

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Waiver of Industrial Signal Booster Labeling)	WT Docket No. 19-272
Requirements)	
)	

PETITION TO DENY OF SURECALL

Surecall urges the Commission to deny the above-referenced request for waiver that was filed by Pivotal Commware (“Pivotal”). The Commission should deny the waiver request because (1) the labeling requirement for Industrial Signal Boosters serves a critically important purpose in protecting the integrity of wireless networks and it should not be waived for any party, (2) Pivotal has failed to demonstrate that its signal booster can operate in a safe and effective manner in accordance with the operational restrictions that it has proposed, and (3) the grant of a waiver in this case would significantly harm consumers by giving a single manufacturer an unfair advantage in the sale of its non-conforming products.

In opposing Pivotal’s waiver request, Surecall acknowledges the tremendous need that exists for the Commission to approve the sale of a new class of Consumer Signal Boosters that can be used by consumers and small businesses to receive 5G services using millimeter wave (“mmW”) frequencies. As Pivotal correctly observes, “millimeter wave transmissions present material propagation challenges that typically require line-of-sight and have difficulty penetrating walls and windows for indoor applications.”¹ Signal boosters will be a critically

¹ *Pivotal Commware Request for Waiver of Section 20.21(f)*, WTB Docket No. 19-272 at 1 (Sept. 16, 2019) (“*Pivotal Waiver Request*”).

important tool for both businesses and consumers to expand the reach of 5G services into their homes and offices.

The Commission, however, should not threaten the integrity and reliability of the nation's wireless networks using a shortcut approach that employs a hastily considered waiver. Instead, the Commission should authorize a new generation of signal boosters pursuant to a rulemaking process that carefully considers and identifies appropriate modifications to the rules for Consumer Signal Boosters, including the critically important Network Protection Standard ("NPS") that was developed on a cooperative basis by all industry stakeholders.

I. THE COMMISSION SHOULD CONTINUE TO ENFORCE ITS INDUSTRIAL SIGNAL BOOSTER LABELING RULES FOR ALL SIGNAL BOOSTERS THAT DO NOT COMPLY WITH THE NETWORK PROTECTION STANDARD

As the Commission correctly observed last year, its Consumer Signal Booster rules "have achieved the Commission's goals of expanding Americans' access to well-designed boosters that do not harm wireless providers' networks."² The core component of the Commission's Consumer Signal Booster rules is the NPS, noting that "compliance with the NPS requirements is central to limiting any interference from Consumer Signal Boosters."³ The NPS includes carefully considered and necessary requirements addressing noise limits, bidirectional capability, gain limits, power limits, out-of-band gain limits, out-of-band emission limits, intermodulation limits, antenna kitting requirements, uplink inactivity requirements and interference safeguards

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, *Second Report and Order and Second Further Notice of Proposed Rulemaking*, WT Docket No. 10-4, FCC 18-35, ¶ 9 (March 23, 2018) ("2018 2nd FNPRM").

³ *Id.*, ¶ 40.

applicable to anti-oscillation, gain control and interference avoidance for wireless subsystems.⁴ As a result of these detailed restrictions, each of the major carriers have acknowledged that “interference from Consumer Signal Boosters that meet the NPS is virtually nil.”⁵

Based on this strong record of success, the last thing the Commission should consider is permitting a self-described new entrant to the wireless industry distribute what would effectively be a consumer-oriented signal booster, but without complying with the NPS or any of the Commission’s other Consumer Signal Booster requirements. Such an approach would risk causing substantial interference to wireless networks, likely resulting in a significant backlash by both wireless carriers and consumers against the well-deserved reputation of quality and reliability that NPS-compliant signal booster manufacturers have cultivated since the Commission’s Consumer Signal Booster rules were adopted in 2013.

In expressing this position, Surecall acknowledges that Pivotal claims that its signal booster will operate at “very low radiated power levels,”⁶ but the NPS was adopted to ensure that all types of consumer-oriented signal boosters, including those with very low power, do not cause harmful interference to wireless networks. Pivotal also claims that it will only sell its boosters through the wireless carriers.⁷ The Commission has repeatedly indicated that carriers have flexibility in marketing Industrial Signal Boosters directly to their subscribers.⁸ An

⁴ 47 C.F.R. § 20.21(e)(8) & (9).

⁵ 2018 2nd FNPRM, ¶ 40.

⁶ *Pivotal Waiver Request* at 2.

⁷ *Id.* at 4.

⁸ See 2018 2nd FNPRM (explaining that “nothing here restricts a licensee’s ability to install Industrial Signal Boosters or other solutions”); see also 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*, WT Docket No. 10-4, FCC 13-21, ¶ 18 (Feb. 20, 2013) (“2013

important restraint on this flexibility, however, has been the Commission's requirement that all Industrial Signal Boosters be clearly labeled with the admonition that:

WARNING. This is NOT a CONSUMER device. It is designed for installation by FCC LICENSEES and QUALIFIED INSTALLERS. You MUST have an FCC LICENSE or express consent of an FCC Licensee to operate this device. Unauthorized use may result in significant forfeiture penalties, including penalties in excess of \$100,000 for each continuing violation.⁹

Pivotal, however, wants to forgo both the use of this label and each of the substantive restrictions that the label appropriately highlights. Pivotal wants its products to be sold by carriers directly to consumers, to be installed by consumers, and to be used in any environment. Although Pivotal arguably may secure the consent of the wireless carrier that sells the device to its subscribers, it will not have the consent of other wireless licensees on whose spectrum the boosters will invariably operate, a point discussed below in these comments. Thus, Pivotal's proposal directly conflicts with, and will seriously undermine, the Commission's carefully crafted distinction between Consumer Signal Boosters that comply with the NPS and Industrial Signal Boosters that must be professionally installed in controlled conditions with the active consent and involvement of all wireless carriers that will be affected.

The grant of Pivotal's waiver request will therefore clearly frustrate the underlying purpose of the rule (which is to protect the nation's wireless networks from non-NPS compliant signal boosters) and will ill-serve the public interest by allowing non-compliant boosters to harm wireless networks. Further, withholding such a waiver will not be inequitable because the Commission's Consumer Signal Booster rules impose the same restrictions on all booster

Order”) (observing that “providers should continue to be allowed to use all types of signal boosters to serve their subscribers’ needs”).

⁹ 2013 *Order*, ¶ 123.

manufacturers for the ultimate benefit of end users. In fact, any waiver of the rules would be especially inappropriate in the case of Pivotal, which does not yet hold a single FCC equipment certification for a signal booster and would therefore be a highly inappropriate candidate for an extraordinary exception to the Commission's well considered regulatory requirements.

II. THE COMMISSION SHOULD REFRAIN FROM GRANTING A WAIVER TO PIVOTAL UNLESS IT FIRST DEMONSTRATES COMPLIANCE WITH ITS OWN PROPOSED OPERATING RESTRICTIONS

A second reason why the Commission should not grant a waiver of the Industrial Signal Booster labeling requirement to Pivotal is because the startup company has failed to demonstrate that its signal booster will not interfere with the safe operation of multiple wireless networks. One of the most significant technical challenges in developing mmW signal boosters is restricting their operations to the licensed spectrum of a single carrier. 5G spectrum licenses will likely cover large swaths of spectrum, but mmW frequency assignments are unlikely to involve consistent bandwidths and fully contiguous spectrum in all portions of the country. Therefore, mmW boosters that are designed for mass market consumption will almost invariably retransmit the signals of multiple licensed carriers in many communities where they operate.

Pivotal claims that its booster “will operate only on spectrum licensed to the service provider,”¹⁰ but Pivotal has provided no technical demonstration that its product can comply with this requirement. Pivotal also indicates that its booster operates with an electronic gain of 60 dB on the forward path and 56 dB on the return path,¹¹ which poses a tremendous risk of oscillation, excessive signal noise and out-of-band emissions if Pivotal's booster is not fully NPS-compliant. As a new entrant to the signal booster industry, Pivotal has no FCC equipment

¹⁰ *Pivotal Waiver Request* at 2.

¹¹ *See id.* at 5.

certifications for signal boosters, or other verifiably technical credentials, to support its claims. In stark contrast, each of the leading companies in signal booster research and development, including Surecall, have spent many years focused on exactly these issues.

The Commission should therefore view with extreme skepticism the claims of this newcomer that its booster product can operate in the discrete spectrum assignments of any one wireless carrier without causing substantial harmful interference to the network operations of other major wireless carriers operating in adjacent frequency bands. This skeptical posture should include requiring Pivotal to demonstrate in public filings that its product can operate in a safe and effective manner in mmW frequencies.

III. THE COMMISSION SHOULD NOT TAKE ANY ACTION THAT UNFAIRLY DISTORTS COMPETITION IN THE SIGNAL BOOSTER INDUSTRY

The third reason why Pivotal's waiver request must be denied is because the Commission's statutory obligation to serve the public interest prohibits it from taking any action that distorts the market for 5G signal booster technology.¹² Consumers benefit substantially from vibrant competition in the availability of 5G signal boosters, even those that are sold solely through wireless carriers. In contrast, if the Commission grants a waiver that would effectively permit only one manufacturer to market 5G boosters through the carriers' retail distribution channels, it will prevent the highly beneficial reduction in prices and advances in capabilities that routinely accompany the competitive introduction of new technology.

¹² A fourth reason why it would be inappropriate for the Commission to grant a waiver of the labeling requirement to Pivotal is because Pivotal acknowledges that it will not actually be marketing its product to consumers. As Pivotal concedes "[c]onsumers can only obtain the Device from their service provider." *Pivotal Waiver Request* at 4. Thus, it is the carriers that will be marketing the product, as this term is defined in Section 2.803 of the rules, and it is therefore the carriers that would be required to request a waiver of the labeling rule.

Instead, given the critically important role that mmW signal boosters will serve in ensuring the availability of 5G services to consumers, the Commission should immediately initiate a rulemaking on expanding its rules for Consumer Signal Boosters to include the recently auctioned mmW frequencies. At the same time, the Commission should promptly conclude its existing rulemaking on eliminating the personal use restriction for Consumer Signal Boosters so they can be used by small business owners to ensure the connectivity of their employees and customers. Each of these actions would substantially benefit the public interest and help create leadership for the United States in the development and use of 5G communications technologies. Under no circumstances, however, should the Commission employ a shortcut approach of granting a waiver that would likely inject widespread interference into newly launched 5G broadband networks.

Respectfully submitted,

SURECALL

By: 

Bruce A. Olcott
Jones Day
51 Louisiana Ave. NW
Washington, D.C. 20001
(202) 879-3630

Its Attorneys

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