

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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

**COMMENTS OF
THE AD HOC TELECOMMUNICATIONS USERS COMMITTEE**

The Ad Hoc Telecommunications Users Committee ("Ad Hoc") submits these comments in response to the Commission's Second Further Notice of Proposed Rulemaking¹ in the aforementioned proceeding. As set forth further below, Ad Hoc urges the Commission to eliminate the "personal use restriction" for Wideband Consumer Signal Boosters so that consumers of all types, including enterprise consumers, can deploy these simple and cost-effective devices to improve access to wireless services.

INTRODUCTION

Ad Hoc is a longstanding organization of corporate enterprise customers that individually and collectively purchase large quantities of wireline and wireless telecommunications and information services. Its membership includes companies from a wide variety of industries including manufacturing, financial services, shipping and logistics, and transportation. Ad Hoc's membership does not include any

¹ *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, Second Report and Order and Second Further Notice of Proposed Rulemaking, FCC 18-35 (rel. Mar. 23, 2018) ("Second R&O and FNPRM").

telecommunications carriers or manufacturers of telecommunications equipment.

As we described in comments previously filed in this proceeding,² seamless and ubiquitous wireless connectivity is an essential component of nearly every enterprise network operating in today's increasingly competitive and global economy. Wireless communications support many mission-critical applications of Ad Hoc member companies' worldwide businesses. Importantly, wireless signal boosters have, for many businesses, become a key building block in spreading wireless connectivity across enterprise facilities.

The Commission's recent decision to eliminate the "personal use restriction" for Provider-Specific Consumer Signal Boosters removed ambiguous and potentially burdensome restrictions limiting the types of entities that could use consumer signal boosters and the purposes for which those signal boosters could be deployed.³ Ad Hoc strongly supports this recent action.⁴ We now urge the Commission to continue improvement of its signal booster rules by eliminating the "personal use restriction" for Wideband Consumer Signal Boosters. This additional step to simplify the signal booster rules will facilitate expanded use of signal boosters by enterprise customers consistent with the intended purpose of such devices. In furtherance of its existing signal booster rules and its stated policy goals to increase the opportunities for operators to deploy

² Comments of the Ad Hoc Telecommunications Users Committee on the Public Notice, WT Docket No. 10-4 (filed Mar. 23, 2017) ("Ad Hoc Comments").

³ Second R&O and FNPRM, ¶¶12-16.

⁴ See Ad Hoc Comments at 2-4. Throughout this proceeding, Ad Hoc has also supported Commission efforts to facilitate deployment of signal boosters through the adoption of signal booster rules and, where appropriate, common sense revision to such rules. See Comments of the Ad Hoc Telecommunications Users Committee on the Petition for Clarification and/or Reconsideration filed by the Enterprise Wireless Association, WT Docket No. 10-4 (filed June 21, 2013).

signal boosters, the Commission should also adopt a simple, unified registration process for operators of Wideband Consumer Signal Boosters. This “one-stop” registration process would ensure all wireless licensees whose spectrum may be used by a Wideband Consumer Signal Booster would receive appropriate information needed to address any potential interference issues. The process would also simultaneously convey adequate licensee consent for operators to use licensed spectrum with Network Protection Standard (“NPS”)-compliant signal boosters, regardless of whether the operator is a subscriber of the licensee’s wireless services.

I. THE COMMISSION SHOULD ELIMINATE THE “PERSONAL USE RESTRICTION” FOR MULTIBAND CONSUMER SIGNAL BOOSTERS

In response to paragraph 34 of the Second FNPRM, Ad Hoc urges the Commission to expand the accessibility of Wideband Consumer Signal Boosters to enterprise customers by eliminating the “personal use restriction” currently applicable to such devices. As Ad Hoc has previously commented in this proceeding, off the shelf consumer signal boosters provide a simple and cost-effective method to improve wireless communications in a variety of enterprise environments.⁵ They are particularly useful in locations where the installation of larger Industrial Signal Boosters is neither cost effective nor technically necessary to obtain improvement of wireless signal coverage.⁶ Importantly, the utility of the consumer signal boosters in enterprise environments applies equally to Multiband and Single-Provider Consumer Signal Boosters.⁷ An enterprise

⁵ Ad Hoc Comments at 3.

⁶ *Id.*

⁷ The Commission has noted the broad array of commenters in this proceeding who support elimination of the personal use restriction for Wideband Consumer Signal Boosters. Second R&O and FNPRM at ¶¶ 37-38.

would select one type or the other depending on the particular requirements of the location at which they are deployed, the needs of the particular business at a particular site, and the number of wireless licensees whose spectrum a business at a specific location might need to access.

The Commission's light touch regulatory structure for consumer signal boosters has worked well. The streamlined signal booster registration/licensee consent process has facilitated the deployment of consumer signal boosters through its simplicity and accessibility to consumers. According to the Second R&O and FNPRM, the NPS developed by multiple stakeholders has enabled the widespread operation of signal boosters with no reports by licensees of major interference issues.⁸ The Commission should build upon this record of success by eliminating unnecessary barriers to the deployment and use of signal boosters by all types consumers when such barriers provide no meaningful protection against potential interference. The Commission rightly eliminated the "personal use restriction" for Provider-Specific Consumer Signal Boosters for that reason, and the logic underlying the Commission's decision there applies equally to Wideband Consumer Signal Boosters. Elimination of the "personal use restriction" for Wideband Consumer Signal Boosters will expand their availability to operators that are presumably excluded under the Commission's current rules. The elimination of the restriction poses little to no risk of unlawful interference given the sensible regulatory structure already in place, centered around compliance with the NPS, for the use of consumer signal boosters.

⁸ *Id.* at ¶ 8.

II. THE COMMISSION SHOULD REQUIRE WIRELESS LICENSEES TO CREATE, OPERATE, AND MAINTAIN A SINGLE DATABASE FOR REGISTRATION OF NPS-COMPLIANT MULTIBAND CONSUMER SIGNAL BOOSTERS

Ad Hoc supports the Commission's overall suggested approach of eliminating the personal use restriction for Multiband Consumer Signal Boosters by extending the broadly successful registration and licensee consent framework currently in place. The Commission correctly identifies additional issues that need to be addressed for Multiband Consumer Signal Boosters—namely, the registration of boosters with and receipt of consent to operate that booster in the spectrum from a licensee of which the booster operator is not a subscriber.

Ad Hoc cautions the Commission, however, against modifying the existing registration/consent framework in a manner that imposes overly complicated and unnecessary additional burdens on operators of Multiband Consumer Signal Boosters. It is not reasonable or efficient to impose upon *operators* the obligation of determining what licensees' spectrum their off-the-shelf multiband boosters might access from any number of different locations in their enterprise. Businesses and other entities should be encouraged to deploy these devices widely, and regulatory requirements should enable that deployment to take place quickly. Burdensome registration requirements impose unnecessary barriers to the effective and efficient deployment of these devices and increase the likelihood of non-compliance, jeopardizing the ability of wireless licensees to address quickly any interference issues in the unlikely event they might arise from the operation of a Multiband Consumer Signal Booster. It is not practical to expect and, in many cases, may not even be feasible for an operator to determine what licensees' spectrum will be accessed from a given enterprise location, even if the FCC

operates a database identifying geographic areas where licensed spectrum is accessible.

To that end, the Commission should require wireless licensees to coordinate and cooperate in the development of a single, unified database that permits operators of Multiband Consumer Signal Boosters to register their NPS-compliant devices in a single instance. This one-stop registration could be coordinated and operated by the wireless licensees themselves, through a single purpose consortium created by the licensees to manage such a database, or by an existing entity such as their trade association, CTIA.⁹

A. Wireless Licensees Should be Required to Assume all Costs of Creating and Managing the Registration Database.

Wireless licensees—not consumers deploying Multiband Consumer Signal Boosters—should be required to pay for the creation and management of the database. In response to paragraph 48 of the Second FNPRM, the Commission should explicitly prohibit wireless licensees or their designated operator of a consolidated database from imposing registration fees of any kind.

First, the wireless licensees are the primary beneficiaries of the registration process. The information provided by operators of signal boosters enables licensees to resolve any interference issues that affect their networks—therefore, it is in their

⁹ There is precedent for the successful development and operation of consolidated licensing databases and clearinghouses. For example, the CTIA Spectrum Clearinghouse managed relocation and cost-sharing following the award of license for Advanced Wireless Services. See CTIA Spectrum Clearinghouse at www.ctiaspectrumclearinghouse.org (last visited May 18, 2018). Other examples of centralized databases include the 800 MHz Interference Notification Site (publicsafety800mhzinterference.com), and the FCC's own registration database for Part 90 Class B signal boosters (<https://signalboosters.fcc.gov/signal-boosters/>).

immediate interest to ensure that such information is provided accurately by operators and that the carriers' consent for operation of an NPS-compliant signal booster is provided explicitly.

Second, registration fees will significantly increase the risk of noncompliance by operators with the registration requirement. As mentioned, signal booster registration primarily benefits wireless licensees and facilitates resolution of interference issues. If fees are imposed by licensees, operators may be discouraged from complying with registration requirements. Small businesses, decentralized branch office locations of large companies, hospitals, schools, and libraries may not properly register devices if they incur charges for doing so. The Commission should explicitly eliminate any disincentives to operators for registering their devices so that the Commission's streamlined registration/consent framework continues its success in encouraging deployment of signal boosters without any significant reports of interference.

Third, operator registration fees create economic disincentives for the efficient management of the registration database. If wireless licensees can pass all costs on to third operators, they have no obvious economic incentive to minimize those costs and manage the database efficiently. Operators, on the other hand, will have little economic power to influence registration fees since they have no choice but to register with the designated database provider and, in cases of wireless licensees to which they are non-subscribers, operators do not even have a business relationship which would provide them some degree of economic power to influence charges imposed on them. In the absence of choice and competition for registration options, the Commission will necessarily have to regulate, in some form, the appropriate registration fees, either

through mediating potential complaints from operators, mandating fee amounts, or approving fees proposed by the licensees. In each case, the Commission is not well-positioned with resources or information to determine the appropriate amount of registration charges. Most importantly, such a heavy-handed regulatory approach would undermine the light touch regulatory framework that the Commission has already successfully deployed for signal boosters.

B. The Commission Should Establish a Single Set of Exclusive Terms Pursuant to Which Non-Subscribers Can Operate Consumer Signal Boosters Upon Registration.

In response to paragraph 47 of the Second FNPRM, Ad Hoc supports the Commission's proposal to require operators to agree to a reasonable list of terms governing their use of consumer signal boosters in licensees' spectrum. The list proposed by the Commission is reasonable and comprehensive, adequately protecting the relevant interests of licensees. Therefore, the Commission should establish the terms set forth in paragraph 47 as the exclusive list of terms applicable to the operation of consumer signal boosters and that agreement between the operator and licensee to comply with such terms is established upon registration of the signal booster.

CONCLUSION

As set forth above, Ad Hoc supports the Commission's proposal to eliminate the "personal use restriction" on Multiband Consumer Signal Boosters. In order to preserve the Commission's successful streamlined regulatory structure for signal booster registration and permitted use of licensed spectrum, the Commission should require wireless licensees to create and operate a single, one-stop registration database for consumer signal boosters that, in the case of Multiband Consumer Signal Boosters,

permits operation of the booster in multiple licensees' spectrum. To avoid imposition of economically inefficient and unnecessary regulatory oversight, wireless licensees should not be permitted to charge operators registration fees. Finally, the Commission should adopt the reasonable terms of operation identified in the Second FNPRM as the exclusive terms applicable to the operation of NPS-compliant and adequately registered signal boosters.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Andrew M. Brown", with a stylized flourish at the end.

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