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United States
GPS Industry Council



January 25, 2011

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By Hand Delivery

Honorable Julius Genachowski, Chairman
Honorable Michael J. Copps, Commissioner
Honorable Robert M. McDowell, Commissioner
Honorable Mignon Clyburn, Commissioner
Honorable Meredith Atwell Baker, Commissioner
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

FILED/ACCEPTED

JAN 25 2011

Federal Communications Commission
Office of the Secretary

**Re: LightSquared Subsidiary LLC Application for
Modification of Authority for Ancillary Terrestrial Component,
File No. SAT-MOD-20101118-00239**

Dear Mr. Chairman and Commissioners Copps, McDowell, Clyburn and Baker:

I am writing to you on behalf of the U.S. GPS Industry Council (“the Council”), its members and the hundreds of entities, including most Federal agencies, who operate and use the U.S Global Positioning System for thousands of national security, public safety, commercial and non-commercial applications. I will not reiterate the hundreds of comments and presentations that all of these entities, including the Council, have submitted to the record or presented verbally to each Commissioner’s office and the various responsible Bureaus over the last few weeks, as these speak for themselves. I am writing instead to ensure that you understand fully the irresponsibility of the January 21, 2011 suggestion by LightSquared Subsidiary LLC (“LightSquared”) that its above-referenced satellite-system modification application and request for waiver of Commission rules -- a request for reallocation of spectrum in thinly-veiled disguise -- should be granted subject to the outcome of post-grant studies to determine the extent of interference the proposed operation will cause to the reception of GPS signals.¹

First and foremost, the record of this proceeding is replete with references to the real and unavoidable interference impact the LightSquared proposal for independent, non-gated, high-power mobile broadband transmitters in the 1525-1559 MHz band will

¹ See Letter dated January 21, 2011, from Sanjiv Ahuja, Chairman & CEO, LightSquared, to Secretary, FCC, File No. SAT-MOD-20101118-00239 (“January 21 Letter”).

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have on the entire base of hundreds of millions of installed users of the GPS system. The National Telecommunications and Information Administration (“NTIA”) has made clear that LightSquared’s November 2010 application reflects a fundamental change to the company’s previous operating model that will transform LightSquared’s use of the mobile-satellite service spectrum immediately adjacent to the GPS “L1” frequency band at 1559-1610 MHz from an *ancillary*, gap-filler solution to enhance the coverage and reach of the mobile-satellite service system into an independent, stand-alone terrestrial mobile broadband application that will completely preclude access to the mobile-satellite service and to all GPS signals in urban areas where LightSquared intends to roll out tens of thousands of high-power transmitters. NTIA’s conclusion that the proposal will create substantial interference is supported by the Department of Defense, the Department of Transportation, the Department of Homeland Security, the FAA and other agencies that operate and make use of GPS. These very same concerns have been raised by the Council, including an empirical demonstration of the impact of LightSquared devices on avionics certified by the FAA for critical aeronautical maneuvers, such as precision landing of aircraft in private and commercial civil aviation.

Earlier this month, the Council provided the Commission with a proposal for a succinct testing program, fairly administered by NTIA, that includes the participation of all interested and affected parties. Under the Council’s proposal, a conclusive report is to be delivered to the Commission within 90 days of the testing program’s commencement.² This is a fair and neutral manner to study and consider the science and operating scenarios of LightSquared and GPS users.³ The Council remains committed to this course of action, and believes that it will allow the Commission to answer the fundamental compatibility issue between high-power terrestrial mobile broadband services and low-power satellite services in the same and adjacent frequency bands without imposing any unnecessary or unreasonable delay on LightSquared.

² See Letter dated January 7, 2011, from Raul R. Rodriguez, Counsel for the U.S. GPS Industry Council, to Secretary, FCC, File No. SAT-MOD-20101118-00239, recommending five-prong approach for undertaking analysis of the potential interference from LightSquared terrestrial broadband transmissions to receiver equipment operating with the Global Positioning System (“January 7 Testing Proposal”).

³ Logic and experience dictates that any testing and computation of the results of the interference investigation must be conducted by a neutral third party in a clearly transparent process that lends credibility to the result. LightSquared clearly is not the party to conduct the studies. As it advocated in its January 7 Testing Proposal, the Council believes that NTIA, which is charged as a steward of the spectrum as well and carrying out the President’s telecommunications policy, is the best – probably the only – entity that is truly qualified to undertake the necessary analysis, testing, and reporting of the results within a 90-day window.

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As a consequence of the demonstrated need for testing, the Council strongly opposes LightSquared's proposal in its January 21 Letter that the Commission grant the November 2010 modification application subject to the conditions that the Commission create "a process to address interference concerns regarding GPS," and that the process be completed to the Commission's satisfaction "before LightSquared commences offering commercial service"⁴ This suggestion would require the Commission, in the face of compelling evidence already in the record of this proceeding of inherent incompatibility between high-power terrestrial broadband transmitters and low-power satellite signals, to abdicate its responsibility to make the threshold determination of whether such terrestrial services can be operated in the 1525-1559 MHz band without causing harmful interference to GPS services. The Commission has no business granting any authorization – conditional or otherwise – unless and until this fundamental compatibility question is answered in the affirmative. It is inconceivable that there could be any public or even private interest rationale that would justify a Commission determination that granting LightSquared such conditional authority overrides the interests of the hundreds of millions of direct and indirect users of the GPS system that will be abrogated by LightSquared's commercial exploitation of its spectrum.

In its January 21 Letter, LightSquared also contends that the November 2010 application is but a "minor modification" in the manner in which LightSquared intends "to provide an integrated satellite-terrestrial broadband service,"⁵ and infers that the proposal flows naturally from an authorization issued in March 2010 on an earlier modification application from LightSquared's predecessor, SkyTerra Subsidiary LLC.⁶ LightSquared completely overlooks the fact that the *March 2010 Order* addressed truly ancillary terrestrial use of the mobile-satellite service spectrum; gating criteria still applied and the operating premise was that the dual satellite/terrestrial handsets had to function in a way that the low-powered mobile-satellite service signal was not blocked by the higher-power signal from the terrestrial component.⁷ The November 2010 modification application, with its requests for waivers of the gating criteria, decouple the

⁴ January 21 Letter, at 2.

⁵ *Id.* at 1.

⁶ *Id.* LightSquared is supposedly referring to the International Bureau's March 26, 2010 Order and Authorization in *SkyTerra Subsidiary LLC*, DA 10-534 (Int'l. Bur., released March 26, 2010) ("*March 2010 Order*").

⁷ It was on this basis, and the presumption of required compatibility within the mobile-satellite service system, that the Council and SkyTerra reached accommodations on the additional protections required for adjacent-band GPS receivers. *Id.*, DA 10-534, at ¶ 45.

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terrestrial and satellite components of the LightSquared system in a way that leaves the mobile-satellite service receivers incapable of operating in the presence of the high-power terrestrial broadband signals LightSquared seeks to operate throughout the country's urban areas. Without the built-in safeguard of LightSquared's protection of its own satellite signal, the interference danger to receivers of the low-power, adjacent-band GPS signal trying to operate in the same areas increases exponentially. As NTIA Administrator Strickling explained to the Chairman in his January 12, 2011 letter regarding the LightSquared application, "LightSquared's new business model creates a new and more challenging interference environment"⁸

LightSquared's November 2010 modification application is no mere minor adjustment to the gating rules.⁹ LightSquared's proposal for terrestrial-only operations offered on a wholesale basis is diametrically contrary to the purposes of the gating rules, and thus a grant of the waiver would effectively nullify the rules being waived. No bureau has the delegated authority to change completely or nullify a rule duly adopted by the full Commission. Thus, whatever the *March 2010 Order* accomplished, it was of a totally different character and policy impact than what LightSquared is seeking to accomplish now. The International Bureau is not competent to make this decision within the scope of its delegation of authority, and the Commission needs to think long and hard about how it goes about reversing decades of spectrum allocation and use policy.

It is amply clear to all who follow this proceeding – from fellow mobile-satellite service system operators, to the manufacturers and users of GPS equipment, to the Federal agencies that rely on GPS for defense, transportation, public safety and homeland security applications -- that LightSquared is using the fiction of a minor modification application to fundamentally reallocate the mobile-satellite service spectrum at 1525-1559 MHz to primary terrestrial use, without consideration of the consequences of that reallocation to hundreds of millions of users of the GPS system. The GPS system alone is a \$22+ Billion investment by the Congress in what has resulted in the most critical national, albeit global, utility. Users of the system have invested orders of magnitude greater amounts of dollars in developing applications that serve a plethora of industries and communities. GPS represents tens of thousands of American jobs and the impact GPS has on economic productivity cannot be measured.

⁸ Letter dated January 12, 2011, from L. Strickling, NTIA Administrator, to J. Genachowski, Chairman, FCC, in reference to LightSquared November 2010 Modification Application, at 2 ("NTIA Letter").

⁹ If anything in the *March 2010 Order* suggested or even contemplated the introduction of terrestrial-only transmitters that had no functional nexus to the mobile-satellite component, the instant proceeding would be unnecessary and a moot exercise.

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Any jeopardy to GPS must entail careful, constructive, deliberative and transparent analysis by a party that is best suited to develop the appropriate methodology and test scenarios, analyze the resulting data, and provide an unbiased report that all parties can rely on for its impartiality and seriousness. The Council urges the Commission not to grant the waiver application until NTIA has completed its interference analysis and has reported its results.

Respectfully submitted,



F. Michael Swiek
Executive Director

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