

700 K Street NW Suite 600
Washington, DC 20001
December 5, 2022

VIA ECFS
Marlen H. Dortch
Secretary
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: *Amendment of Section 15.255 of the Commission's Rules*; ET Docket No. 21-264

Dear Ms. Dortch,

The undersigned nonprofit, nonpartisan research and policy organizations write to encourage the Commission to pursue the necessary steps to permit near-ground-level airborne use of unlicensed field disturbance sensor (hereinafter “radar”) devices in the 60-64 GHz band. With this letter, we take no position on the power limits or duty cycles necessary for compatibility between communications devices and radar devices within the band more generally.

Making productive use of spectrum is central to the Commission’s purpose and goals. In the above-captioned proceeding, the Commission has an opportunity to increase the productivity of the 60-64 GHz band by permitting airborne radar devices to operate near ground level. Therefore, the Commission should seek a technical arrangement that permits the maximum commercial use of this band while also protecting the federal interest in the Earth Exploration Satellite Service (EESS).

ALLOWING AIRBORNE RADAR IN THE BAND IS IN THE PUBLIC INTEREST

As for all spectrum bands, the value of the 60 GHz band to society comes from the uses to which it is put. It is, therefore, in the public interest to maximize the potential for different services to use the band. This is especially true since the 60 GHz band is unlicensed, an access framework premised on openness and coexistence among the widest possible scope of innovative uses and devices.¹ While it is important that the FCC tailor its technical rules to prevent the degradation of overall utility of the band and the protection of services in adjacent bands, the airborne restriction can likely be relaxed without undue harm to other users. The Commission should, therefore, scrutinize proposals for near-ground airborne radar in the band, but it should do so with the aim of enabling new uses when feasible.

To the extent that removing the restriction on airborne radar in the Notice mirrors the waiver granted to Leica Geosystems, the Commission’s analysis should mirror the finding that allowing airborne radar is in the public interest.² Insofar as a more thoroughgoing introduction of airborne radar would present

¹ See Comments of Open Technology Institute and Public Knowledge, *Modernizing and Expanding Access to the 70/80/90 GHz Bands*, WT Docket No. 20-133 (Dec. 2, 2021) (“we believe that rules for this band that are technology-neutral and that accommodate as many different services and users as possible will . . . produce the greatest long-term benefits to consumers and the economy”).

² *Leica Geosystems AG Request for Waiver of Section 15.255 of the Commission's Rules Applicable to Radars used on Unmanned Aerial Vehicles in the 60 64 GHz Frequency Band*, ET Docket No. 19-350 (rel. July 28, 2020), <https://www.fcc.gov/document/leica-geosystems-ag-request-waiver-order>.

new concerns to adjacent band services, the Commission should make evidence-based risk assessments to ensure coexistence.

COORDINATION WITH FEDERAL EARTH EXPLORATION-SATELLITE AND RADIO ASTRONOMY USES IS A TEST OF THE INTERAGENCY PROCESS

The FCC and NTIA have made significant steps toward improving the interagency coordination process to identify and resolve potential conflicts between federal systems and commercial spectrum applications.³ While certainly important spectrum users, the federal interests up to 59.3 GHz should present an easier case for coordination than some more contentious interference disputes. Building trust and consistency in the coordination process with a goal of promoting coexistence is important to all parties as they seek to foster a spectrum allocation framework that enables all users to make the most of all frequencies.

To that end, NTIA filed a letter in this proceeding indicating that the Commission's proposed updates to rules for transmitters on the surface of the Earth would not result in harmful interference to the EESS in the adjacent band.⁴ NTIA, however, requested the opportunity to conduct "further analysis" if the Commission sought to allow aeronautical deployments, suggesting that airborne transmitters may exhibit different atmospheric attenuation.⁵ While the Commission's notice did include a discussion of potential airborne use, the FCC should continue the cooperative spirit of this proceeding by coordinating with NTIA to allow the requested analysis to be conducted and included in the FCC's final decision.⁶

In assessing how best to enable new services while protecting EESS, the Commission should look to existing technical mitigations, such as the natural guard band between 60 GHz and the passive sensors at 59.3 GHz and existing FAA altitude limits on drones.⁷ Given the propagation characteristics of millimeter wave spectrum, a natural guard band of 700 megahertz seems likely to protect passive sensors from low-power radar subject to near-ground level restrictions. This is a significantly different use case than is 60 GHz radar operating on conventional aircraft at substantially higher altitudes and speeds. The FCC should show due regard for the concerns of federal agencies, but the Commission should also affirmatively engage with NTIA to obtain the relevant information and make a policy determination without undue delay.

Sincerely,

Joe Kane
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Information Technology and Innovation Foundation

Michael Calabrese
Director, Wireless Future Program
Open Technology Institute at New America

³ Memorandum of Understanding Between the Federal Communications Commission and the National Telecommunications and Information Administration (Aug. 1, 2022), <https://www.fcc.gov/document/mou-between-fcc-and-ntia-spectrum-coordination>.

⁴ *Ex parte* letter of National Telecommunications and Information Administration, ET Docket No. 21-264 (filed June 21, 2022), <https://www.fcc.gov/ecfs/document/1062751986518/1>.

⁵ *Ibid.*

⁶ *Amendment of Section 15.255 of the Commission's Rules*, Notice of Proposed Rulemaking, ET Docket No. 21-264 (rel. July 14, 2021), at ¶ 42.

⁷ *See, e.g.*, 14 CFR 107.51.

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