

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

In the Matter of)
)
Petition for Waiver of Section 15.403) ET Docket No. 23-282
of the Commission's Rules)

To: Chief, Office of Engineering and Technology

**OPPOSITION TO
EXTREME NETWORKS' REQUEST
FOR
WAIVER OF FCC RULE SECTION 15.403**

The undersigned organizations represent incumbent licensees in the 6 GHz band (“Incumbents”). They have been active participants in ET 18-295¹ for the purpose of ensuring that fixed microwave facilities receive appropriate protection from unlicensed operations in that band. For the reasons detailed below, the Incumbents strongly oppose the waiver request (“Waiver Request”) filed by Extreme Networks (“Extreme”) seeking relief from one of the essential interference protection measures adopted in that proceeding.² The showing does not demonstrate the good cause required for waiver relief under FCC Rule Section 1.3.³ As addressed below, Extreme has not shown that its proposed abandonment of one of the only criteria adopted to ensure that low-power indoor Access Points (“APs”) actually remain indoors is necessary, arises in such an unusual situation that deviation from the rules is appropriate, or even that it would better serve the public interest than enforcement of the current requirements. The Incumbents endorse the Opposition to the Waiver Request filed by AT&T Services, Inc.⁴ and urge the Federal Communications Commission (“FCC”) to deny the Waiver Request promptly.

The rules required to prevent interference from unlicensed, indoor, low-power devices were debated extensively in ET 18-295. Ultimately, the FCC rejected the recommendation from incumbents that all unlicensed APs, both standard power and indoor low-power, operate with an automated frequency coordination (“AFC”) system.⁵ Instead, the FCC determined that low-power indoor APs do not need AFC coordination,

¹ *Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, Report and Order and Further Notice of Proposed Rulemaking, ET Docket No. 18-295, 35 FCC Rcd 3852 (2020) (“6 GHz Order”).

² *Office of Engineering and Technology Seeks Comment on Extreme Network’s Request for Waiver of Section 15.403 of the Commission’s Rules*, Public Notice, ET Docket No. 23-282, DA 23-707 (rel. Aug. 16, 2023).

³ *WAIT Radio v. FCC*, 413 F.2d 1153 (D.C. Cir. 1969), *aff’d*, 459 F.2d 1203 (1973), *cert. denied*, 409 U.S. 1027 (1972).

⁴ Opposition of AT&T Services, Inc., ET Docket No. 23-282 (filed July 31, 2023) (“AT&T Opposition”).

⁵ 6 GHz Order at 98.

but would be subject to technical criteria to prevent them from being used outdoors where their interference potential would be significantly greater. FCC Rule Section 15.403 specifies low-power indoor APs as those that are supplied power from a wired connection, have an integrated antenna, are not battery powered, and **do not have a weatherized enclosure**.⁶ While the Incumbents have challenged even the efficacy of those criteria in preventing interference from indoor devices,⁷ they are the minimum prophylactic measures needed to ensure indoor operation and mitigate their interference potential according to the 6 GHz Order.⁸

Extreme Networks now seeks relief from the prohibition against placing low-power APs in weatherized enclosures so they can be installed in indoor sports venues without concern about damage from beverage spills and what it calls “venue washing.” It claims the request satisfies the FCC’s waiver requirements because, “Without this waiver, venue operators will have to limit their indoor access points only to areas where spills are unlikely to cause equipment damage and where the venues do not engage in power washing operations, which will result in significant, unnecessary coverage limitations.”⁹ That claim is not valid for multiple reasons.

Extreme has reasonable alternatives. Whatever the perceived benefits of 6 GHz Wi-Fi, it is not the only band available for the use case described by Extreme. Multiple vendors, including Extreme, sell a variety of equipment providing Wi-Fi capability in various bands with no prohibition against being weatherized. Denial of the Waiver Request will not deprive fans of Internet access in sports venues.

Moreover, any venue that is convinced of the superior capability of Wi-Fi that includes 6 GHz spectrum need only wait for the FCC to complete the process of approving AFC systems for commercial operation, a process that is well underway.¹⁰ Standard power APs are not subject to the protective measures defined in FCC Rule Section 15.403 because they are required to be directed to available frequencies by an AFC system and are not limited to indoor-only operation.¹¹ Extreme has FCC-certified standard power APs¹² and seemingly has installed them already at Oracle Field in San Francisco, as discussed *infra*, and perhaps at other arenas.

Also, as pointed out by AT&T, careful placement of non-weatherized low-power APs throughout the venue would lead to a very low probability that beverages would be

⁶ 47 C.F.R. §15.403.

⁷ See e.g., Letter from American Public Power Association, APCO International, Edison Electric Institute, Enterprise Wireless Alliance, National Rural Electric Cooperative Association, Southern Company Services, Inc., and Utility Technologies Council to Chairwoman Jessica Rosenworcel, FCC, ET Docket No. 18-295, GN Docket No. 17-183 at 1 (filed March 31, 2023) (seeking public comment on extending AFC requirements to all uses of the 6 GHz band).

⁸ 6 GHz Order at 107.

⁹ Waiver Request at 5.

¹⁰ *OET Announces Commencement of Testing of the 6 GHz Band Automated Frequency Coordination Systems*, Public Notice, ET Docket No. 21-352, DA 23-759 (rel. Aug. 24, 2023).

¹¹ See 47 C.F.R. § 15.407(k)(8)(i).

¹² Extreme Networks, Universal Wireless AP5050U and AP5050D; <https://www.extremenetworks.com/products/wi-fi-access-points/universal-aps-outdoor/ap5050u>.

spilled on enough APs to create an issue for fans and surely venues have procedures in place to avoid “washing” a variety of equipment that could be damaged by that activity.

Extreme has also failed to overcome the underlying purpose of the weatherized prohibition. The conditions proposed by Extreme to ensure that indoor APs will remain indoors do not offer adequate assurance that they will be effective.¹³ As stated by AT&T, “...none of the conditions Extreme proposes to follow would ‘make outdoor operations impractical and unsuitable,’ the goal of the form factor rules, given that no guarantee is or could be made that none of these devices would find their way into the secondary market and used outdoors, protected from the weather.”¹⁴

Further, Extreme’s proposal for addressing what it calls “legitimate” interference complaints,¹⁵ presumably as defined by Extreme, falls woefully short of adequate when the interference could affect public safety, utility, or other critical networks. By the time Extreme investigates the complaint to assess its “legitimacy,” consults with the FCC’s Office of Engineering and Technology regarding modification of operations in the venue to correct the problem, and only then takes whatever action is deemed necessary pursuant to that consultation, the interference could have a disastrous impact on systems with primary, front-line responsibility for public safety and welfare.

The Incumbents also request clarification regarding Extreme’s current sales activities. The Waiver Request states Extreme wishes to install waterproofed Indoor APs “exclusively in indoor-only sport venues.”¹⁶ A representative of Lumen Field Stadium and Event Center in Seattle, Washington has filed in support of the Waiver Request for what it describes as the indoor portion of that venue. Since Lumen Field itself is an outdoor stadium, it would not qualify for waiver relief even if Extreme’s request is granted over the Incumbents’ opposition. Arguably the Event Center might qualify except for the fact that it does not appear to be a “sports venue,” but rather a large multi-purpose space for conventions and similar events. Additionally, the Lumen filing states they have “strategically placed our access points on the seats affixed to the concrete” and “it’s very important that these weatherproof enclosures are allowed...”¹⁷ While it is possible the Event Center, like the Stadium, has concrete seating, that seems unusual for a space touted for its flexibility to accommodate a variety of events. It also is not clear whether weatherproofed indoor low-power APs already have been installed prior to FCC action on the Waiver Request and perhaps even prior to the FCC placing the Waiver Request on public notice for comment, or if Lumen installed the APs without weatherproofing in the hope, but without any assurance, that they would be able to add that protection at a later date. If the latter, they presumably made that investment and are prepared to live with the equipment as is. If the former, they may not have been fully informed about the FCC’s

¹³ Waiver Request at 4-5.

¹⁴ AT&T Opposition at 2.

¹⁵ Waiver Request at 4.

¹⁶ Waiver Request at 1.

¹⁷ Letter from Chip Suttles, Vice President, Seattle Seahawks & Lumen Field Stadium, ET Docket No. 23-282 (filed Aug. 29, 2023).

standard for granting waiver relief and the possibility they would have to remove the weatherproofing.

Oracle Park in San Francisco, an *outdoor* venue, has announced that it has installed “879 new Wi-Fi APs from Extreme Networks” for which they were required to “drill new holes in the seating floor to accommodate the new Extreme gear in under-seat enclosures.”¹⁸ The announcements regarding the operational status of that system, at best, are confusing. Although as of September 5, 2023, the AFC testing process has not yet begun, the following was reported in April 2023:

Apple iPhones do not yet support [Wi-Fi 6E](#), but fans can now connect on laptops, iPads and Android phones without any lag, according to John Brams, vice president of strategic accounts at Extreme Networks.¹⁹

The FCC should clarify how fans were able to connect to 6 GHz APs in an outdoor venue in April since no AFC systems have yet been approved for commercial operation.

The Oracle arrangement suggests that some sport venues have deployed Extreme equipment without the need for waiving the Commission’s rules – further demonstrating that there is no immediate requirement for the exception requested by Extreme. Moreover, while the Incumbents assume that Extreme and its customers remain in compliance with all FCC requirements governing deployment of 6 GHz Wi-Fi systems, the statements above raise enough questions that the FCC should assure itself of that fact. Even without a grant of the waiver at issue, the record here suggests that the public is confused about the state of unlicensed 6 GHz devices and permissible operations. Thus, the public interest is better served by preventing further confusion and retaining the prohibition on weatherized enclosures to prevent interference to incumbent 6 GHz systems, particularly those critical to protecting life and property.

¹⁸ [San Francisco Giants Partner with Comcast Business and Extreme Networks to Make Oracle Park the First 100% WiFi 6E-Ready Professional Sports Venue](#). It is unclear whether the “under-seat enclosures” are “weatherized” and, therefore, in violation of FCC Rule Section 15.403.

¹⁹ <https://stadiumtechreport.com/feature/sf-giants-bring-wi-fi-6e-to-oracle-park/>.

The FCC's standard for waiver relief is well-established.²⁰ The AT&T Opposition sets out in detail the hurdle faced by a party seeking relief from FCC rules.²¹ The Extreme Waiver Request fails to satisfy those criteria and must be denied.

Respectfully submitted,

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²⁰ 47 C.F.R. § 1.925(b); *WAIT Radio v. FCC*, 413 F.2d 1153, 1157 (D.C. Cir. 1969), *aff'd*, 459 F.2d 1203 (1973), *cert. denied*, 409 U.S. 1027 (1972).

²¹ AT&T Opposition at 2.

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