38.85205, -77.04384	2011-12-09 00:01 ET	364 days
38	L	P	38.89833, -77.0366	2011-12-09 00:01 ET	7 days
39	L	P	40.46319, -74.74495	2011-12-12 12:00 ET	520000 mins
40	L	Q	38.90389, -77.02648	2011-12-12 13:00 ET	2 days
41	L	P	40.74163, -73.98924	2011-12-19 11:00 ET	14 hours
42	L	P	40.75817, -73.97915	2011-12-20 11:00 ET	14 hours
43	L	P	40.18961, -74.21211	2011-12-12 16:00 ET	15 mins

44	L	P	40.11541, -74.32197	2011-12-12 16:00 ET	15 mins
45	L	P	40.04396, -75.23384	2012-02-13 09:23 ET	45 mins
46	L	P	40.62035, -73.92013	2011-12-13 11:00 ET	5 hours
47	L	P	40.62035, -73.92013	2011-12-13 11:00 ET	5 hours
49	L	P	40.03134, -75.5854	2012-01-01 09:33 CT	23 mins
50	L	P	40.03134, -75.5854	2012-01-01 09:33 CT	23 mins
51	L	P	40.03134, -75.5854	2012-01-01 09:33 CT	23 mins
52	L	P	36.07018, -115.06851	2011-12-14 00:00 PT	365 days
56	L	P	26.14119, -80.13546	2011-12-22 08:00 ET	14 hours
57	L	P	33.07261, -104.28657	2012-01-01 09:23 ET	90 mins
58	L	P	34.0808333333, -118.326194444	2011-12-21 17:00 ET	364 days
59	L	Q	33.7816666667, -84.3919444444	2011-12-21 17:00 ET	364 days
60	L	Q	33.78167, -84.39194	2011-12-21 17:00 ET	364 days
61	L	Q	33.78167, -84.39194	2011-12-21 17:00 ET	364 days
62	L	Q	33.78167, -84.39194	2011-12-21 17:00 ET	364 days
63	L	P	40.87413, -75.20834	2012-01-10 18:00 ET	60 mins
64	L	P	36.23054, -86.7718	2011-12-21 08:00 CT	14 hours
65	L	P	36.23054, -86.7718	2011-12-21 08:00 CT	14 hours
66	L	P	36.23054, -86.7718	2011-12-21 08:00 ET	16 hours

67	L	P	32.78633, -96.79625	2011-12-30 08:00 ET	14 hours
68	L	P	36.23054, -86.7718	2012-01-12 08:00 ET	14 hours
71	L	Q	40.545, -74.48158	2012-01-26 12:00 ET	60 mins
72	L	P	38.95465, -77.35145	2012-01-14 12:11 ET	5 days
74	L	Q	43.14818, -77.6157	2012-01-20 06:00 ET	15 days
75	L	P	40.27067, -74.20112	2012-02-06 09:45 ET	14 mins

TABLE 2 - LIST OF UNLICENSED LP-AUX REGISTRATIONS

ID:	Lic:	Reg:	Location:	Start:	Duration:
31	U	Q	34.14989, -118.36936	2011-12-07 07:00 PT	14 hours
32	U	P	42.012411, -87.772694	2011-12-25 06:00 CT	24 hours
34	U	P	34.11267, -117.53281	2011-12-09 18:00 PT	5 hours
35	U	Q	40.55022, -74.48433	2011-12-07 17:45 ET	60 mins
48	U	P	40.0986, -74.50599	2012-01-01 03:33 ET	33 mins
53	U	P	35.42884, -119.09126	2011-12-18 06:45 PT	12 hours
54	U	P	35.37958, -119.05281	2011-12-18 06:45 PT	12 hours
55	U	P	40.42975, -74.62959	2011-12-15 23:30 ET	30 mins
69	U	P	38.86061, -75.37666	2012-01-10 12:30 ET	30 mins
70	U	P	40.52168, -74.64058	2012-12-01 12:12 ET	1212 mins
73	U	P	43.15578, -77.60706	2012-01-16 22:00 ET	3 days

TABLE 3 - LIST OF MVPD REGISTRATIONS

ID:	Site Loc.:	Xmit Chan.:	Xmit Sign:
7	39.68691, -104.55208	21	XXXX
8	39.68691, -104.55208	21	XXXX
9	40.51333, -75.64582	7	XXXX -TV
10	40.64, -103.8	21	XXXX
11	41.62182, -105.37141	21	XXXX
12	40.760902, -74.023802	49	XXXX
13	40.27905, -76.93123	9	XXXX
14	39.729095605, -103.85	32	XXXX
15	38.932575, -78.272125	11	XXXX -TV

TABLE 4 - LIST OF TBAS REGISTRATIONS

ID:	Site Loc.:	Xmit Chan.:	Xmit Sign:
7	35.31237, -88.10432	4	XXXX
8	40.35025, -75.06904	3	XXXX
9	40.65517, -74.79438	23	XXXX
10	40.17735, -75.6527	50	XXXX -TV
11	40.19099, -77.1894	50	XXXX -TV
12	39.0, -80.0	32	XXXX
13	40.191, -77.189	50	XXXX -TV
14	40.17394, -75.6623	50	XXXX -TV
15	40.17394, -75.66436	49	XXXX -TV
16	40.17525, -75.65956	51	XXXX -TV
17	40.1721, -75.66093	50	XXXX -TV