Before the
Federal Communications Commission
Washington, D.C. 20554

Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band ) GN Docket No. 12-354

REPLY TO OPPOSITIONS TO PETITION FOR RECONSIDERATION OF THE NATIONAL ASSOCIATION OF BROADCASTERS

The National Association of Broadcasters (NAB)\(^1\) hereby replies to oppositions to the petition NAB filed seeking reconsideration of a limited aspect of the Commission’s Order in the above-captioned proceeding.\(^2\) NAB has no wish to impede unlicensed operations in the 3.5 GHz band. Rather, NAB has urged the Commission to establish a regime that will allow unlicensed operations to flourish while preventing harmful interference as a result of foreseeable human error or abuse.

Opponents of NAB’s petition conveniently ignore the fact that, as a result of the Commission’s experience with the TV white spaces database, the Commission and the public are already aware that “professional installation” as a means of determining a device’s location leads to false information with alarming frequency. On reconsideration, the Commission should acknowledge that the “professional installation” concept has not proven

\(^1\) The National Association of Broadcasters is a nonprofit trade association that advocates on behalf of free local radio and television stations and broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

effective, and should move forward with simple but robust rules that will ensure the accuracy of location information of Citizens Broadband Service Devices (CBSDs).

I. "PROFESSIONAL INSTALLATION" HAS INHERENT FLAWS THAT RENDER IT UNWORKABLE AS A MEANS TO PREVENT HARMFUL INTERFERENCE

The Commission and all parties agree that “(a)ccurate CBSD location is essential for coordinating interactions between and among users in the band and for protecting Incumbent Users from harmful interference.”3 This much is beyond dispute. What should also be beyond dispute is that professional installation as a mechanism for accurately determining device location has been proven ineffective in another, related context: TV white spaces. Rather than importing this flawed approach into the 3.5 GHz band, the Commission should take the opportunity, before widespread deployment, to require automatic geolocation in CBSDs to ensure the success of commercial operations in the band.

In its petition, NAB explained that more than 10 percent of the entries in the TV white spaces database – all the result of professional installation – were inaccurate.4 Rather than attempt to solve the problem, some parties attempt to explain away the unacceptable error rate. Google, for example, postulates that the presence of transparently falsified information in the white spaces database proves nothing because those entries “likely” were nothing more than test entries.5 Google may or may not be correct that the extensive fabrication of names, addresses, phone numbers, and other information in the database was the result of unreported testing. But it is telling that Google, itself a database administrator, does not even

3 Id. at ¶ 220.


attempt to address the central issue, which is the fact that NAB demonstrated that the
database included widespread, indisputably incorrect location data. NAB even directly
contacted a number of parties regarding specific entries in the TV white spaces database to
confirm that the devices were in operation and that the location information was incorrect.\(^6\)
This directly undermines the central purpose of the database.

The ease with which people or companies can falsify location data – whether for
testing or to mislead the database – raises concerns regarding the sustainability of the
current rules. We recognize that Google may not care about harmful interference to other
services that do not contribute to its bottom line, but the FCC certainly should. The ease with
which the database can be populated with incorrect information undermines the entire
concept of using a database to facilitate meaningful sharing.

For the same reasons, Google’s argument that the system is working because there has yet to be a single case of harmful interference is specious.\(^7\) Google, as a database
administrator, is perfectly well aware that only a few hundred white spaces devices are
actually operating nationwide. One is more likely to find a four-leaf clover than to stumble
across a working white spaces device (and the clover may be more useful). The failure of a
handful of devices to cause a problem yet proves nothing, beyond the fact that the
Commission’s white spaces experiment has radically underperformed. If the Commission
hopes to see widespread deployment in the 3.5 GHz band, then Google’s argument is without
merit.

\(^6\) Letter from Scott Goodwin to Marlene H. Dortch, RM-11745, ET Docket No. 14-165 (filed June 11,
\(^7\) Google Response at 11-12.
T-Mobile suggests that the Commission should take a wait-and-see approach, monitoring developments to determine whether automatic geolocation capabilities might be feasible in the future.\textsuperscript{8} This approach would put the cart before the horse. The Commission must adopt rules that will prevent harmful interference before allowing operations to commence. Thus, in evaluating its rules, the Commission’s initial question on reconsideration should be whether professional installation is an appropriate model. If professional installation is flawed – which NAB has already demonstrated it is – then the question becomes whether geolocation is a good solution. If it is not, the Commission should not default back to another problematic method (\textit{i.e.}, professional installation). Rather, the Commission should not move forward until it identifies another workable solution to prevent interference. Fortunately, geolocation is a reasonable option and can be easily implemented to more effectively deal with the potential for interference.

To that end, NAB has submitted a joint proposal with four white spaces device manufacturers to amend the Commission’s white spaces rules to require automatic geolocation capability, or be under the control of a device that includes such capability.\textsuperscript{9} These parties agreed that the rules should require a transition to a system that minimizes human intervention to reduce the risk of error. To the extent this capability cannot determine location consistent with the Commission’s current accuracy requirements, the FCC can address this uncertainty with larger required separation distances.

\textsuperscript{8} Response of T-Mobile USA, Inc. at 10, GN Docket No. 12-354 (filed Oct. 19, 2015).
WISPA, in an extended flirtation with hyperbole, claims that NAB is “simply throwing in the towel based on future predictions.”\textsuperscript{10} That could not be further from the truth. NAB is looking for a meaningful solution so as to avoid completely foreseeable challenges with the current system. NAB is offering a constructive solution based on a well-documented problem. Professional installation has proven unreliable, and closing one’s eyes, covering one’s ears and stomping on the ground will not magically make it effective.

\section{Professional Installation Cannot Be Rehabilitated by a Certification Process}

Despite the demonstrated problems with relying on professional installation, numerous parties appear desperate to try to salvage that model by recommending the establishment of a certification program.\textsuperscript{11} Presumably, the notion is that somehow certifying compliance will remedy the documented problems with professional installation. There are a number of problems with this well-intentioned theory.

First, a certification program is an overly complicated “solution” to a simple problem. It is not difficult to accurately determine the location of a device and enter that location and other basic identifying information into a database. Google’s claim that “logic suggests” that “certification through an established industry-wide process will require all professional installers to adhere to a set of jointly developed standards” provides no reassurance in this context.\textsuperscript{12} Indeed, “logic suggests” that this process does not require a specialized new degree or more or different technical training. As Google should know as well as anyone,


\textsuperscript{11} See, e.g., Opposition of the Wireless Internet Service Providers Association at 10-11.

\textsuperscript{12} Google Response at 12.
technology – in this case, geolocation technology – provides a simple, automated solution to the challenge presented.

Second, a certification program also overlooks the potential for human error. While the Commission has not defined the term professional installation, it has attempted to ensure quality control through conditions on white devices equipment authorizations. By the terms of their authorizations, all white spaces devices currently must be professionally installed by an installer authorized by the specific device manufacturer. Yet, this requirement has not ensured the accuracy of information in the white spaces database. NAB has demonstrated that even well-intentioned, competent professionals make errors when it comes to professional installation. They fail to register devices, make mistakes in entering geographic coordinates, do not update registrations, and make other errors.

Third, a certification program ignores the incentives that may tempt some professional installers to falsify location information. Federated Wireless states that SAS Administrators and Citizens Band licensees will have every incentive to ensure that their databases have accurate information due to their business imperatives. This statement is true as far as it goes, but it ignores the pressure on any professional installer to install a device that can actually access spectrum it needs to operate. If Jane is scrupulously honest and flawlessly precise, but her customers wind up with devices that do not work as well as those installed by Johnny, who is willing to alter data to give his customers access, Jane risks losing business.


\[14\] NAB Letter, Attachment at 4-24.

Relying on a system that is readily subject to abuse, and provides very real incentives to engage in that abuse, is a recipe for harmful interference.

A certification program should be viewed in the context of other available technological solutions. Geolocation is not a new, untested technology. Rather, it is well-known, inexpensive and automated. It simply does not make sense that the FCC would move forward with a sub-optimal solution such as a professional installation certification program when a simple, efficient mechanism is available and ready to deploy.

III. CONCLUSION

It is perplexing why so many parties continue to defend a concept that has proven unsuccessful. Rather than accusing NAB of “fearmongering” or “baseless hyperbole,” parties should acknowledge the constructive role NAB has played both in uncovering the problems associated with professional installation, and in negotiating an agreement to phase in automatic geolocation capabilities in TV white space devices. This success should serve as a basis for similar progress in the 3.5 GHz band.

16 Google Response at 12.
CERTIFICATE OF SERVICE

I, Susan Baurenfeind, certify that on this 29th day of October, 2015, I have caused a true and correct copy of the foregoing Reply to Oppositions to Petition for Reconsideration to be served via first class mail, postage paid, upon:

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