December 7, 2020

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
45 L Street, NE
Washington, DC 20554

Re:  Ex Parte Presentation, Expanding Flexible Use of the 3.7-4.2 GHz Band,
GN Docket No. 18-122

Dear Ms. Dortch:

CTIA hereby responds to aviation stakeholders’ last-minute request to “suspend” Auction 107—which will begin tomorrow, December 8, 2020—for 3.7-3.98 GHz frequencies in the C-Band.¹ The request, submitted a day before the auction launches and more than three years after the Commission first began exploring the band for wireless use, relies on the filing parties’ unsound and unsupported technical findings and should be summarily rejected.

As the Commission is well aware, the C-Band Order concluded that the 3.7 GHz Service technical rules, combined with the spectral separation of at least 220 megahertz from aviation altimeter operations, “are sufficient to protect aeronautical services in the 4.2-4.4 GHz band.”² Following adoption of the C-Band Order, representatives from approximately 60 different companies and associations across a dozen different industry sectors formed the C-Band Multi-Stakeholder Group (“C-Band MSG”) to further ensure against harmful interference among


² Expanding Flexible Use in the 3.7-4.2 GHz Band, Report and Order and Order Proposing Modification, 35 FCC Rcd 2343 ¶ 395 (2020) (“C-Band Order”).
divergent services in and around the C-Band.\(^3\) Within the C-Band MSG, stakeholders set up Technical Working Group 3 (“TWG-3”) to consider 5G/aeronautical coexistence issues, with participation from 29 different companies and associations across the aviation industry, wireless service providers and manufacturers, cable providers, Wireless Internet Service Providers, and others.

Separate from that process, the aviation community has developed a work product, a study submitted by RTCA (“Report”),\(^4\) which is lacking and unreliable in several respects: the underlying test data driving the conclusions has not been made available for review, the analysis is suspect, and its findings are unsupported. CTIA is on record rebutting RTCA’s claims and urging the Commission to dismiss the Report.\(^5\) Specifically, as CTIA observed, the RTCA Report is lacking in several ways:

- **Altimeters could fail aviation’s overly stringent, newly invented criteria even if 5G were not present.** The Report applied pass/fail criteria that are stricter than RTCA’s recommended minimum performance standard for low-range radar altimeters, DO-155. Under this flawed approach, several altimeter models could fail the criteria under a baseline assessment even with no C-Band 5G operations present, as these models were designed to satisfy performance criteria less stringent than the pass/fail criteria.

- **Aggregated data is obscuring actual results.** The Report does not identify the altimeter models tested and it does not provide any individualized (even anonymized) data of altimeter model performance results—despite the fact that the aviation industry has made individual altimeter performance data available in other contexts.\(^6\) RTCA’s

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3. Aviation industry standards group RTCA asserts that it created its own multi-stakeholder group, but RTCA is an aviation organization, it has no representation from the wireless industry, and it is not a cross-industry multi-stakeholder group.


approach makes it impossible to make an independent assessment about the validity of aviation’s findings—underscoring why policymakers cannot rely on them.

- **The Report relies on unrealistic scenarios.** The Report relies on input data assembled by extracting the worst-performing data points from multiple altimeters, under unrealistic conditions, into a single performance envelope for each of three altimeter Usage Categories (commercial air transport, all other fixed wing aircraft, and helicopters). The end result is a performance envelope for each Usage Category that is unlikely to match the performance characteristics of any individual altimeter.

- **The Report layers exaggerated margins.** The Report then includes several unwarranted margins in the reported interference tolerance thresholds, which RTCA subsequently used in its interference calculations. And the Report also improperly applies a worst-case landing scenario with settings and assumptions that do not match real-world situations.

- **Obsolete equipment is driving aviation’s findings.** The Report’s approach permits a few altimeter models of unknown age, design, condition, and penetration to drive the RTCA conclusions. For example, the Report included a pulsed altimeter model (Type 8 altimeter) in the testing, and the Commission has not certified a pulsed altimeter in more than 40 years. This altimeter very likely could be driving results in Usage Categories 2 and 3.

Notably, applying the Report’s approach to existing radio operations in the vicinity of the 4.2-4.4 GHz band used by aviation altimeters, several existing systems and services would exceed the purported interference tolerance threshold. These include the Navy AN/SPN-43 radar operating at very high radiated power levels below 3.65 GHz and Federal systems in the adjacent band, 4.4-4.94 GHz band, including ground-to-air communications that would require a ground antenna to focus energy upward toward aircraft. And yet, none of these existing services have been shown to contribute harmful interference to aviation altimeters. The lack of reports of widespread altimeter interference today is further evidence that aviation’s conclusions are critically flawed.

RTCA’s flawed inputs and analytical missteps lead to the Report’s unsound conclusions regarding the impact of C-Band 5G operations on altimeters in the 4.2-4.4 GHz band. RTCA’s approach impedes the ability of stakeholders—including the Commission—to use the Report to independently assess 5G/altimeter coexistence.

Now, the aviation industry files a request to suspend the auction just one day before it commences. First, the late date of such a request is peculiar to say the least given that the
Commission adopted the 3.7 GHz Service Rules at issue in February 2020\(^7\) and set the December 8, 2020 auction date *four months ago*, on August 7, 2020.\(^8\) Thus, at most, the aviation filing is an untimely petition for reconsideration of the Auction Procedures Public Notice and should be dismissed.\(^9\) More broadly, the Commission should refuse to countenance stakeholder efforts to hold up any Commission proceeding based on claims as unreliable and intentionally unsupported as the RTCA Report is. The Commission should therefore reject the aviation community’s last-minute attempts to thwart the auction of these critical mid-band airwaves, and it should move forward with Auction 107 as scheduled.

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Pursuant to Section 1.1206(b) of the Commission’s rules, a copy of this letter is being electronically submitted into the record of this proceeding. Please do not hesitate to contact the undersigned with any questions.

Sincerely,

/s/ Scott K. Bergmann
Scott K. Bergmann
Senior Vice President, Regulatory Affairs

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\(^7\) The C-Band Order was adopted February 28, 2020 and released March 3, 2020. See C-Band Order.
