



## DISCUSSION

In its Response, Adaptrum entreats NAB to “look beyond procedural matters” and support Adaptrum’s waiver request. In fact, NAB’s comments regarding the rules Adaptrum ignored are anything but “procedural.” Rather, these rules go to the heart of the substantive goal of preventing harmful interference to licensed services.

Adaptrum’s mischaracterization of NAB’s comments suggests that Adaptrum fundamentally misapprehends the Commission’s framework for the coexistence of licensed and unlicensed services in the TV bands. For example, in its previous submission in this matter, NAB observed that Adaptrum had not registered its devices in the TV bands database, as the Commission’s rules require.<sup>4</sup> This is not a mere procedural requirement; registration in the database is a cornerstone of the FCC’s rules for operating unlicensed TV White Spaces devices in the TV bands and preventing harmful interference to licensed services.

Adaptrum acknowledges its failure in this regard, but claims that this should not trouble the Commission because there are no broadcast television stations operating in the immediate area.<sup>5</sup> Of course, that answer is of no moment. First, the TV bands database allows users to register licensed devices, including wireless microphones, that may operate at different locations. Failure to register properly thus runs the risk of causing interference to such licensed operations. Second, Adaptrum’s operation apparently exceeds the height and power limits upon which the television protection

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<sup>4</sup> Reply Comments of the National Association of Broadcasters, 3, ET Docket No. 14-187 (filed Dec. 9, 2014) (“NAB Reply Comments”).

<sup>5</sup> Adaptrum Response at 3.

requirements are based,<sup>6</sup> yet Adaptrum has not submitted any engineering analysis demonstrating that its operations will adequately protect licensed stations. While there may be no full power stations that require protection under the present rules, there are two licensed LPTV stations with protected contours approaching the Adaptrum site, as well as additional U.S. and Canadian authorizations that may be operational.<sup>7</sup> Third, Adaptrum’s operation seeks to test the deployment of unlicensed devices on towers in rural areas. This testing may spur further experiments and, ultimately, deployments in other areas. Adaptrum’s failures to comply with current requirements to protect licensed users in this limited test, and to conduct the appropriate analysis to consider the impacts of its increased height and power parameters, cast doubt on its willingness to comply with the rules in any in broader deployments in the future.

Further, Adaptrum’s latest filing demonstrates that its devices fail to comply with another key component of the registration requirements – specifically the requirement

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<sup>6</sup> 47 C.F.R. § 15.711(b)(2).

<sup>7</sup> A search of the FCC’s CDBS shows two licensed UHF stations, WFVX-LD, Channel 22, Bangor and WMEB-TV, Channel 25, East Eddington, Maine, within 100 kilometers of the Cooper Hill site. The CDBS also shows a number of U.S. stations holding construction permits, which may in fact be operating, and a number of Canadian stations with “grant” status, which require a cross-check of the CRTC database to determine operating status. A complete list of UHF authorizations within 100 km of the Cooper Hill site follows:

Call	Channel	Service	Status	City	State	Distance
CIHF-TV-12	21	DT	GRANT	ST-STEPHEN	NB	48.47 km
CIHF-TV-12	21	TV	GRANT	ST-STEPHEN	NB	48.30 km
WFVX-LD	22	LD	LIC	BANGOR	ME	90.41 km
W23EI-D	23	LD	CP	LINCOLN	ME	91.20 km
W24EE-D	24	LD	CP	ORONO	ME	97.83 km
WMEB-TV	25	LD	LIC	EAST EDDINGTON	ME	90.41 km
W26EG-D	26	LD	CP	ORONO	ME	97.83 km
CHCT-TV	26	TX	GRANT	ST. ANDREWS	NB	33.71 km
CHCT-TV	26	TX	GRANT	ST. ANDREWS	NB	33.71 km
W39DT-D	39	LD	CP	LINCOLN	ME	91.20 km
W41EG-D	41	LD	CP	LINCOLN	ME	91.20 km
W49EC-D	49	LD	CP	ORONO	ME	97.83 km

that TV White Spaces (“TVWS”) devices must register and receive a list of available channels from the database by connecting to the Internet, either directly or through another fixed TVWS device that has a direct connection to the Internet.<sup>8</sup> Adaptrum now acknowledges that the devices in its testing do not actually have a direct connection to the Internet or a connection through another TVWS device. Instead, according to Adaptrum, channel selection for its devices is conducted *manually* without registration.<sup>9</sup> That is, Adaptrum checks the TV bands database on the Internet, then programs the devices manually, installs the devices, and conducts test operations. Obviously this means the devices cannot comply with existing rules requiring fixed devices to re-check the database at least once per day to receive an updated list of available channels.<sup>10</sup>

Beyond its failure to register its devices in the database, NAB also observed that photographs on Adaptrum’s own website appeared to show Adaptrum devices already deployed and operating at an antenna height above ground exceeding the limits in the Commission’s rules.<sup>11</sup> NAB expressed concern that Adaptrum had self-granted its requested waiver, and was operating out of compliance with those rules. Oddly, in response, Adaptrum painstakingly avoids making any representation about the height of these devices. Instead, Adaptrum claims that “all antennas installed to connect *client sites* are within the current FCC height limit.”<sup>12</sup> Of course, this says *nothing* about whether or not the devices deployed on the Cooper Tower, which is clearly not a “client

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<sup>8</sup> 47 C.F.R. § 15.713(e)(3).

<sup>9</sup> Adaptrum Response at 3.

<sup>10</sup> 47 C.F.R. § 15.711(b)(3)(i).

<sup>11</sup> NAB Reply Comments at 2.

<sup>12</sup> Adaptrum Response at 2 (emphasis added).

site,” are 30 meters or less above ground. The FCC’s antenna structure registration database indicates that the Cooper Tower is much taller than 30 meters.<sup>13</sup>

Adaptrum further states that the photographs from its website that NAB submitted contain “no statement as to the height of the TVBD antennas on the towers.”<sup>14</sup> Although this statement is accurate on its face, Adaptrum again does not deny that the antennas are deployed at heights exceeding the limits in the current rules. While NAB leaves it to Commission staff to determine whether the devices in these photos are actually at or below 30 meters above ground, it is notable that Adaptrum chooses to dance around the issue rather than simply affirmatively stating the height of these devices. If Adaptrum actually wishes to clarify, rather than obfuscate, it can easily provide this information. Its failure to do so should give the Commission cause for concern, with respect both to Adaptrum’s commitment to complying with the rules going forward as well as its commitment to candor with the Commission.

Adaptrum’s explanation that it thought its deployment was somehow authorized by the modified equipment authorization rules adopted in 2013 appears even more baffling. Specifically, Adaptrum states that it interpreted section 2.805, concerning operation of radio frequency devices prior to equipment authorization, as allowing Adaptrum to perform its current testing without an experimental license. Section 2.805 does allow, under certain specific conditions, testing and evaluation without an experimental authorization, but the very portion of the rule Adaptrum itself *cites and quotes* as its basis

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<sup>13</sup> ASR 1023990 shows the overall structure height to be 100.5 meters above ground level.

<sup>14</sup> Adaptrum Response at 2.

for believing no authorization was necessary expressly states that devices in such testing “shall be operated in compliance with existing Commission rules.”<sup>15</sup> Given this clear language, Section 2.805 cannot justify test operations failing to comply with the Commission’s rules concerning height above ground, registration with the TV bands database, or a direct connection to the Internet to check the database. Additional requirements of this rule, which Adaptrum conveniently chooses *not* to quote in its filing, provide that such testing is authorized only: (1) under the authority of a service license with the permission of the licensee; or (2) under a grant of special temporary authorization.<sup>16</sup> Adaptrum’s experimental unlicensed operation meets neither one of these conditions, and thus cannot possibly be permitted by Section 2.805.

Finally, NAB has asked that if, despite Adaptrum’s transgressions, the FCC chooses to grant Adaptrum’s request, it should, at a minimum, require Adaptrum to operate with two vacant television channels on either side of the channel on which these devices operate.<sup>17</sup> Adaptrum responded that such “excessive” guard bands “merely decrease service opportunities” to citizens in rural areas.<sup>18</sup> This response makes little sense. Adaptrum repeatedly trumpets the number of available channels in the area where it is conducting testing, even including an exhibit showing 40 available channels, or 240 MHz of spectrum. Of course, Adaptrum does not state whether its determination of available channels is based on the actual height and power of its operations, but, if 40 channels are actually available for Adaptrum’s use, compliance with NAB’s proposed

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<sup>15</sup> Adaptrum Response at 3, citing 47 C.F.R. § 2.805(e)(1).

<sup>16</sup> 47 C.F.R. §§ 2.805(e)(1)(i)-(ii).

<sup>17</sup> NAB Reply Comments at 4-5.

<sup>18</sup> Adaptrum Response at 4.

conditions would still leave Adaptrum with over 200 MHz of available spectrum for testing. If Adaptrum cannot perform its testing with that much spectrum, this is not an experiment worth conducting, let alone one warranting the Commission's time and attention to a waiver request.

## **CONCLUSION**

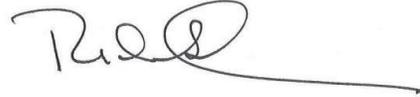
When NAB submitted its previous comments in this matter, NAB believed Adaptrum had failed to comply with the FCC's rules in certain respects, including the failure to register TVWS devices with the database and operation at higher than permitted heights without a waiver. Adaptrum has now acknowledged at least some of those violations, as well as admitting to others, including the installation and operation of devices that have no connection to the Internet to check for available channels in the database. In addition, rather than simply acknowledging its transgressions and promising to come into compliance going forward, Adaptrum has chosen to be evasive at best in its representations concerning its operations, and has stated that its failures were based on a reading of the experimental licensing rules that strains credulity. This is not a strong case for a waiver.

Nevertheless, if the FCC decides to grant Adaptrum's request, it should adopt the limited technical conditions NAB has proposed, to ensure that any further rule transgressions, whether intentional or not, do not cause harmful interference to licensed operations. That is, after all, what the rules Adaptrum has violated are intended to prevent.

Respectfully submitted,

**NATIONAL ASSOCIATION OF  
BROADCASTERS**

1771 N Street, NW  
Washington, DC 20036  
(202) 429-5430

A handwritten signature in black ink, appearing to read "Rick Kaplan", with a long horizontal line extending to the right.

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Rick Kaplan  
Jerianne Timmerman  
Patrick McFadden

Bruce Franca  
Robert Weller

January 7, 2015