

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

In the Matter of)	
)	
LightSquared Subsidiary LLC)	IB Docket No. 12-340
)	DA12-1863
)	
Petition for Rulemaking to Revise The Commission's Technical Rules)	RM-11683
)	
Modification Application of LightSquared Subsidiary LLC)	IBFS File Nos. SAT-MOD-20120928- 00160, -00161; SES-MOD-20121001- 00872

**COMMENTS OF
AVIATION SPECTRUM RESOURCES, INC.**

Aviation Spectrum Resources, Inc. (ASRI), submits these Comments on the request by LightSquared to modify its Ancillary Terrestrial Component (ATC) authorization associated with its Mobile Satellite Service (MSS) L-Band licenses and the Petition for Rulemaking associated with the request.¹ For the reasons set forth below, the Commission should ensure that the needed additional studies are completed before proceeding with any rulemaking.

ASRI is the communications company of the US civilian air transport industry and is owned by the airlines and other airspace users. As sponsor of the Aeronautical Frequency Committee (AFC), ASRI brings together expertise and opinions from across the aviation sector

¹ Federal Communications Commission Invites Comments on LightSquared Request to Modify its ATC Authorizations, IB Docket No. 12-340, *Public Notice*, 27 FCC Rcd 14290 (2012); Consumer & Governmental Affairs Bureau Reference Information Center Petition for Rulemaking Filed, Report No. 2968, *Public Notice* (Nov. 16, 2012).

to promote the safe and effective operation of commercial aviation radio communications systems in use within the US. The aviation sector is a crucial asset to the United States, directly contributing \$206.4 billion to the economy and supporting up to an estimated 4.9% of US GDP² by enabling fast, efficient and safe air transport. This sustains an estimated 5 million American jobs across the aerospace sector, including a large number of highly skilled professionals vital to maintaining the technological edge of the US economy.

Unimpeded GPS service is increasingly indispensable to safe and efficient airline operations. In addition to its integration into aviation safety systems such as the Terrain Awareness and Warning System (TAWS), the FAA's NextGen program will make interference-free GPS operations even more essential to the aviation industry over the next decade.

Therefore, ASRI is extremely concerned about potential interference to GPS operations from LightSquared's proposed deployment.

To its credit, LightSquared now proposes to relinquish authority to operate ATC in the 10 MHz adjacent to the GPS spectrum. Yet it still urges the Commission to move forward with ATC operations in the 1526 – 1536 MHz band, following a rulemaking. However, the LightSquared conclusion that limiting the use of terrestrial base station transmissions to the lower 10 MHz in the L-Band will allow for compatibility with GPS does not fully address the results of the FCC sponsored Technical Working Group (TWG) study with which both LightSquared and the GPS industry were involved.³ The TWG report states that definitive compatibility between GPS systems and LightSquared's revised deployment cannot be determined without additional study, and only speculates with limited analysis as to potential

² Oxford Economics, *Economic Benefits from Air Transport in the US* 4 (2011).

³ Technical Working Group Report, Final Report, IBFS File No. SAT-MOD-20101118-00239 (filed June 30, 2011).

options using a lower L-band deployment. Furthermore, studies of a lower L-band LightSquared deployment have since been conducted by the FAA and the National Space-Based Positioning, Navigation, and Timing Systems Engineering Forum (NPEF). Both studies concluded that the lower L-band deployment would still result in harmful interference to GPS receivers, even with LightSquared's proposed reduction in base station power.⁴

LightSquared has responded to both reports with its own conclusions that favor its revised L-band deployment.⁵ However, even LightSquared recommends additional work to confirm the different conclusions to the FAA report, which states that significant issues remain to be addressed, particularly for low altitude scenarios. This includes determining an appropriate propagation model for compatibility testing and rules to ensure that the LightSquared network would comply with agreed limits.

Recognizing the increasing use of GPS within aviation, it would be premature to rule on a change to the rules governing 1526-1536 MHz while lacking any conclusive evidence of LightSquared's ability to operate without causing any harmful interference to GPS. The detailed studies already completed have yet to provide any definite results to prove the safe operation of a LightSquared deployment across all aviation environments. Given the potential impact to public safety, ASRI urges the Commission not to proceed with any such rulemaking unless and until the additional studies called for have been conducted. If those studies appear to bear out

⁴ U.S. Department of Transportation, Federal Aviation Administration, "Status Report: Assessment of Compatibility of Planned LightSquared Ancillary Terrestrial Component Transmissions in the 1526-1536 MHz Band with Certified Aviation GPS Receivers" (rel. Jan. 25, 2012) ("FAA Status Report"); National Space-Based Positioning, Navigation, and Timing Systems Engineering Forum, "Follow-on Assessment of LightSquared Ancillary Terrestrial Component Effects on GPS Receivers" (rel. Jan. 18, 2012).

⁵ FAA Status Report, Appendix C; Letter from John P. Janka, Outside Counsel to LightSquared to Marlene H. Dortch, Secretary, Federal Communications Commission, FCC File No. SAT-MOD-20101118-00239, IB Docket No. 11-109 (Apr. 19, 2012).

LightSquared's claims, it would then be appropriate to explore in a rule making the conclusions reached in the studies and appropriate operating rules for LightSquared's terrestrial use of 1526 – 1536 MHz. Such changes, however, should only be considered once peer reviewed studies have laid the basis for concluding that all existing aviation GPS receivers would not be harmfully degraded by any proposed LightSquared deployment. Absent such an approach, the Commission will create a situation in which the inertia of a rulemaking will be thrust upon the GPS community without an adequate record.

In sum, the Commission should encourage the additional work needed to follow-up on the FAA's remaining questions as to how, if at all, LightSquared can make widespread terrestrial use of 1526-1536 MHz without endangering aviation's use of GPS. Only if the peer-reviewed results of such additional studies pass muster should the Commission initiate a rulemaking to examine operating rules for LightSquared terrestrial use of 1526 - 1536 MHz.

Respectfully submitted,

AVIATION SPECTRUM RESOURCES, INC.

By: /s/ Kris Hutchison
Kris Hutchison
President
Aviation Spectrum Resources, Inc.
2551 Riva Road
Annapolis, MD 21401

December 17, 2012