

June 18, 2014

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage through the Use of Signal Boosters, WT Docket No. 10-4

Dear Ms. Dortch:

Nextivity, Inc., V-COMM, L.L.C., Verizon and Wilson Electronics hereby jointly submit the attached proposal for revised signal booster rules for the Commission to consider. These rules address issues raised by Verizon, V-COMM and Wilson ("Petitioners") in a petition for reconsideration,¹ and would allow provider-specific consumer boosters that satisfy the proposed rules to be operated in mobile settings. If adopted, these changes would resolve Petitioners' concerns raised in the petition for reconsideration.

In February 2013, the Commission adopted signal booster rules.² The rules were based largely on technical network protection standards proposed jointly by Nextivity, T-Mobile, V-COMM, Verizon and Wilson.³ Petitioners argued that the Joint Proposal did not contemplate that provider-specific consumer boosters⁴ would be authorized for mobile use, because the noise and gain limits allowed for such boosters would cause harmful interference.⁵ Accordingly, the Petition asked the Commission to amend the booster rules to prohibit mobile provider-specific boosters.⁶ The Petition also asked the

¹ Petition for Reconsideration of V-COMM, L.L.C., Verizon Wireless and Wilson Electronics, WT Docket No. 10-4, filed May 13, 2013 ("Petition").

² *Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters*, Report and Order, 28 FCC Rcd 1663 (2013) ("Booster Order").

³ See Letter from Nextivity, Inc., T-Mobile, USA, Inc., V-COMM, L.L.C., Verizon Wireless, and Wilson Electronics to Marlene H. Dortch, WT Docket No. 10-4 (filed June 8, 2012) ("Joint Proposal").

⁴ Provider-specific consumer boosters are boosters designed to operate on the frequencies and in the market areas of the specified licensee(s). Provider-specific boosters may only be certified and operated with the consent of the licensee(s) whose frequencies are being amplified by the device. See 47 C.F.R. § 20.3.

⁵ Petition at 2, 4-8.

⁶ *Id.* at 8.

Commission to harmonize the provider-specific booster antenna kitting rules with the booster antenna kitting rules for wideband consumer boosters and require that consumer boosters certified for fixed, in-building use be labeled accordingly.⁷

Nextivity opposed the Petition arguing that mobile provider-specific consumer boosters would not cause harmful interference and that prohibiting such boosters would stifle innovation. Nextivity also opposed revising the antenna kitting and labeling rules, arguing that there was no need to distinguish between fixed and mobile provider-specific consumer boosters.⁸

At the request of Commission staff, Nextivity, V-COMM and Verizon engaged in a series of discussions to try and resolve the issues raised in the Petition and Nextivity Opposition. Those discussions resulted in a set of consumer booster rule revisions that the parties agree will allow mobile provider-specific consumer boosters to be operated without causing harmful interference to wireless networks and adjacent users. The proposed rules provide:

- Mobile provider-specific boosters must meet the same noise limits as mobile wideband consumer boosters;
- Mobile provider-specific boosters that are directly connected to the device and that use direct contact coupling (e.g., cradle-type boosters) must meet the same gain limits that apply to similarly connected wideband consumer boosters;
- The maximum booster gain for mobile provider-specific boosters that use an inside antenna and that have both automatic gain adjustment based on isolation measurements between booster donor and server antenna and automatic feedback cancellation must not exceed 58 dB and 65 dB for frequencies below and above 1 GHz, respectively;
- The antenna kitting rule for provider-specific boosters should be amended to be the same as the current antenna kitting rule applicable to wideband consumer boosters; and
- The booster labeling requirements should be amended to require that consumer boosters certified for fixed, in-building use include language stating: "This device may only be operated in a fixed location for in-building use."

In addition, the parties agree that the Commission's Knowledge Database ("KDB") procedures for certification of mobile provider-specific boosters should be amended to address these changes. The test procedures must include demonstrating

⁷ *Id.* at 9-10.

⁸ Opposition to Petition for Reconsideration, WT Docket No. 10-4, filed June 21, 2013 ("Nextivity Opposition").

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compliance to mobile isolation and feedback cancellation, and other requirements for mobility such as frequency band changes at market borders to enable such operation. These requirements will need to be demonstrated in certification testing, and not only by attestations in the certification application. Nextivity, V-COMM, Verizon and Wilson stand ready to assist the Commission in developing revised test procedures.

Nextivity, V-COMM, Verizon and Wilson urge the Commission to adopt these revised consumer booster rule changes and test procedures.

Sincerely,

NEXTIVITY, INC.

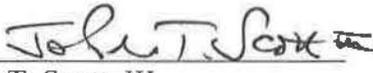
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Attachment

cc (via email):
Roger Noel
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Draft Rules for Mobile Provider-Specific Consumer Boosters

Add new subsection:

§ 20.21(e)(9)(i)(A) *Noise Limits:*

(2)(iii) Mobile booster maximum noise power shall not exceed -59 dBm/MHz.

Add new subsection:

§ 20.21(e)(9)(i)(C) *Booster Gain Limits:*

(3) Mobile Booster maximum gain shall not exceed 15 dB when directly connected (e.g., boosters with a physical connection to the subscriber device), 23 dB when using direct contact coupling (e.g., cradle-type boosters), or 50 dB when using an inside antenna (e.g., inside a vehicle). For systems using an inside antenna that have automatic gain adjustment based on isolation measurements between booster donor and server antenna and automatic feedback cancellation, the mobile booster maximum gain shall not exceed 58 dB and 65 dB for frequencies below and above 1 GHz, respectively.

Modify language in § 20.21(e)(9)(i)(H) *Booster Antenna Kitting* to read:

All consumer boosters must be sold with user manuals specifying all antennas and cables that meet the requirements of this section. All consumer boosters must be sold together with antennas, cables, and/or coupling devices that meet the requirements of this section. The grantee is required to submit a technical document with the application for FCC equipment authorization that shows compliance of all antennas, cables, and/or coupling devices with the requirements of this section, including any antenna or equipment upgrade options that may be available at initial purchase or as a subsequent upgrade.

Modify § 20.21(f) *Signal booster labeling requirements* (to be inserted at the end of the current Consumer Signal Boosters label requirement) to add:

The label for consumer boosters certified for fixed indoor operation must also include the following language:

This device may only be operated in a fixed location for in-building use.