



June 11, 2015

Marlene H. Dortch, Esq.
Secretary
Federal Communications Commission
445 12th Street SW
Washington DC 20554

Re: Notice of Ex Parte Communication, RM – 11745 and ET Docket No. 14-165

Dear Ms. Dortch:

On Tuesday, June 9, 2015, Bruce Franca, Robert Weller, Patrick McFadden and the undersigned, all of the National Association of Broadcasters (NAB), met with Julius Knapp, Alan Stillwell, Martin Doczkat, Geraldine Matise and David Sturdivant of the Office of Engineering and Technology. We discussed the attached presentation and NAB's ongoing concern that the existing framework for the provision of unlicensed device operation in the TV "white spaces" (TVWS) is flawed and needs immediate correction to ensure interference-free operation.

The TVWS database has never been subject to closer scrutiny than it is now. Since the filing of NAB's Petition for Rulemaking regarding database problems in March, and the attendant press attention, database administrators have taken some steps to clean up obvious errors and flaws. Despite this effort, and despite the fact that the spotlight has never shone more brightly on the database, the database remains fundamentally flawed and incapable of serving its intended function in its current form.

Our updated examination of the TVWS database reveals that the database is, once again, riddled with inaccuracies despite the fact that the FCC has made aggressive efforts to clean up the errors. This confirms that the problem of inaccurate information in the database is one that will not stop – and will likely accelerate – unless and until the Commission changes its rules to ensure location data is built into the device and input with limited human involvement. The following are just some of the examples of the ongoing unreliability of the TVWS database as a mechanism for preventing interference.

The Return of John Doe

NAB previously brought to the Commission's attention the entry of false contact information such as "John Doe" or "Sue Q. Public," and the entry of false addresses such as 123 Jumpstreet, and Anytown, CA. Remarkably, months after NAB focused considerable attention on such errors, someone registered a device in the TVWS database under the name "John Doe." This device was registered as being located in the middle of an empty

1771 N Street NW
Washington DC 20036 2800
Phone 202 429 5300

field, with a contact e-mail address of "jd@example.com," and a contact telephone number of 232-555-1212. While this entry was eventually deleted, after NAB reported it to the Commission, it reflects a level of disdain for the current rules the Commission should find troubling.

Lake Michigan

NAB's investigation also uncovered a device registered in the middle of Lake Michigan. This device remained registered in that location nearly two months after NAB brought this example to the FCC's attention. This registration was, in all likelihood, a mistake, but the fact that such a significant error could persist in the database for months begs the question: how many other location errors are there in the database that are not so obvious?

Even Professionals Make Mistakes

Another significant problem we have encountered is the apparent error rate by well-intentioned, professional, competent installers.

For example, Axiom Technologies, a group that by all accounts is professional and dedicated to using TVWS and other technologies to bring broadband services to rural Maine, registered a device with inaccurate location information, possibly due to sample location information being automatically populated when the device was registered. We contacted Axiom, and the company was very helpful, responsive and professional. Axiom did, however, confirm this device was mistakenly registered at an incorrect location. Inaccurate device location undermines the very purpose of the database and will lead to harmful interference to licensed services. If Axiom, which arguably represents a perfect example of "professional installer," can make a simple mistake inputting a device's location, professional installation simply cannot be considered a reliable method of determining a device's location.

Mistakes and inaccurate information were also found in entries by a number of other TVWS operators, such as Conxx.net, MyAirFiber, Meld Technologies, and Deep South Communications.

Even the database entries for Air.U, the highly touted TVWS showcase at West Virginia University, appear to contain errors and incorrect information. This deployment has Adaptrum 1.0 devices registered in the database. Adaptrum's website, however, shows Adaptrum 2.0 devices as deployed at West Virginia University. This raises the question, should the registered 1.0 devices actually be 2.0 devices? If so, what other updates have not been performed in the database? Or, are the 1.0 devices correctly registered while the 2.0 device deployment is entirely absent from the database?

Axiom and West Virginia University are not bad actors, and they certainly are not trying to deceive the Commission or enter false information in the TVWS database. These are perfect examples of the problem with leaving the determination of location information in the hands of professional installers. The risk of human error is simply too great, whether the installers are "professional" or not.

Opponents to NAB's petition have argued that because broadcasters have failed to identify specific instances of harmful interference, the problems we have identified should be ignored as anomalies and/or otherwise harmless tests. The truth, as our reexamination of the TVWS database conclusively shows, is that human error is unavoidable – even by “professionals” – and the Commission should make every reasonable effort to limit the possibility of human errors in the process of TVWS registration and device location data. NAB has proposed very simple, straightforward solutions to these problems – including extending the geolocation capability requirement to all fixed devices. It would be arbitrary and capricious for the Commission to continue to ignore the problems we have repeatedly identified and to make no effort to implement reasonable solutions.

Only a few hundred devices have been deployed since the first TVWS device was approved in 2011. Broadcasters, other licensed users, and the public are lucky that, built on a cracked foundation, the TVWS marketplace has yet to flourish. But that failure should not serve as an excuse to ignore the core problems plaguing the TVWS system. Considering the Commission's proposals to liberalize the TVWS rules in conjunction with the incentive auction, and its proposal to extend the database system to the spectrum sharing regime planned for the 3.5 GHz band, it is ever more critical that the Commission carefully and faithfully consider all ways to improve its spectrum sharing rules before a flood of devices invades the market either in the TV band or at 3.5 GHz. We implore the Commission to take advantage of this opportunity before it's too late.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Scott Goodwin". The signature is fluid and cursive, with a prominent initial "S" and a trailing flourish.

Scott Goodwin
Associate General Counsel
Legal and Regulatory Affairs

Enclosure

cc: Julius Knapp
Alan Stillwell
Martin Doczkat
Geraldine Matisse
David Sturdivant