

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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

To: The Commission

June 23, 2018

REPLY COMMENTS OF STAIRCASE 3, INC, D/B/A REPEATERSTORE AND RSRF

I. INTRODUCTION

Staircase 3, Inc., d/b/a RepeaterStore and RSRF (“Staircase 3”), hereby submits these reply comments in response to the Second Further Notice of Proposed Rulemaking (“Second FNPRM”) seeking comment on proposed alterations to the Commission’s rules governing Consumer Signal Boosters.

As one of the leading online resellers of Consumer Signal Boosters, our company has helped over 25,000 customers improve their cell phone reception. We speak to customers every day who rely on Consumer Signal Boosters to ensure connectivity. We also work closely with carriers to deploy enterprise small cell and distributed antenna systems.

Staircase 3 urges the FCC to take action to prevent the harm that would be caused to subscribers in rural areas if signal boosters are not updated to support new frequency bands. Preventing Consumer Signal Boosters from operating in newly licensed bands would significantly inhibit their utility and decrease the efficacy of boosters in ensuring connectivity for rural customers.

Furthermore, we urge the commission to remove the “personal use” restriction on wideband Consumer Signal Boosters.

II. THE COMMISSION SHOULD ACT TO STREAMLINE THE ADDITION OF NEW BANDS TO THE CONSUMER SIGNAL BOOSTER RULES

5G standards depend heavily on these higher frequency bands to deliver faster data services to users. As new bands are rolled out for 5G frequencies, the issues with in-building and rural coverage will only become more acute. Higher frequency bands in the 2 GHz, 3 GHz and mmWave ranges are attenuated to an even greater degree by both natural obstacles and building materials.

At Staircase 3, we talk to hundreds of customers every month who have issues with connectivity in rural areas and inside buildings. A recent poll we conducted in conjunction with Survey Monkey (currently pending publication) indicates that upwards of 10% of consumers have issues with coverage in their homes. A similar problem faces small businesses, with 10% of employees reporting issues with coverage inside offices. As 5G rollout happens, these connectivity issues will become even more acute.

II. THE COMMISSION'S NETWORK PROTECTION STANDARD HAS BEEN SHOWN TO PREVENT HARMFUL INTERFERENCE; AND THE SAME STANDARD WILL ALSO PREVENT INTERFERENCE IN NEW BANDS

In their comments, AT&T, the Aerospace and Flight Test Radio Coordinating Council, Inc. ("AFTRCC") and Sirius XM refer to potential issues with interference with adjacent bands utilized for satellite radio and aeronautical uses.

Sirius XM's comments note that "Commercial use of the WCS band is still developing, and the need for consumer boosters is unproven at this time and is likely to be unnecessary for the foreseeable future."

Staircase 3 disagrees; from our experience working with consumers across the country, the WCS band has been deployed in many areas, and amplifying it for in-building use is in high demand due to the limited penetration of buildings of the 2.3 GHz frequency range.

While we appreciate the concerns expressed by other commenters, it is critical to note that the FCC's existing Network Protection Standard requires that the uplink path of Consumer Signal Boosters be shut off after a duration of inactivity. As such, in any areas where AT&T has not to deployed WCS

frequencies, any Consumer Signal Boosters would not transmit in the uplink path. Meanwhile, the amplification of downlink signals is limited to 12 dBm and restricted to the inside buildings. Downlink signal at such power levels would not be a detectable source of interference outside buildings.

The Commission has also already implemented stringent Part 27 emission requirements that include restrictions adjacent-band emissions for Consumer Signal Boosters. Combined with the uplink shutoff component of the Network Protection Standard, these regulations already act to protect both operators and adjacent band licensees.

III. AUTHORIZATIONS OF NEW SPECTRUM BANDS FOR CONSUMER SIGNAL BOOSTERS SHOULD OCCUR QUICKLY

If authorization for new spectrum bands for Consumer Signal Boosters occurs after a long Notice and Comment Rulemaking and Grant of Consent process, Consumer Signal Boosters will lag behind the roll-out of new bands. Since technologies like 5G depend on these new frequency bands, a longer process will mean that Consumer Signal Boosters will not be available to consumers who wish to benefit from the advances brought by 5G services.

Consumer Signal Boosters are a critical component of wireless infrastructure. Any rules that prevent devices from keeping up with the latest technologies and standards will be a grave harm to both consumers and small businesses. Staircase 3 encourages the creation of a streamlined process that allows carriers to detail any interference concerns but weighs them against the benefit to consumers. The goal of any new regulation should be to allow new frequency bands to be quickly added to Consumer Signal Booster devices.

IV. THE COMMISSION SHOULD ADOPT A ONE-STEP, CENTRALIZED PROCESS FOR WIDEBAND CONSUMER SIGNAL BOOSTERS, AND STAIRCASE 3 WOULD BE WILLING TO CREATE AND HOST SUCH A DATABASE AT NO COST TO THE FCC OR CARRIERS

Staircase 3 agrees that the existing registration process for consumer signal boosters should be updated, and that a centralized process for registering boosters would be preferable to the current process in which

consumers register boosters directly with carriers. Any such centralized database should include an application programming interface (“API”) to allow public access to the locations of deployed Consumer Signal Boosters, while restricting access to subscriber’s private information. We also ask the commission to consider requiring the creation of an API for creating new booster registrations that could be utilized by booster manufacturers and resellers to register devices at time of sale.

While others have suggested that either the FCC or CTIA should be responsible for creation of this centralized repository, we appreciate the technical burden required to set up such a system. As such, Staircase 3 would be willing to work with carriers and the Commission to create and maintain a centralized database at no cost, hosted separately from our commercial services. Our company has extensive experience designing, implementing and maintaining such systems. For example, OpenSignal, a “big data” company that measures user experience and counts major US operators amongst its carriers, was created by our engineering team prior to being spun out as an independent company.

As a neutral third-party that works closely with both carriers and the major booster manufacturers, and given our experience creating user-friendly interfaces and hosting large datasets, Staircase 3 is uniquely positioned to create and host a neutral centralized repository. If the Commission decides to move forward, Staircase 3 would license the code under a permissive “open source” license, while also making available APIs and downloadable datasets.

V. THE COMMISSION SHOULD REMOVE THE “PERSONAL USE” RESTRICTION FOR WIDEBAND SIGNAL BOOSTERS

The replies on the FCC’s NPRM indicate that there is broad consensus on removing the “personal use” restriction for wideband Consumer Signal Boosters. Staircase 3 encourages the Commission to take swift action to remove this restriction, which would enable small businesses in rural areas to enjoy the benefits of Consumer Signal Boosters. We strongly disagree with Nextivity’s request that the Commission bifurcate enterprise use of wideband boosters from the remainder of this NPRM. We have pushed against Nextivity’s requests in past comments, and urge the Commission to dismiss this request given the lack of

evidence supporting their comments regarding intermodulation issues, the thorough technical analysis performed by SureCall, and wide support from carriers and users for removal of the “personal use” restriction.

VI. CONCLUSION

Staircase 3 encourages the FCC to remove the “personal use” restriction, and to seek a solution that streamlines approval for the use of both wideband and provider-specific Consumer Signal Boosters on new bands, without requiring an overly complex rulemaking and approval process.

Finally, Staircase 3 offers to create a centralized platform for registration of Consumer Signal Boosters. We believe that as a neutral third party with extensive experience designing and creating such systems, we’re uniquely situated to collaborate with manufacturers, carriers, and the Commission to create an easy-to-use registration system.

Respectfully submitted,

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