

DISCUSSION

Adaptrum requests a waiver to allow operation of fixed white spaces devices with antenna heights above ground exceeding those provided in the Commission's rules.³ Adaptrum seeks to mount fixed TV White Spaces ("TVWS") devices on towers in Northeast Maine near the Canadian border in order "to demonstrate the use of TV band devices in a rural area where there are few alternatives for broadband."⁴

As a general matter, NAB has supported innovative unlicensed technologies, provided they can operate without causing harm to licensed services. Indeed, NAB has provided a forum for Adaptrum at NAB's annual show in Las Vegas so that Adaptrum can showcase its products.

NAB also understands the important role waivers can play in innovation. In this instance, however, Adaptrum has taken a number of steps that should give the Commission pause before rewarding the company with additional flexibility and trust.

It is well understood that parties are expected to request and obtain rule waivers authorizing their deployments *before* actually deploying. Yet, in this case, Adaptrum appears to have already installed equipment pursuant to a waiver the Commission has yet to grant. Pictures available on Adaptrum's website confirm that Adaptrum has installed a TVWS device on at least one large tower,⁵ that the device has been

³ Letter from Haiyun Tang, Adaptrum, to Julius Knapp, FCC, ET Docket No. 14-187 (Aug. 10, 2014) ("Adaptrum Waiver Request").

⁴ *Id.* at 1.

⁵ Attachment 1; *see also* http://www.adaptrum.com/acrs2launch/Launch_DeployPics_Maine.htm.

operational at least long enough to perform testing,⁶ and that customer premises equipment was installed miles away from the tower – presumably for further testing.⁷ In short, Adaptrum appears to have granted its own waiver prior to seeking and receiving Commission approval and has commenced limited operations.

In addition, waiver or no, current TVWS rules require Adaptrum to register devices in the TVWS database. NAB can find no such registration for Adaptrum's devices in Maine. This is troubling, to say the least. The database approach to preventing interference depends entirely on unlicensed users properly registering devices. When devices are not registered, as appears to be the case here, there is no ready way to determine the source of harmful interference or ask the responsible party to turn down its operations. NAB has also been unable to find any active experimental licenses for Adaptrum or Axiom using Adaptrum devices in Maine.⁸ Whatever operation Adaptrum is conducting in Maine, it is doing so without authorization, and apparently in violation of current FCC rules. The Commission should be very hesitant to grant a waiver of rules designed to prevent harmful interference to a party that cannot demonstrate that it consistently follows such rules. After all, unlicensed operation does not mean operation without responsibility. Quite the contrary – unlicensed TVWS users are required to follow the Commission's rules to mitigate potential harmful interference.

⁶ Attachment 2; *see also*
http://www.adaptrum.com/acrs2launch/Launch_DeployPics_Maine.htm.

⁷ Attachment 3; *see also*
http://www.adaptrum.com/acrs2launch/Launch_DeployPics_Maine.htm.

⁸ Axiom previously had an experimental license for testing in Maine using Carlson devices, under call sign WG9XYZ, File No. 0857-EX-ST-2013. That experimental authorization expired on March 7, 2014.

It is also relevant that the Commission currently has an open proceeding examining potential modifications to the rules for unlicensed operation, and whether these modifications can be made without causing harmful interference to licensed operations.⁹ Indeed, the Commission expressly seeks comment on the question of whether limits on antenna height above ground can safely be raised in rural areas. While one commenter claims the FCC has already recognized the benefits of operation at increased heights, in fact, the FCC is actively seeking input on this very issue, and has yet to reach any conclusion.¹⁰ NAB respectfully submits this issue is more properly addressed in a rulemaking proceeding, based on thorough technical analysis.

Despite Adaptrum's transgressions, if the Commission nevertheless elects 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 – that is, on the central channel of five vacant, contiguous channels. While operation at higher antenna heights permits greater communication range, such extended range also means that the interference potential from these devices will extend to a further distance, thereby significantly increasing the potential for harm. Given the large number of vacant channels in this part of Maine, this condition will not preclude operation. It will, however, help to ensure that Adaptrum's experiment does not disrupt reception for television viewers, as

⁹ *Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37, and Amendment of Part 74 of the Commission's Rules for Low Power Auxiliary Stations in the Repurposed 600 MHz Band and 600 MHz Duplex Gap; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, ET Docket No. 14-165, GN Docket No. 12-268, FCC 14-144, ¶ 44 (rel. Sept. 30, 2014).

¹⁰ Comments of the Wireless Internet Service Providers Association, 2, ET Docket No. 14-187 (filed Nov. 24, 2014).

Adaptrum has not shown any independent inclination to follow procedures intended to prevent such disruption.

In sum, Adaptrum's actions and the Commission's current rulemaking directly on point make Adaptrum's request far less compelling than the average waiver request. Even if the Commission overlooks Adaptrum's relevant actions, the Commission should take the necessary steps to ensure that Adaptrum does not harm broadcasters in the market in any way.

Respectfully submitted,

**NATIONAL ASSOCIATION OF
BROADCASTERS**

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

Rick Kaplan
Jerianne Timmerman
Patrick McFadden

Victor Tawil
Bruce Franca
Robert Weller

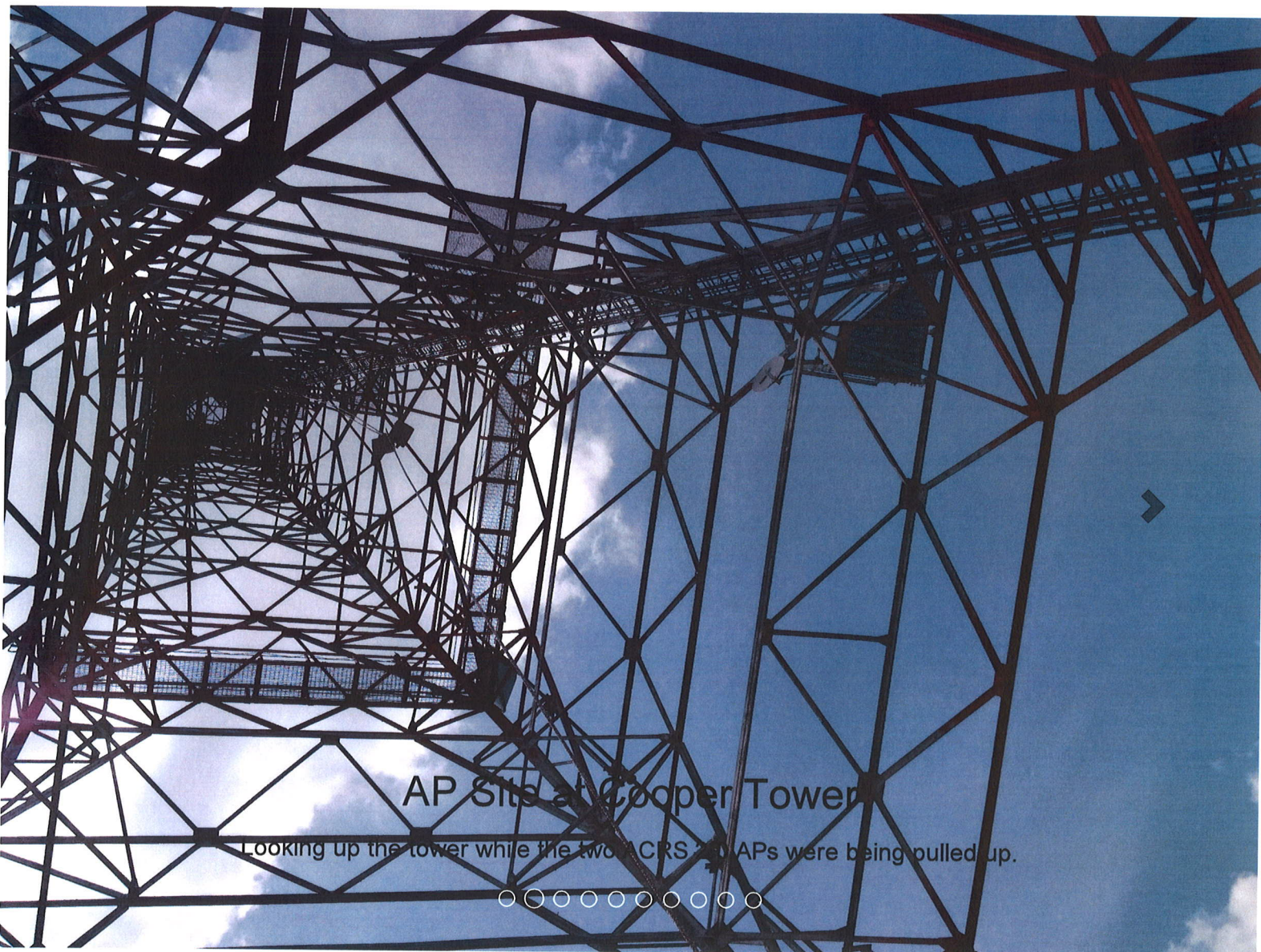
December 9, 2014

ATTACHMENT 1

ACRS 2.0 Deployment Image Gallery Washington County, Maine



ACRS 2.0 Deployment Image Gallery Washington County, Maine



AP Site at Cooper Tower

Looking up the tower while the two ACRS 2.0 APs were being pulled up.





Antennas installed on the Cooper Tower

The antennas and equipment are installed on the Cooper Tower. The tower is a lattice structure of red-painted steel beams. The antennas are white, circular, and mounted on a central vertical pole. The background shows a vast landscape of green hills and a winding river under a blue sky with scattered white clouds.



ATTACHMENT 2

ADAPTRUM

(<http://www.adaptrum.com>)

ACRS 2.0 Deployment Image Gallery Washington County, Maine



ATTACHMENT 3

ACRS 2.0 Deployment Image Gallery Washington County, Maine



