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ALERT

FCC Updates Rules for the 37 GHz and 50 GHz Spectrum Bands; Establishes Process to Accommodate DOD Needs in Upper 37 GHz Band

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On April 15, 2019, the Federal Communications Commission (FCC or Commission) released a Fifth Report and Order (Fifth R&O) adopting additional rules to make available millimeter wave spectrum at or above 24 GHz for fifth-generation (5G) wireless, Internet of Things (IoT), and other advanced spectrum-based services.[1] The Commission takes two actions in the Fifth R&O. First, the Commission establishes a process for the U.S. Department of Defense (DOD) to operate on a shared basis in the Upper 37 GHz band (37.6-38.6 GHz) in limited circumstances. Second, the Commission establishes rules to allow Fixed-Satellite Service (FSS) to operate with individually licensed earth stations transmitting in the 50 GHz band (50.4-51.4 GHz). The rules adopted in the Fifth R&O would further facilitate access to an additional 1000 MHz of spectrum in the Upper 37 GHz band in anticipation of an auction scheduled to commence on December 10, 2019.

A. Process for DOD to Operate on a Shared Basis in the Upper 37 GHz band

In the 2016 *Spectrum Frontiers First Report and Order*,[2] the Commission divided the 37 GHz band into the Lower 37 GHz band (37.0-37.6 GHz) and the Upper 37 GHz band (37.6-38.6 GHz), made the Lower 37 GHz band available for coordinated co-primary sharing between Federal and non-Federal users, and established coordination zones throughout the entire 37–38.6 GHz band for the 14 military sites and three scientific sites identified by the National

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Telecommunications and Information Administration (NTIA). While the Commission noted that Federal agencies still had the ability to add future sites on a coordinated basis, it did not specify how this could be done. (¶ 5).

Last June, the Commission sought comment on how best to accommodate coordination zones for future Federal operations in the Upper 37 GHz band. NTIA, on behalf of DOD, identified one additional Federal site in the Upper 37 GHz band beyond the 14 military sites and three scientific sites identified in the Commission's rules. (¶ 13). Furthermore, and perhaps more importantly, NTIA indicated that DOD will need to use the Upper 37 GHz band at additional sites in the future, but that it could not identify those locations at this time, and that the Lower 37 GHz band may not be sufficient. (¶ 14). NTIA urged the Commission to clarify under what circumstances and processes DOD and other Federal users could seek access through coordination to the Upper 37 GHz band in areas outside of the sites listed in the Commission's rules.

In the Fifth R&O, the Commission establishes a process that aims at accommodating DOD's needs, while protecting the interests of non-Federal licensees in the Upper 37 GHz spectrum band. Under this process, DOD may submit requests for access to the Upper 37 GHz band for specific additional military bases and ranges for the purpose of defense applications or national security. The requests must include a justification regarding why the proposed operations could not be accommodated in the Lower 37 GHz band. Commission staff will review the request to assess any potential impact on non-Federal licensees, contacting the potentially affected licensees and facilitating direct coordination with DOD and NTIA. The Commission would then determine whether the request for access can be accommodated without creating a significant risk of harmful interference to current or planned deployments by potentially affected non-Federal licensees. NTIA would provide the applicable military departments any new or revised frequency assignments that are successfully coordinated. (¶ 16).

The Commission acknowledged the concern of various parties, including commercial wireless providers and equipment manufacturers, regarding a process for future federal sites that lacks sufficient certainty and how it might impact an auction of the Upper 37 GHz band and the value of the spectrum. However, the Commission states that the established process will protect auction winning bidders from harmful interference while enabling DOD to carry out operations in the Upper 37 GHz band for specific additional military sites on a limited basis. In this regard, the Commission identified several mitigating factors. For instance, the Commission stated that requests by DOD are likely to be relatively rare; that military use, if it could not be accommodated in the Lower 37 GHz band, will be limited to military bases and ranges, for the purpose of defense applications or national security, and most likely will be in remote areas; and that the technical characteristics of operations in this region of the spectrum, marked by high path losses and use of advanced antennas and adaptive power control, can minimize any significant impact on licensees' operations. (¶ 17).

The Commission also noted that DOD and the wireless industry are working together to advance spectrum-based technologies through various collaborative efforts (such as their participation in the National Spectrum Consortium) and coordinate operations across many frequency bands, such as in the 3.5 GHz band. The Commission anticipates that those working relationships will facilitate successful coordination of operations in

the 37 GHz band. (¶ 19).

B. Licensing of Individual FSS Earth Stations in the 50.4-51.4 GHz Band

The Commission states that in the 50.4-51.4 GHz band, where an FSS allocation already exists, a limited number of individually licensed FSS earth stations can share the 50.4-51.4 GHz band with minimal impact on terrestrial operations. Therefore, the Commission amended section 25.136 to permit the licensing of individual FSS earth stations in the 50.4-51.4 GHz band using the criteria identical to those applicable in the 24.75-25.25 GHz band. (¶¶ 10-11).

Under those criteria, there may be no more than three earth stations in the 50.4-51.4 GHz band in a county and no more than 15 earth stations in any Partial Economic Area (PEA). Furthermore, the area in which the earth station generates a power flux density (PFD), at 10 meters above ground level, of greater than or equal to −77.6 dBm/m2/MHz, together with the similar area of any other earth station operating in the 50.4-51.4 GHz band in the same county, may not cover more than the following aggregate populations:

- .1 percent of the population in a county with a population greater than 450,000;
- 450 people in a county with a population between 6,000 and 450,000;
- 5 percent of the population in a country with a population of less than 6,000.

The area in which the earth station generates a PFD, at 10 meters above ground level, of greater than or equal to −77.6 dBm/m2/MHz may not contain any major event venue, urban mass transit route, passenger railroad, or cruise ship port. Furthermore, that area may not cross certain roads classified as "Interstate, Other Freeways and Expressways, or Other Principle Arterial" by the Federal Highway Administration. (¶ 10).

The Commission made a minor confirming modification to Section 25.130(b)(4) to include the newly modified Section 25.136 in the list of rule sections with which FSS transmitting earth station applicants must comply when seeking authorization in bands shared with UMFUS. Lastly, the Commission modified footnote NG65 to the U.S. Table of Allocations to include the 50.4-51.4 GHz band. (¶ 12).

If you have any questions about the reimbursement process, please contact the Wiley Rein attorney who regularly handles your FCC matters or one of the attorneys listed on this client alert.

Kamila Benzina, a Law Clerk in Wiley Rein's Telecom, Media and Technology practice, contributed to this alert.

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[1] *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, GN Docket No. 14-177, Fifth Report and Order, FCC 19-30 (rel. Apr. 15, 2019).

[2] *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014 (2016) (Spectrum Frontiers First Report and Order).