

BEFORE THE  
**Federal Communications Commission**  
WASHINGTON, D.C. 20554

In the Matter of )  
 )  
Flexibility of Delivery of Communications by ) IB Docket No. 01-185  
Mobile Satellite Service Providers in the 2 GHz )  
Band, the L-Band, and the 1.6/2.4 GHz Bands )

**COMMENTS ON PETITIONS FOR RECONSIDERATION**

Aeronautical Radio, Inc. (“ARINC”) and the Air Transport Association of America (“ATA”), by their attorneys, hereby respond to the Petitions for Reconsideration submitted in this matter by Mobile Satellite Ventures Subsidiary LLC (“MSV”), Cingular Wireless LLC (“Cingular”), Inmarsat Ventures PLC (“Inmarsat”), and the U.S. GPS Industry Council. ARINC and ATA oppose the expansions of ancillary terrestrial operations sought by MSV, but fully support the requests for reconsideration by Cingular, Inmarsat, and the GPS Industry Council.

In this proceeding, Mobile Satellite Ventures L.P. (“MSV”) sought to supplement its L-Band MSS with “ancillary terrestrial components.” The FCC largely granted MSV’s wishes, but imposed a number of conditions and technical standards to provide some level of assurance that the terrestrial operations would remain ancillary and would not interfere with safety-of-life mobile satellite services (MSS), such as those used by aviation. ARINC and ATA had questioned the wisdom of adding domestic terrestrial operations in an important international aeronautical communications system, and the Commission thoughtfully attempted to craft reasonable protections for aviation. MSV, however, now is seeking to weaken those protections before it ever fields a system. We especially object to MSV’s desire to place terrestrial base stations nearer than 470 meters to a runway. There is no need for terrestrial base stations on or near any airport. Airports are generally free of obstructions and MSV’s satellite should be in view at all times. MSV’s petition for reconsideration should be denied in its entirety.

Airlines and corporate aviation rely heavily upon aeronautical mobile satellite (R) service (AMS(R)S) provided by ARINC and SITA using Inmarsat space segment. The communications carried over these systems are time-critical, safety communications that the United States is required to protect under the Radio Regulations of the International Telecommunication Union (“ITU”).<sup>1</sup> The FCC should not relax the protections afforded to aeronautical communications in its order without any experience with the current regulations. MSV’s petition should be denied.

By contrast, Inmarsat has requested reconsideration to reduce the potential for interference from terrestrial operations. These proposals should be adopted by the Commission, especially those that will ensure the additional power for mobile earth terminals (“METs”) to penetrate buildings is used only inside of buildings. If the power control permits the higher power operation at the edge of cell, for example, the interference potential would be significantly increased.

Cingular questions whether the rules adopted would ensure that terrestrial operations remain “ancillary.” This is a concern that ARINC and ATA expressed in their comments in this proceeding and is not fully satisfied by the gating criteria established by the Commission. In addition to the gating considerations, the Commission should require that most communications on the system utilize the satellite space segment rather than the terrestrial base stations. A ratio of space to terrestrial of 4 to 1 would seem adequate to ensure that the terrestrial service is ancillary to the MSS.

Finally, GPS Industry Council asked that the out of band emission (OOBE) limits developed by it and MSV be adopted by the Commission. MSV and the GPS Industry Council, working together, reached a reasonable compromise on OOBE levels that would give protection to the GPS L-1 frequency that is used for safety of life navigation purposes. The agreed limits were: –100 dBW/MHz for terrestrial base stations, –90 dBW/MHz for mobile earth terminals initially, and –95 dBW/MHz for all new terminals five years after the commencement of ancillary terrestrial service. The FCC, however, has determined to ignore this negotiated compromise and harkened back to OOBE limits negotiated a decade ago in the *Big LEO*

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<sup>1</sup> ITU Radio Reg. 4.10.

*Proceeding* for completely different circumstances.<sup>2</sup> There is no basis in the record or in public interest for these less stringent OOB limitations to be applied in the current context, especially in view of the fact that they do not protect sufficiently for Category II and III landings and are based on a smaller population of METs than is expected to be the case in the current proceeding.

The earlier, less stringent limits were based upon a single MET 100 feet directly below an aircraft and the technology reasonably available to the Big LEO applicants at the time. The -70 dBW/MHz OOB limit was deemed satisfactory to permit Category I approaches and landings, although the FAA would have preferred an additional 6 dB of protection. The level of protection adopted for the Big LEOs is not sufficient to permit Category II or III precision approaches and landings or to provide protection to the aeronautical radionavigation service during taxiing. During these type of operations, which are now under consideration by the FAA, the 100-foot separation cannot be maintained. Moreover, the MSV hopes that the ancillary terrestrial operations will increase the number of METs operating on its system and the assumption that only one MET will be causing interference is no longer valid. Thus, the improved OOB limits proposed in the current proceeding will facilitate the use of GPS for critical aircraft operations.

Further, the OOB limits proposed by the GPS Industry Council and MSV are now technically practicable, and MSV is willing to meet these new limits. Technology will now support OOB limits necessary to promote the use of GPS for additional aeronautical safety functions. The public interest will be served by requiring new systems to reduce out of band transmissions to the greatest extent practicable.

Therefore, the FCC should deny MSV's petition to increase the interference potential of its terrestrial operations. Instead, the agency should carefully consider and adopt the proposals of Inmarsat to reduce the possibility of harmful interference. In addition, Cingular raises an important issue about how to be certain that the ancillary terrestrial operations in the MSS remain ancillary. The FCC should impose a limit on communications transiting the terrestrial base stations to no more than 20% of the total communications handled by the system. Finally, the FCC should adopt the OOB limits proposed by MSV and GPS Industry Council, which are technically practicable for ancillary terrestrial operations in the L-band MSS service. The FCC

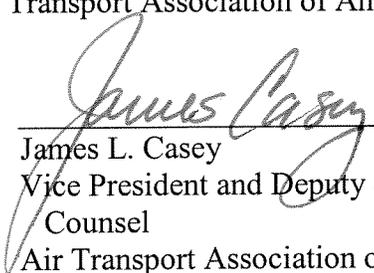
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<sup>2</sup> Big LEO Report & Order, 9 FCC Rcd 5936 (1994).

should be encouraging deployment of the best commercially practicable technology in new systems. FCC should promptly reconsider the OOB limits adopted in regulatory flexibility order and adopt those agreed to by MSV and the GPS Industry Council.

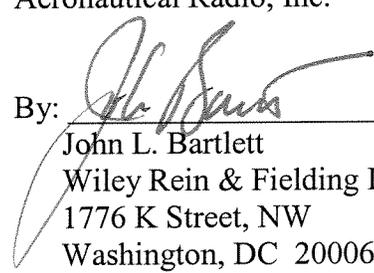
Respectfully submitted,

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