Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Promote Aviation Safety	)	WT Docket No. 19-140
	)	
WiMAX Forum Petition to Adopt Service Rules for the Aeronautical Mobile Airport Communications System (AeroMACS)	)	RM-11793
	)	
Petition of Sierra Nevada Corporation for Amendment of the Commission's Rules to Allow for Enhanced Flight Vision System Radar under Part 87	)	RM-11799
	)	
Petition of Aviation Spectrum Resources, Inc. for Amendment of Sections 87.173(b) and 87.263(a) of the FCC's Rules to Allow Use of the Lower 136 MHz Band by Aeronautical Enroute Stations	)	RM-11818
	)	
Petition of Airports Council International-North America Regarding Aeronautical Utility Mobile Stations	)	RM-11832

REPLY COMMENTS OF AVIATION SPECTRUM RESOURCES, INC.

Aviation Spectrum Resources, Inc. ("ASRI") hereby submits reply comments in response comments filed to the Commission's Notice of Proposed Rule Making ("*NPRM*") released June 7, 2019, FCC 19-53.[1] ASRI's principal interest focuses on the Commission's proposal to make available spectrum in the lower half of the 136 – 137 MHz band for aeronautical enroute stations that will support air traffic control (ATC) and aeronautical operational control (AOC) using VDL Mode 2 digital data communications. These stations will facilitate the ongoing deployment of

[1] A summary of the *NPRM* was published in the Federal Register at 84 FR 31542 (July 2, 2019).

the Data Comm component of the FAA's NextGen initiative to modernize the nation's air traffic control system. For the reasons noted in ASRI's Comments and in those of numerous other commenters, ASRI urges the Commission to move forward with the agency's proposal with respect to the 136 MHz band.

The Commission's proposal for the 136 MHz band was made in response to the petition for rule making submitted by ASRI concerning the FAA's major effort to upgrade the management of the air traffic control system by transmitting routine ATC messages in nonvoice data over the same stations employed to communicate AOC traffic. The ATC messages are automatically to be accorded priority such that they messages will be transmitted within timeframes specified by the FAA contractually.

As noted in ASRI's Comments, the Data Comm system has already improved the efficiency of ATC operations resulting in major time savings and the elimination of read-back errors in which pilots and controller repeat spoken messages in order to ensure accuracy. Thus far, aeronautical enroute stations licensed in the upper half of the 136 MHz band have been utilized for Data Comm operations, but the time is rapidly approaching in which additional spectrum will be needed. Accordingly, ASRI asked the Commission to add aeronautical enroute stations to the list of facilities that may be licensed in the 136 – 136.475 MHz sub-band.

ASRI's proposal received support from numerous organizations without any opposition. The Air Line Pilots Association, International (ALPA) represents the men and women who fly air transport aircraft around the world. As such, ALPA members are responsible for the safety and efficiency of aircraft operations on a daily basis. In its Comments ALPA moved right to the point:

> …the current Federal Aviation Administration (FAA) deployment of Controller-Pilot Data Link Communications (CPDLC) is currently using the upper portion of the 136-137 MHz band; we support expanding its use to the entire band as additional capacity is needed within the next year to support the full deployment of CPDLC capability in the United States. ALPA sees CPDLC as a significant improvement in safety as it allows for error-free transmission of aircraft route amendments that eliminate read-back/hear-back and typographical errors which could lead to Gross Navigational Errors.
>
> The CPDLC system is based on existing international industry standards (i.e., VHF Digital Link Mode 2 [VDLM2]) and is the only planned CPDLC system that FAA intends for domestic Air Traffic Control (ATC) purposes. No alternatives are currently being considered. With FAA involvement via contracted performance requirements and direct engagement with service providers, the changes to rules as petitioned by ASRI provide the best balance between FAA oversight and industry innovation. ALPA further recommends that FCC not overprescribe or duplicate FAA or RTCA requirements in the FCC regulations; this will have the real-world effect of needing to make regulatory changes in order to make any needed technical changes as the CPDLC system is further developed in the future.
>
> ALPA endorses the transmission of both Airline Operational Control and ATC communications on VDLM2 networks that support data communications, as the system has been designed to incorporate message prioritization and preemption.[2] In addition, we note that FAA and industry have agreed to the specific frequency assignments in this band, and both monitor the performance of the CPDLC in operations and make proactive changes to accommodate message traffic growth and changes to the CPDLC system. Finally, as an international standard, VDLM2 is also planned for service or in service in Europe, Canada, and elsewhere around the world, which eliminates the need for airlines to install multiple data radio systems in their aircraft.[3]

With respect to prioritization of ATC messages, Collins Aerospace noted:

> Existing data link standards (such as ARINC Standard 618 and 631) provide the requirements and a specific methodology for ensuring that the ATC message will have priority over and pre-empt AOC messages. The FAA Data Comm program office has specified these and additional performance requirements in the contract requirements to their data link service providers. Therefore, we believe that the intent of the proposed language that "the specific frequencies and traffic sharing methodology must be agreed upon with the FAA" is already met through existing standards and practices.[4]

Collins Aerospace also addressed the Commission's question concerning alternatives to Data Comm:

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[2] Referencing ARINC Standard 619.
[3] ALPA Comments at 3-4.
[4] Comments of Collins Aerospace at 4-5 (footnotes omitted).

> There is no other viable near- or mid-term alternative that would serve as a substitute to this proposal to serve the Data Comm program. The FAA and the aviation industry have invested significant resources into the program; any effort to seek an alternative would be cost prohibitive and would impede the FAA's NextGen program.[5]

Recognizing the positive contribution that Data Comm will make to aeronautical communications, Boeing commented:

> Boeing supports these proposed rule changes. As ASRI explains in its petition, Data Comm will leverage key developments in aeronautical communications technology that allow for air traffic control and aircraft operational control communications to be transmitted using a single terminal. This will enable the FAA to 'leverag[e] industry networks' to meet growing 'demand for bandwidth for data communications' aboard aircraft. Boeing welcomes the Commission's attention to the design and spectrum needs of NextGen, and agrees with ASRI that updating the allocation and service rules for the lower 136 MHz band will complement the implementation of Data Comm. Accordingly, the Commission should adopt its proposal.[6]

In sum, the proposal to expand eligibility for the lower half of the 136 MHz band to allow for aeronautical enroute stations makes sense, has industry support, and should be quickly enacted.

[5] Id. at 5.
[6] Comments of the Boeing Company at 7 (footnotes omitted)

Conclusion

ASRI urges the Commission to move forward to adopt the proposed rule changes needed to facilitate use of the entire 136 – 137 MHz band in support of the Data Comm system so essential to the success of the FAA's NextGen program to improve the management of the National Air Space. These changes will improve both the safety and the efficiency of ATC and AOC communications and benefit air transport operators and the members of the public they serve.

Respectfully Submitted,

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