6712-01

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 90 and 95

[ET Docket No. 19-138, DA 24-538; FR ID 225149]

Use of the 5.850-5.925 GHz Band

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Office of Engineering and Technology invites supplemental comment to address issues regarding the use of geofencing in cellular-vehicle-to-everything on-board units to reduce out-of-band emission power limits around specified federal radiolocation services.

DATES: Interested parties may file comments on or before July 5, 2024.

ADDRESSES: Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments on or before the dates provided in the "Dates" section of this Proposed Rule. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). You may submit comments, identified by ET Docket No. 19-138 and referencing this public notice, by any of the following methods:

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: https://www.fcc.gov/ecfs/.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing.
- Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by First-Class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.

- Commercial overnight deliveries (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service First-Class, Express, and Priority mail must be addressed to Secretary, Federal Communications Commission, 45 L Street NE, Washington, DC 20554.
- *People with Disabilities*: Contact the Commission to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by e-mail: FCC504@fcc.gov or phone: 202-418-0530 or TTY: 202-418-0432.
- *Availability of Documents*: Comments and *ex parte* submissions will be available via ECFS. Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat.

FOR FURTHER INFORMATION CONTACT: Brian Butler of the Office of Engineering and Technology, at Brian.Butler@fcc.gov or 202-418-2702.

SUPPLEMENTARY INFORMATION: This is a summary of the Office of Engineering and Technology's Public Notice in ET Docket No. 19-138, DA 24-538, released June 11, 2024. The full text of this document is available for public inspection at the following internet address: https://www.fcc.gov/document/oet-seeks-comment-board-unit-power-limits-c-v2x-operations.

Regulatory Flexibility Analysis. The *Further Notice of Proposed Rulemaking* (*FNPRM*) in ET Docket No. 19-138 included an Initial Regulatory Flexibility Analysis ("IRFA") pursuant to 5 U.S.C. 603, exploring the potential impact on small entities of the Commission's proposals. *Use of the 5.850–5.925 GHz Band*, 86 FR 23323, 23333-36 (May 3, 2021). We invite parties to file supplemental comments on the IRFA in light of this request to refresh the record.

Paperwork Reduction Act Analysis. This document does not contain any new or modified information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104-13. Thus, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. § 3506(c)(4).

Ex Parte Presentations. This proceeding shall be treated as "permit-but-disclose" in accordance with the Commission's *ex parte* rules. Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the

presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter's written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

***Providing Accountability Through Transparency Act*:** The Providing Accountability Through Transparency Act, Public Law 118-9, requires each agency, in providing notice of a rulemaking, to post online a brief plain-language summary of the proposed rule. The required summary of this Public Notice is available at https://www.fcc.gov/proposedrulemakings.

Synopsis

By this Proposed Rule, the Office of Engineering and Technology invites supplemental comment to the *FNPRM* in the Commission's proceeding titled *Use of the 5.850-5.925 GHz Band*, 86 FR 23323 (May 3, 2021), to address issues raised by a commenter regarding the use of geofencing to allow for higher power limits in devices operating in certain areas while ensuring that their power is sufficiently limited in locations near specified federal radiolocation service sites. Specifically, the National Telecommunications and Information Administration (NTIA) recently filed a letter in this proceeding making recommendations to address three specific areas related to the protection of federal radiolocation systems: general provisions for cellular vehicle-to-everything (C-V2X) technical and service rules; C-

V2X roadside unit (RSU) equivalent isotropically-radiated power (EIRP) limits; and EIRP limits for C-V2X on-board units (OBUs). Letter from Charles Cooper, Associate Administrator, Office of Spectrum Management, NTIA, to Ronald T. Repasi, Chief, Office of Engineering and Technology and Joel Taubenblatt, Chief, Wireless Telecommunications Bureau, FCC, ET Docket No. 19-138 (filed June 7, 2024) (NTIA Letter). The NTIA suggestions regarding EIRP limits for C-V2X OBUs present a proposal to allow for higher power limits in devices equipped with geofencing than in devices not so equipped. We specifically request comment on this proposal.

In the *First Report and Order* of this proceeding, *Use of the 5.850-5.925 GHz Band*, 86 FR 23281 (May 3, 2021), the Commission adopted provisions requiring Intelligent Transportation System (ITS) operators to move Dedicated Short-Range Communications (DSRC) operations out of the lower 45 megahertz of the 5.850-5.925 GHz band (5.9 GHz band) and the transition of those operations to C-V2X technology. At the same time, in the *FNPRM*, the Commission sought comment on numerous proposals aimed at finalizing the technical parameters for C-V2X operations. With regard to OBU device power limits, the Commission proposed to limit C-V2X OBUs' output power to no more than 20 dBm and EIRP to no more than 23 dBm.

NTIA's recommendations focus on ensuring that the power levels of C-V2X operations are limited as necessary to protect federal radiolocation services. Under current Commission rules, the federal radiolocation service site locations for which protection is sought are specified in 47 CFR 90.371(b), and the DSRC RSU facilities within certain radii relative to these locations ("coordination zones") must be coordinated with the NTIA prior to authorization. 47 CFR 90.371. The existing rules addressing power limits for both RSUs and OBUs are agnostic regarding operations relative to the coordination zones.

Among other things, in its letter, NTIA suggests that the Commission adopt power requirements for OBUs to ensure federal radiolocation service sites are protected within the coordination zones, including optionally incorporating geofencing that would enable OBUs to operate at variable levels depending on location. "Geofencing" is used to create a virtual boundary around a physical location by enabling a radiofrequency device using a geolocation capability to determine whether its geographic coordinates are within a defined geographic area. As proposed by NTIA, an OBU could incorporate a geolocation capability to respond to the appropriate areas around federal radiolocation sites, currently enumerated in

47 CFR 90.371(b), by dynamically reducing power when entering any of those areas. NTIA suggests that such OBUs would be able to operate without such power restrictions in areas outside the coordination zones, provided that they are programmed with information about these sites—geographic coordinates and a predetermined radius—ensuring that they operate with reduced EIRP levels within the relevant areas. NTIA suggests that OBU devices not incorporating a geolocation capability be required to comply with the more restrictive EIRP limits.

Accordingly, considering the need to protect the federal radiolocation service through the optional use of geofencing techniques, NTIA suggests the following EIRP power spectral density (PSD) limits for C-V2X OBUs operating without a geofencing capability at all locations and those that incorporate a geofencing capability when operating inside of a coordination zone:

- 10 megahertz channel (5.895-5.905 GHz): 23 dBm/10 MHz EIRP; 10 megahertz channel (5.905-5.915 GHz): 33 dBm/10 MHz EIRP, reduced to 27 dBm within ± 5 degrees of horizontal;
- 10 megahertz channel (5.915-5.925 GHz): 33 dBm/10 MHz EIRP, reduced to 27 dBm within ± 5 degrees of horizontal;
- 20 megahertz channel (5.895-5.915 GHz): 23 dBm/20 MHz EIRP;
- 20 megahertz channel (5.905-5.925 GHz): 33 dBm/20 MHz EIRP, reduced to 27 dBm within ± 5 degrees of horizontal; and
- 30 megahertz channel (5895-5925 GHz): 23 dBm/30 MHz EIRP.

NTIA suggests the following EIRP PSD limits for C-V2X OBUs that incorporate a geofencing capability when operating outside of a coordination zone:

- 10 megahertz channel (5.895-5.905 GHz): 33 dBm/10 MHz EIRP;
- 10 megahertz channel (5.905-5.915 GHz): 33 dBm/10 MHz EIRP;
- 10 megahertz channel (5.915-5.925 GHz): 33 dBm/10 MHz EIRP;
- 20 megahertz channel (5.895-5.915 GHz): 33 dBm/20 MHz EIRP;
- 20 megahertz channel (5.905-5.925 GHz): 33 dBm/20 MHz EIRP; and
- 30 megahertz channel (5.895-5.925 GHz): 33 dBm/30 MHz EIRP.

NTIA also suggests that manufacturers implementing a geofencing capability would need to specifically demonstrate and certify compliance of the capability within the equipment certification

process specified in part 2 of the Commission's rules. In addition, NTIA suggests that responsible parties should provide a mechanism to update the OBUs with new information within a reasonable timeframe if geofencing locations and parameters are subsequently modified.

Through this Proposed Rule, we seek comment on NTIA's recommendations that the Commission modify its part 95 rules to adopt power limit rules for C-V2X OBUs that include provisions for the optional use of geofencing techniques. Given that using geofencing would be an option and not required, we seek comment on the likelihood of manufacturers incorporating such a capability. What performance gains would be expected for C-V2X devices and the ITS overall when a geolocation capability is used as compared to if it is not? Are NTIA's recommendations regarding the power limits for C-V2X devices inside and outside the coordination areas appropriate? Would NTIA's recommendations provide benefits for C-V2X devices and ITS as compared to the Commission's C-V2X OBU rules originally proposed in this proceeding? What would be the relative complexity for adding a geolocation capability and the associated logic necessary for the OBU to adjust its power when in a coordination zone compared to devices without such capability? Would there be increased costs? If so, what would be the expected cost increase? What is the likelihood that manufacturers would incorporate a geofencing capability into their devices given any increased device complexity, additional compliance requirements, and increased cost? Conversely, would the proposed limits have a detrimental effect on operations or compliance? What methods could be used to update deployed OBUs to reflect revised geofencing locations and parameters?

Federal Communications Commission.

Ronald T. Repasi,
Chief
Office of Engineering and Technology.

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