United States
GPS Industry Council

February 16, 2012

FILED ELECTRONICALLY

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *Ex Parte* Communication of the U.S. GPS Industry Council in File No. SAT-MOD-20101118-00239 and IB Docket No. 11-109

Dear Ms. Dortch:

The U.S. GPS Industry Council ("USGIC") herein responds to a January 20, 2012 ex parte communications by LightSquared Subsidiary LLC ("LightSquared") in the above-referenced proceedings ("LightSquared Letter"). The LightSquared Letter seeks to supplement its earlier communications regarding interference studies conducted by Alcatel-Lucent Laboratories and funded by LightSquared. The USGIC here briefly comments on the LightSquared Letter, pointing to the obvious flaws in the analysis and conclusions drawn by LightSquared from this limited testing of some GPS receivers.

As in earlier presentations regarding interference analysis, the LightSquared Letter draws unsupportable conclusions from the information presented. In this instance, the LightSquared Letter concludes:

> As demonstrated by the test results attached to this filing and by previous testing covering other types of GPS devices, LightSquared's planned terrestrial deployment is fully compatible with GPS operation in all device categories.[1]

This conclusion is flatly wrong. Neither this nor any other filing demonstrates compatibility with GPS operation in a number of receiver categories, including aviation, space, high precision, and general location and navigation.

The LightSquared Letter concerns interference to high precision receivers. Nonetheless, LightSquared errs in the same manner as its previous correspondence -- by testing "modified" equipment without assessing whether the modifications maintained operational fitness for use by the installed base in high precision applications. The testing presented in the LightSquared Letter appears to use a similar C/No measurement scheme as employed by the Technical Working Group ("TWG")[2]. The TWG, however, tested fielded production equipment from an array of major manufacturers whose designs had been carefully crafted to solve a broad range of high precision problems of their customers. By using "modified" equipment in its most recent test, and without evaluating fitness for operational use of the

[1] LightSquared Letter, Summary and Assessment, at 6.
[2] *See* Final Report of the Technical Working Group, dated June 30, 2011 at Appendix H.1.6.

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modifications, LightSquared effectively demonstrates little about high precision compatibility with its various transmission proposals.

In an earlier letter to the Commission the USGIC addressed comments by manufacturers whose devices had been tested by Alcatel-Lucent Laboratories at LightSquared's request.[3] These comments, as augmented by USGIC notations, shed light on some particulars of the operational fitness-for-fielded-use issues that high precision manufacturers must consider when faced with altering their filtering. These considerations include multipath correction capability, insertion-loss-related signal attenuation, GLONASS operation, mechanical robustness, and ability to retrofit existing equipment, particularly in receivers having integrated antennas.[4] All of these operational requirements apply equally well to the testing described in the present Lightsquared Letter and their omission from consideration undermines the conclusion in that letter.

The Alcatel-Lucent Laboratories' report attached to LightSquared Letter states that:

> Tests were conducted to determine the DUT's susceptibility to the proposed L-band LTE transmission signals of LightSquared Inc. when tested with antennas with and without an integral band-pass filter circuit.[5]

This statement was also asserted in earlier LightSquared filings. To our knowledge, *every* high precision antenna contains integrated bandpass filtering – typically several stages of bandpass filtering. We are quite certain that none of the production antennas on which Alcatel-Lucent reported lacked integrated bandpass filtering. The USGIC, therefore, corrects for the record the general misperception that uninformed readers might take from Alcatel-Lucent Laboratories' unfortunate choice of words.

Please contact me if you have any questions regarding the foregoing.

Respectfully submitted,

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[3] USGIC Ex Parte Letter in File No. SAT-MOD-20101118-00239 and IB Docket No. 11-109, dated January 12, 2012 at 1.
[4] *Id.* at 3.
[5] Alcatel-Lucent Report attached to LightSquared Letter at 5.