

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of:)	
)	ET Docket No. 18-295
Unlicensed Use of the 6 GHz Band)	
)	GN Docket No. 17-183
Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz)	

**COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL**

The National Public Safety Telecommunications Council (NPSTC) submits these comments in response to the Second Further Notice of Proposed Rulemaking in the above captioned proceeding.¹

¹ Second Report and Order, Second Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order, ET Docket No. 18-295 and GN Docket No. 17-183, released November 1, 2023.

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of being a resource and providing advocacy for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 14 organizations serve on NPSTC's Governing Board:²

- American Association of State Highway and Transportation Officials
- American Radio Relay League
- Association of Fish and Wildlife Agencies
- Association of Public-Safety Communications Officials-International
- Forestry Conservation Communications Association
- International Association of Chiefs of Police
- International Association of Fire Chiefs
- International Municipal Signal Association
- National Association of State Emergency Medical Services Officials
- National Association of State Foresters
- National Association of State Technology Directors
- National Council of Statewide Interoperability Coordinators
- National Emergency Number Association
- National Sheriffs' Association

² These comments represent the views of the NPSTC Governing Board member organizations.

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland Security (the Federal Emergency Management Agency, the Emergency Communications Division, the Office for Interoperability and Compatibility, and the SAFECOM Program); Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, Communications Technology Program). Also, Public Safety Europe is a liaison member. NPSTC has a relationship with associate members, the PSBN Innovation Alliance (PIA) and the Utilities Technology Council (UTC), and with the following affiliate members: The Alliance for Telecommunications Industry Solutions (ATIS), Open Mobile Alliance (OMA), Telecommunications Industry Association (TIA), TETRA Critical Communications Association (TCCA), Project 25 Technology Interest Group (PTIG), the Government Wireless Technology & Communications Association (GWTCA), and the Safer Buildings Coalition (SBC).

NPSTC Comments

The Second Further Notice of Proposed Rulemaking (FNPRM) proposes to expand further the types of unlicensed devices allowed to operate in the 5.925-7.125 GHz spectrum (6 GHz band). Public safety, critical infrastructure, commercial wireless and broadcast entities rely on this spectrum to support licensed microwave links for their respective operations.

The Commission has already approved spectrum sharing in the 6 GHz band by Standard Power, Low Power and Very Low Power types of unlicensed devices with respective maximum power and band segment rules. The Commission now proposes 1) to allow Very Low Power devices to expand operation to include the entire 6 GHz band; and 2) to allow a higher power version of Very Low Power device that would incorporate geofencing capabilities and also operate over the entire 6 GHz band. According to the proposal, geofencing would define exclusion zones around licensed

cochannel operations within which this particular type of VLP device would not be allowed to operate.

The following table summarizes the multiple types of 6 GHz unlicensed devices already allowed by previous Commission decisions, and those proposed in the current further NPRM:

Unlicensed Devices	Band Segment (GHz)	Max. Power Allowed	AFC Required?	Status
Standard Power [Indoor or Outdoor]	5.925-6.425 (U-NII-5) 6.525-6.875 (U-NII-7)	23 dBm/MHz EIRP PSD; 36 dBm EIRP maximum	Yes	Allowed
Low Power [Indoor]	5.925-7.125 (entire Band U-NII-5,6,7,&8)	5 dBm/MHz EIRP PSD 30 dBm EIRP maximum	No	Allowed
Very Low Power [Indoor or Outdoor]	5.925-6.425 (U-NII-5) & 6.525-6.875 (U-NII-7)	-5 dBm/MHz EIRP PSD 14 dBm EIRP maximum	No	Allowed
Very Low Power [Indoor or Outdoor]	5.925-7.125 (entire Band U-NII-5,6,7, &8)	-5 dBm/MHz EIRP PSD 14 dBm EIRP maximum	No	Proposed
Very Low Power [Indoor or Outdoor]	5.925-7.125 (entire Band U-NII-5,6,7, &8)	1 dBm/MHz EIRP PSD 14 dBm EIRP maximum (with question re 21 dBm maximum instead)	Geofencing Required	Proposed

The Commission proposes that a geofenced VLP access point would obtain or calculate the exclusion zones and have the capability to determine its location and intelligently choose its operating channel to avoid prohibited frequencies in the exclusion zone. The Commission states: “We are not proposing specific details for the geofencing system architecture for VLP because we want to provide manufacturers with the flexibility to design appropriate geofencing systems for

different equipment use cases, many of which may not be known at this time” and asks questions about the degree of flexibility it should allow.³

The overall 6 GHz proceeding spectrum sharing decisions and proposals continues to be controversial. Licensed incumbents have repeatedly raised concerns about potential interference to critical microwave links from unlicensed spectrum sharing. Unlicensed proponents have continued to push aggressively for spectrum access. The Commission has relied primarily on interference simulations provided by unlicensed proponents and has concluded that harmful interference is unlikely.

It is clear from decisions so far that the Commission has no intention of reversing course in this proceeding. However, in doing so, it also has acknowledged that interference may occur. In the Second Report and Order the Commission states “...we also take this opportunity to reiterate several core Commission spectrum management principles that directly affect our decision-making in this proceeding” and refers to its Policy Statement which in part says “...zero risk of occasional service degradation or interruption cannot be guaranteed.”⁴

NPSTC believes it is imperative that 6 GHz licensees have a viable mechanism to report and expeditiously resolve any 6 GHz harmful interference to critical microwave links that occurs. The recent Public Notice that announced Commission approval of seven 6 GHz band automated frequency coordination (AFC) systems for commercial operation indicates the seven AFC companies have committed to establish a “centralized means to receive and address complaints regarding

³ Second Report and Order, Second Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order at Paragraphs 124-129.

⁴ See paras. 22-23 and para. 54

purported harmful interference from AFC-authorized unlicensed operations.”⁵ The Public Notice conditions approval of the AFC systems on putting such a process in place by April 23, 2024.

Incumbents are not part of this effort to develop an interference complaint and resolution process, and it does not appear they will be. It remains to be seen if the AFC operators will provide an effective mechanism that meets incumbents’ needs. Hopefully, AFC operators will adhere to the recommended procedures endorsed as the incumbents’ perspective in the multi-stakeholder group report.⁶ Even if they do, however, this will apply only to AFC-enabled 6 GHz unlicensed devices; it is not a comprehensive approach. If/when public safety and other 6 GHz licensees experience system degradation and harmful interference to critical microwave links, it is unclear how they will determine the source of the interference, i.e., whether it is from an AFC-enabled device, a Low Power Device, a Very Low Power Device without geofencing capability or a Very Low Power Device with geofencing. Public safety and other licensees in the 6 GHz band need a viable means to report and expeditiously resolve harmful interference regardless of the type of 6 GHz unlicensed device involved.

The Commission has confirmed that under Part 15 of its rules, 6 GHz unlicensed devices are not permitted to cause harmful interference and implies that its existing enforcement processes will be effective in resolving harmful interference to 6 GHz licensees:

We also emphasize that 6 GHz VLP devices, like other part 15 devices, are not permitted to cause harmful interference and that any such interference is actionable for enforcement purposes. Section 15.5(b) of the Commission’s rules provides that “[o]peration of an intentional, unintentional, or incidental radiator is subject to the condition that no harmful interference is caused.” In the unlikely event that harmful interference does occur due to VLP

⁵ Public Notice DA 24-166, ET Docket No. 21-352, released February 23, 2024, at paragraph 18.

⁶ Letter from Richard Bernhardt, Don Root, Edgar Figueroa, and Brett Kilbourne, Chairs of the 6 GHz Multi-Stakeholder Group to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 18-295 (filed July 11, 2022), attaching “Best Practices and Recommended Procedures for Interference Detection, Reporting, and Resolution to Protect Fixed Microwave Service Receivers in the 6 GHz Band.”

operations, section 15.5(c) of the Commission’s rules provides that “[t]he operator of a radio frequency device shall be required to cease operating the device upon notification by a Commission representative that the device is causing harmful interference,” even if the device in use was properly certified and configured, and that “[o]peration shall not resume until the condition causing the harmful interference has been corrected.” . . . we already have processes and procedures in place under which the Enforcement Bureau investigates complaints of harmful interference and takes appropriate enforcement action, as necessary. These processes and procedures have been effective in identifying and resolving harmful interference to licensed operations in other situations and are available for use in the 6 GHz band as well.⁷ [Commission footnotes deleted]

NPSTC appreciates the Commission’s willingness to address any harmful interference that arises. Unfortunately, past enforcement cases show the process of doing so is far from expeditious. For example, the Commission’s own records show the protracted timeline involved in a recent enforcement case about interference from an unlicensed device to a licensed commercial wireless system. The following summarizes the timeline in that case, as reported in the Commission’s Citation and Order:⁸

- May 25, 2022: Licensee files interference complaint, identifying likely source.
- June 8, 2022: Enforcement Bureau (EB) agents visit location and confirm source of interference as an unlicensed wireless camera at a residence.
- June 15, 2022: EB issues warning letter to subject interferer.
- Oct. 12, 2022: Interference continues and again EB agent contacts subject.
- Oct. 17, 2022: EB agent again visits subject interferer and did on/off tests.
- Oct. 25, 2022: EB agent notifies subject that interference is still occurring.
- Nov. 7, 2022: Interference continues; EB agents again conduct on-scene investigation
- Feb. 22, 2023: Continuing complaints; EB agents again confirm interference source.
- May 19, 2023: Commission issues Citation and Order to subject interferer.

NPSTC does not have any more recent information whether issuance of the Citation and Order actually resolved the interference. However, in this case, unlicensed interference to a licensed system continued for approximately an entire year, even after the licensee had identified the

⁷ Second Report and Order, Second Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order at Paragraph 58.

⁸ See Citation and Order, File No. EB-FIELDNER-22-00033924. Released May 19, 2023.

suspected source of interference up front. Given the millions of unlicensed 6 GHz devices predicted to flood the market, NPSTC recommends the Commission put in place a more expeditious and effective process to resolve any harmful interference that arises. No licensee should have to experience harmful interference to their critical microwave link from unlicensed devices for a year or longer before the situation is resolved.

Conclusion

As addressed in these comments, NPSTC recommends the Commission put a more expeditious and effective process in place to report, identify and resolve any harmful interference that occurs in the 6 GHz band from unlicensed devices to licensed microwave links. The Commission has stated that its existing processes and procedures will be effective if interference occurs. However, examination of a recent case involving unlicensed interference to a licensed wireless system underscores the process is far from expeditious. Even when the wireless licensee receiving interference had provided information on the suspected source, interference continued for a year, as evidenced by the process timeline detailed in the Commission's Enforcement Bureau Citation and Order.

NPSTC appreciates the Commission's recent action regarding a centralized interference reporting and resolution process applicable to 6 GHz-AFC enabled standard power devices, provided it meets the needs of incumbent licensees. However, public safety and other 6 GHz licensees need a comprehensive and expeditious approach that covers interference from any unlicensed 6 GHz device, whether AFC-enabled or not.

Ralph A. Haller, Chairman

A handwritten signature in black ink, appearing to read "Ralph A. Haller", with a long horizontal flourish extending to the right.

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