Communications, Internet & Technology

FCC Explores New 5G Spectrum Frontiers

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Continuing what it has described as an effort "vital to ensuring continued American leadership in wireless broadband," the Federal Communications Commission (FCC) on June 8, 2018, released a Report and Order (Order) that, among other things, resolves certain matters in the use and acquisition of millimeter wave (mmW) spectrum bands, as well as a Further Notice of Proposed Rulemaking (FNPRM) seeking to make additional mmW spectrum bands available for flexible wireless use.[1] The Order and FNPRM are the third the FCC has released in the past two years as part of the *Spectrum Frontiers* proceeding, and its most recent actions further the FCC's efforts to promote innovation in the use and availability of mmW spectrum.

Five Key Takeaways from the Third Spectrum Frontiers Order and Further Notice

First, the FCC expanded the available performance metrics for Upper Microwave Flexible Use Service (UMFUS) licensees by adopting a geographic area metric for UMFUS licenses to accommodate Internet of Things (IoT)-type deployments or other services deployed along non-traditional lines, particularly where these deployments "may not track residential population."[2] Specifically, the FCC concluded that UMFUS licensees may fulfill the geographic metric "either by demonstrating mobile or point-to-multipoint coverage of at least 25 [percent] of their license's geographic area, or by showing the presence of equipment transmitting or receiving on the licensed spectrum in at least 25 [percent] of census tracts within the license area."[3] In making this determination, the FCC reasoned that the 25 percent geographic metric would maintain parity with the 40 percent population coverage metric it had previously adopted for UMFUS licenses.[4] The FCC also stressed that the metric was "an additional alternative for licensees, not a supplemental requirement,"[5] and that like its previously-adopted metrics, it could be used by any UMFUS licensee, regardless of the type of service deployed.[6]

Second, the FCC eliminated the spectrum aggregation limit it had previously established for the 28 GHz, 37 GHz, and 39 GHz Bands,[7] which would have prevented parties from acquiring more than 1250 megahertz across these three bands at auction.[8] Acknowledging that mmW technology "is at a nascent stage of development" and there is "insufficient information to predict the amount of spectrum needed for future still-to-be-developed services,"[9] the FCC decided to shift its "balancing of objectives . . . towards facilitating rapid 5G deployment in the United States."[10] The FCC therefore concluded that pre-auction limits could potentially restrict entities' ability to acquire spectrum and, in turn, could limit incentives to invest in deploying 5G in mmW bands or to create new 5G services, thereby delaying the "realization of related economic benefits."[11] Nonetheless, the Commission announced that it will undertake a case-by-case post-auction review before awarding initial licenses to any single entity for more than 1850 megahertz[12]—the same threshold the FCC uses for evaluating secondary market transactions of UMFUS licenses.[13] The FCC recognized that this approach would provide it with the ability to evaluate whether an applicant's post-auction spectrum holdings result in the excessive concentration of mmW licenses.[14] The FCC also found that this approach would ensure that the public interest benefits of the threshold as applied to proposed secondary market transactions "are not rendered ineffective."[15]

Third, the FCC forged ahead with creative regulation of the Lower 37 GHz Band, affirming its decision to adopt a co-primary sharing approach to make the band available for sharing between federal and non-federal users.[16] The FCC also adopted its proposal to license the band as six 100 megahertz channels.[17] The FCC found that this type of channelization will permit sufficient spectrum acquisition by smaller users while still allowing for aggregation by larger entities.[18]

Fourth, the FCC adopted an operability requirement in the 24 GHz Band, requiring that any mobile or transportable equipment be capable of operating on any frequency between 24.24-24.45 GHz and 24.75-25.25 GHz.[19] As the FCC explained, this requirement "will support competition by ensuring a robust device ecosystem throughout the band."[20] The FCC emphasized that the requirement is specific to the 24 GHz Band and does not extend to other UMFUS bands; that is, devices need not be operable across all UMFUS bands.[21]

Fifth, the FCC seeks comment on a number of proposals relating to spectrum in the 42 GHz, 26 GHz, and Lower 37 GHz Bands. In particular, the FCC seeks further comment on how the 42 GHz Band could be used to provide commercial wireless broadband service,[22] and on whether the 26 GHz Band could be made available for non-Federal fixed and mobile use.[23] The FCC also seeks comment on how best to facilitate shared use of the Lower 37 GHz Band, indicating that it envisions this band as "an innovation band in the mmW spectrum."[24]

We expect the FCC to continue pursuing policies in the near future that expand the flexibility and availability of spectrum for providers and developers as they rapidly race towards deploying 5G.

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[1] *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, Third Report and Order, Memorandum Opinion and Order, and Third Further Notice of Proposed Rulemaking, GN Docket No. 14-177, FCC 18-73, ¶¶ 1-2 (2018) (*3rd R&O*).

[2] *Id*. ¶¶ 8-9; *see also Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Opinion and Order, 32 FCC Rcd 10,988, 11,020-22 ¶¶ 98-104 (2017).

[3] *3rd R&O* ¶ 8.

[4] *Id*.; *see also* 47 C.F.R. § 30.104(a).

[5] *3rd R&O* ¶ 9.

[6] *Id*. ¶ 8.

[7] *Id*. ¶ 32.

[8] *Id*. ¶ 29.

[9] *Id*.

[10] *Id*. ¶ 33.

[11] *Id*.

[12] *Id*. ¶ 34.

[13] *Id*.

[14] *Id*. *See also* 47 U.S.C. § 309(j)(3)(B) (indicating that spectrum licenses granted through a competitive bidding system should achieve the objective of "promoting economic opportunity and competition and ensuring that new and innovative technologies are readily accessible to the American people by avoiding excessive concentration of licenses.").

[15] *3rd R&O* ¶ 34.

[16] *Id*. ¶¶ 26, 28.

[17] *Id*. ¶ 28.

[18] *Id*.

[19] *Id*. ¶ 13.

[20] *Id*.

[21] *Id*. ¶ 14.

[22] *Id*. ¶ 48.

[23] *Id*. ¶ 78.

[24] *Id*. ¶ 63.

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