



November 7, 2017

**Ex Parte**

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12th Street SW  
Washington, DC 20554

***Re: Use of Spectrum Bands Above 24 GHz for Mobile Radio Service, GN Docket No. 14-177,  
WT Docket No. 10-112***

Dear Ms. Dortch:

On November 6, 2017 Michael Calabrese of New America’s Open Technology Institute (OTI) and Phillip Berenbroick of Public Knowledge (hereinafter the “Consumer Advocates”), met with Rachael Bender, wireless advisor to Chairman Ajit Pai, concerning the above-referenced proceeding.

The Consumer Advocates first expressed their support for the conclusion, in the draft Order on Reconsideration, to reject mobile industry requests that the Commission reallocate the upper five gigahertz of the 64-71 GHz unlicensed band for exclusively-licensed mobile carrier use, as well as the related decision to authorize use of the band aboard aircraft. The Advocates also expressed support for the tentative conclusion that licensed mobile use of the 70 and 80 GHz bands should not be authorized at this time – and that the bands should continue to be dedicated primarily to fixed links under the current open, light-licensing coordination framework.

The Advocates next suggested three changes. First, the Order on Reconsideration should explicitly dismiss requests to reallocate the 37-37.6 GHz band for exclusively-licensed mobile use, adding it to the 4,950 megahertz of spectrum already being allocated exclusively to the Upper Microwave Flexible User Service (UMFUS). In addition, the Commission should add questions about the sharing framework for 37-37.6 GHz to the FNPRM. The lower portion of the band should be developed in parallel with the upper portion; and delaying consideration of the rules for shared access will only create more uncertainty and delay investment in what promises to be a distinct and complementary layer of a heterogeneous 5G wireless ecosystem.

A future 5G wireless ecosystem will be more flexible and robust if there is access to both mid-band and millimeter wave spectrum for operators, businesses and venues that can make use of direct access to spectrum for more localized and customized local area networks. Since mobile carriers are

likely to use spectrum at 37–39 GHz to enhance network capacity primarily in high-traffic areas, limiting access to exclusive, wide-area and expensive licenses relevant only to the largest mobile carriers would inevitably result in leaving most millimeter wave (“mmW”) spectrum unused for many years, and perhaps permanently, in small town, rural, and other low-density environments outside of central urban areas and other high-traffic venues.

The Advocates also stated that NTIA has indicated that the Defense Department, NASA and likely other agencies continue to want access to the band on a co-primary basis, including the ability to expand future use. A failure to simply dismiss the reconsideration of this one modest set-aside for shared use will prolong uncertainty about the future of the 37 GHz band and deter investment by companies seeking to develop technologies and services based on small-area shared access.

Second, the Advocates suggested that the Memorandum Opinion & Order should not reject the concept of use-or-share (opportunistic access) in the bands above 24 GHz at this time, and particularly in the 37-39 GHz band, since the availability of a database mechanism to govern shared use of the 37-37.6 GHz band has not been determined. The Commission has in two recent orders authorized use-or-share access to vacant spectrum in bands where a geolocation database ensures there is absolutely no interference risk or downside for licensees – the Citizens Broadband Radio Service at 3.5 GHz and the post-auction 600 MHz band. Because the Commission has in this draft deferred a decision on the framework for shared access to the 37-37.6 GHz band, it should likewise withhold judgment on the feasibility of opportunistic access to vacant 37-39 GHz UMFUS spectrum.

Tying a decision on use-or-share to a future decision on the framework for 37-37.6 GHz is particularly apt because the 2016 Order, adopted on a 5-0 vote, envisioned three elements working in tandem to promote more intensive and diverse access to the band, particularly in low population density areas where it’s use to enhance capacity in 5G mobile carrier networks is unlikely:

- An operability requirement for equipment across the entire band
- 600 megahertz set-aside for federal and non-federal sharing on a license-by-rule basis (“SALs”)
- Opportunistic access to vacant spectrum across the entire 37-39 GHz band

Our groups continue to believe that maintaining this framework serves the public interest.

Third, the Advocates expressed opposition to the draft’s failure to maintain and enforce limits on aggregate spectrum holdings for the purpose of promoting competition. A spectrum aggregation limit – or, at the very least, a spectrum screen that when surpassed requires Commission scrutiny – gives the Commission a tool to ensure that there is sufficient spectrum for a variety of stakeholders in the band. By eliminating its existing mmW spectrum screen, the Commission is needlessly eliminating a useful tool to help promote competition in the development of 5G services, avoid excessive and anti-competitive concentration and warehousing of licenses, and promote efficient use of the band. The Commission’s customary case-by-case review of transactions provides the agency with ample flexibility to grant license transfer applications that surpass the spectrum screen but nonetheless are found to serve the public interest. Eliminating the existing spectrum screen for the 28, 37, and 39 GHz bands, and failing to adopt a screen for the 24 and 47 GHz bands is unsound as a competition policy, and unnecessary.

Finally, the Advocates suggested that the Memorandum Opinion & Order should not reject the option of indoor-only unlicensed use of the 71-76 and 81-86 GHz bands, but should instead use the FNPRM to request additional engineering evidence on potential interference to incumbent fixed uses. While we do not dispute the draft's conclusion that additional studies on interference risk are warranted, there are important reasons to encourage the further exploration of more intensive use of the band on an indoor-only basis. The 71-76 GHz band is contiguous with the unlicensed band that currently extends up to 71 GHz. As our groups and Microsoft argued in our comments and reply comments, extending unlicensed use of the band above 71 GHz could add as many as three additional WiGig channels. Moreover, the authorization of indoor-only unlicensed use of the 90 GHz band, based on an AC-power requirement, is precedent and also suggests that above 70 GHz, the shielding of building walls, even windows, is likely to protect any nearby fixed links, which are highly-directional ("pencil beams") and almost always deployed at rooftop level, since they require unobstructed line of sight.

Respectfully submitted,

*/s/ Michael Calabrese*  
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cc: Louis Peraertz  
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