



THE COMMITTEE ON ENERGY AND COMMERCE

September 19, 2012

MAJORITY MEMORANDUM

To: Members, Energy and Commerce Committee

From: Majority Staff of the Subcommittee on Oversight and Investigations

Re: LightSquared/GPS Interference Dispute Investigation

On Friday, September 21, 2012, at 9:30 a.m. in room 2123 of the Rayburn House Office Building, the Subcommittee on Oversight and Investigations will hold a hearing entitled “The LightSquared Network: An Investigation of the FCC’s Role.” This hearing will focus on whether the Federal Communications Commission’s (FCC) handling of LightSquared was consistent with prevailing FCC policies, procedures and precedents. In particular, the hearing will examine the process and decision-making leading up to the FCC’s grant of a conditional waiver to LightSquared on January 26, 2011, which allowed LightSquared and its wholesale customers to offer a 4G LTE wireless broadband service to users equipped with terrestrial-only devices.

I. WITNESSES

Ms. Mindel De La Torre
Chief, International Bureau
Federal Communications Commission

Mr. Julius P. Knapp
Chief, Office of Engineering and Technology
Federal Communications Commission

II. OVERVIEW

The L-band is a band of electromagnetic spectrum that has historically been reserved for satellite-based services. In 2003, in an effort to encourage more efficient use of the band, the FCC adopted rules permitting mobile satellite service (MSS) providers to integrate an ancillary terrestrial component (ATC) into their networks to provide mobile service to areas where their satellite signals would otherwise be degraded or blocked. Those rules required MSS licensees to

maintain an integrated satellite and terrestrial service and prohibited the operation of a terrestrial-only system.

The FCC first issued ATC authorization to LightSquared's predecessor in the L-band in 2004. Over time, LightSquared (and its predecessors) requested several technical modifications to its ATC authority in order to have greater flexibility to pursue its wide range of business plans for interconnected voice and data services. The background section below discusses in detail the evolution of LightSquared's business plans, the FCC's regulatory review of LightSquared's requests, and the implications resulting from the FCC's expansion of terrestrial service in the satellite bands.

III. BACKGROUND

A. The Original L-band License and LightSquared's Predecessor's First Request for ATC Authority (1989 – 2002)

The L-band¹ license currently held by LightSquared was first granted to the company's predecessor in interest, American Mobile Satellite Company (AMSC), in 1989. The original license authorized AMSC to construct, launch, and operate a three-satellite geostationary MSS in 28 megahertz of L-band spectrum. Originally, AMSC was authorized to operate in the "upper" portion of the L-band only, the 1545-1559 and 1646.5-1660.5 MHz bands, subject to international coordination and consistent with United States and international frequency allocations reserving that spectrum for satellite use.² In 1995, AMSC sought and received permission to operate in the "lower" portion of the L-band pursuant to a grant of temporary authority by the FCC.³

On April 24, 2000, AMSC changed its name to Motient Corporation (Motient). Two months later, on June 29, 2000, Motient announced that it had entered into a series of agreements with investors to form a new joint venture subsidiary called Motient Satellite Ventures LLC. According to Motient, "[Motient] Satellite Ventures w[ould] conduct research and development activities to explore the technical, strategic, and market potential of new wireless data communications services making use of Motient's existing satellite network."⁴

On January 16, 2001, Motient announced plans to merge its satellite operations with those of TMI Communications and Company, L.P. (TMI), a wholly owned subsidiary of the Canadian telecommunications company BCE Inc. According to a press release announcing the

¹ L-band refers to the frequency range from one to two gigahertz, a portion of which is allocated for mobile satellite service operations. Specifically, 1525-1610 MHz is domestically and internationally allocated for transmission from satellites to mobile earth stations and 1610-1660.5 MHz for transmission from mobile earth stations to satellites.

² Amendment of Parts 2, 22, and 25 of the Commission's Rules to Allocate Spectrum for and to Establish Other Rules and Policies Pertaining to the Use of Radio Frequencies in a Land Mobile Satellite Service, *Memorandum Opinion Order and Authorization*, 4 FCC Rcd 6041 (1989).

³ *AMSC Subsidiary Corporation*, 10 FCC Rcd 10458 (1995) (authorizing AMSC to operate its existing data mobile terminals in the lower L-band on a temporary basis).

⁴ Motient Corp., Current Report (Form 8-K), at Item 5 (June 29, 2000), *available at* <http://www.sec.gov/Archives/edgar/data/913665/000091366500000014/0000913665-00-000014.txt>.

plans, “the partnership w[ould] bring about a complete merger of the two companies’ mobile satellite operations The newly formed company, called Mobile Satellite Ventures (MSV), w[ould] bring together the technology and the resources required to create the next generation of mobile satellite services in North America.”⁵ The announcement also stated that “[t]he new satellite system w[ould] use a highly innovative and spectrum efficient combination of spot beam satellites and fill-in terrestrial base stations.”⁶

On March 2, 2001, Motient and MSV filed applications with the FCC seeking to (1) assign Motient’s existing licenses and authorizations to MSV and (2) modify those licenses and authorizations to permit MSV to operate using satellites licensed to TMI.⁷ Although the existing licenses had permitted only satellite operations, notably, the applications also included a request by Motient and MSV to integrate terrestrial base stations into their MSS network in order to augment the underlying satellite service. The FCC International Bureau issued a *Public Notice* on March 19, 2001, seeking comment on the applications and explaining that they “include[d] a request to deploy terrestrial base stations in the 1626.5-1660.5/1525-1559 MHz bands, to be used with user terminals in high-traffic areas and where the satellite signal is blocked.”⁸

The FCC received comments from twelve parties in response to the application, seven of which addressed the proposal to integrate terrestrial base stations into Motient’s MSS network.⁹ One party expressed approval for the proposal.¹⁰ Six other parties, including several major wireless service providers, opposed the proposal, principally arguing that: (1) Motient’s proposal should not be granted by waiver, but must involve an official FCC rulemaking;¹¹ (2) permitting Motient to provide terrestrial services without obtaining a license at auction would give Motient an unfair competitive advantage over terrestrial wireless service providers;¹² and (3) the FCC should consider reallocating Motient’s spectrum for terrestrial use and auction the spectrum.¹³

⁵ Press Release, Motient Corp., TMI Communications and Motient Corporation Announce Plans to Form New Mobile Satellite Venture (Jan. 16, 2001), *available at* <http://www.sec.gov/Archives/edgar/data/913665/000091366501000002/0000913665-01-000002.txt>.

⁶ *Id.*

⁷ Motient and MSV originally filed their applications on January 16, 2001. *See* File No. SAT-ASG-20010116-00010 (Jan. 16, 2001). At the request of Commission staff, MSV withdrew this application and refiled an identical application on March 2, 2001. *See* Letter from Bruce Jacobs, Counsel for Motient and MSV, to Magalie Roman Salas, Secretary, FCC, File No. SAT-ASG-20010116-00010 (Mar. 1, 2001).

⁸ International Bureau Sets Deadlines Concerning Motient/TMI Assignment and Transfer of Control Applications, and Motient’s Request for Second Generation Satellite/Terrestrial Base Station System; Deadline Extended for TMI’s Applications to Assign Earth Stations, *Public Notice*, Report No. SAT-00066 (rel. Mar. 19, 2001).

⁹ Four parties’ comments focused on the assignment and modification of Motient’s licenses and the merger of MSV and TMI. According to the FCC, “Deere was the only party that opposed the proposed assignments, contending that grant of the assignment applications would deprive Deere of its only possible alternative to Motient. The three other parties, Ericsson Inc (Ericsson), Inmarsat Venture plc (Inmarsat), and Mobile Satellite Users Association (MSUA) expressed their support for the proposed assignments.” *Order and Authorization*, File No. SAT-ASG-20010302-00017 (Nov. 21, 2001).

¹⁰ Comments of New ICO Global Communications (Holdings) LTD., File No. SAT-ASG-20010302-00017 (April 18, 2001).

¹¹ *See* Opposition of Sprint Corporation, File No. SAT-ASG-20010302-00017, at 4 (April 18, 2001).

¹² *See* Comments of the Cellular Telecommunications and Internet Association, File No. SAT-ASG-20010302-00017, at 3-5 (April 18, 2001).

¹³ *See* Comments of AT&T Wireless Services, Inc., File No. SAT-ASG-20010302-00017, at 15 (April 18, 2001). *See also* Opposition of Cingular Wireless LLC, File No. SAT-ASG-20010302-00017, at 9 (April 18, 2001).

On May 7, 2001, Motient, MSV and TMI filed a response to the public comments.¹⁴ In the filing, Motient, MSV and TMI reiterated that the MSV system would “provide a nationwide satellite-based service by deploying a higher-power satellite that uses spot-beam technology and integrated, ancillary, in-band terrestrial facilities that operate strictly on a non-interference basis to improve coverage in urban areas.”¹⁵ In their response, Motient, MSV and TMI explicitly stated that “MSV’s terrestrial operations w[ould] not cause harmful interference to GPS receivers.”¹⁶ Referencing the broad discretion afforded the FCC, the companies argued that the Commission should process MSV’s application without conducting a formal rulemaking. They also claimed that approval of the proposed system did not require a waiver due to their belief that the system was consistent with their existing authority.

After consideration of the comments filed in the proceeding, the FCC issued a *Notice of Proposed Rulemaking (NPRM)* on August 17, 2001, seeking further comment as to whether it should permit MSS providers to integrate ATC into their satellite networks “for the purpose of augmenting signals in areas where the principal service signal, the satellite signal, is attenuated.”¹⁷ In issuing the August 17, 2001, *NPRM*, the FCC noted that “L-band MSS satellite transmitters operate [within] the lower adjacent band to the Global Positioning System (GPS) and other Radio Navigation Satellite Services [*sic*].”¹⁸ As a result, “[u]nwanted emissions from terrestrial stations in the MSS w[ould] have to be carefully controlled in order to avoid interfering with GPS receivers.”¹⁹ Furthermore, the FCC recognized that any rule changes would need to “sufficiently prevent interference problems and . . . adequately ensure that terrestrial operations remain strictly ancillary.”²⁰

On October 22, 2001, Motient, MSV, and TMI submitted comments on the FCC’s *NPRM*, confirming that they would not operate stand-alone terrestrial services in the L-band. They explicitly stated that they “w[ould] not operate a terrestrial-only system; rather, terrestrial operations w[ould] only supplement the satellite service in urban and indoor environments with terrestrial extensions.”²¹ In addressing the potential for harmful interference to GPS caused by the operation of terrestrial base stations, the companies further stated that “MSV ha[d] every incentive to ensure that its terrestrial base station operations d[id] not interfere with GPS receivers.”²²

On November 21, 2001, while the *NPRM* was pending, the FCC granted Motient, MSV and TMI’s request to assign the licenses and authorizations held by Motient and TMI to MSV.

¹⁴ *Consolidated Opposition to Petitions to Deny and Reply to Comments of Motient, MSV, and TMI*, File No. SAT-ASG-20010302-00017 (filed May 7, 2001).

¹⁵ *Id.* at ii.

¹⁶ *Id.* at 15.

¹⁷ Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-band, and the 1.6/2.4 GHz Band, *Notice of Proposed Rulemaking*, 16 FCC Rcd 15532, ¶ 30 (2001).

¹⁸ *Id.* at ¶ 68 (internal quotations omitted).

¹⁹ *Id.*

²⁰ *Id.* at ¶ 78.

²¹ Comments of Motient Services, Inc., TMI Communications and Company, Limited Partnership, and Mobile Satellite Ventures Subsidiary LLC, IB Docket No. 01-185 and ET Docket No. 95-18, at 23 (Oct. 22, 2001).

²² *Id.* at 27.

In approving the assignment, the FCC found that it would “serve the public interest because it w[ould] enable Motient and TMI, and certain investors, to use their combined resources to develop widespread, competitive, and affordable communications services for the underserved areas of the United States.”²³ The FCC reserved judgment on the companies’ request to operate terrestrial base stations pending the outcome of the *NPRM*.

Eight months later, on July 17, 2002, the U.S. GPS Industry Council (USGIC) and MSV submitted a letter to the FCC indicating that they “ha[d] agreed on specific out-of-band emission (OOBE) limits into the entire GPS band” that satisfied the USGIC’s concerns regarding potential interference caused by MSV’s ATC operations.²⁴ According to the parties, the agreed upon limits were “appropriate considering that MSS services, technical characteristics, operational interference scenarios, and expected density [were] published and understood.”²⁵ The parties also confirmed that “MSV’s proposed terrestrial augmentations [were] also well known.”²⁶

B. FCC Adopts Rules Permitting Mobile Satellite Service Providers to Integrate an Ancillary Terrestrial Component into their Satellite Networks (2003)

On February 10, 2003, after receiving extensive comment from industry stakeholders and affected Federal agencies, the FCC adopted rules permitting licensed MSS providers to integrate a terrestrial component into their satellite networks (*2003 ATC Order*).²⁷ The rules required that operators meet certain “gating criteria,” which were designed to prevent the terrestrial component of the MSS from becoming a stand-alone service. Specifically, the “gating criteria” required MSS operators to: (1) provide “substantial” satellite service; (2) maintain spare satellites; and (3) integrate MSS and ATC services. If a licensee satisfied these criteria, they would be permitted to deploy up to 1,725 terrestrial base stations in the L-band.

At the time, the FCC stated unequivocally that “[w]e do not intend, nor will we permit, the terrestrial component to become a stand-alone service.”²⁸ Further, the FCC stipulated that, under the new “integrated service” rule, “MSS licensees must make an affirmative showing to the Commission that demonstrates that their ATC service offering is truly integrated with their MSS offering.”²⁹ According to the FCC, an MSS licensee could satisfy this requirement by either: (1) certifying that the handsets that would be used to access its ATC network would be dual-mode devices that could also be used to access its MSS network, or (2) submitting other evidence that its ATC service offering would be integrated with its MSS offering.³⁰

²³ *Order and Authorization*, File No. SAT-ASG-20010302-00017, at 1 (Nov. 21, 2001).

²⁴ Letter from Bruce D. Jacobs, Shaw Pittman LLP, Counsel to Mobile Satellite Ventures LP & Raul Rodriguez, Leventhal, Senter & Lerman PLLC, Counsel to The U.S. GPS Industry Council, to Marlene Dortch, Secretary, FCC (July 17, 2002) (internal quotations omitted).

²⁵ *Id.*

²⁶ *Id.*

²⁷ See Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, IB Docket Nos. 01-185, 02-364, *Report and Order and Notice of Proposed Rulemaking*, 18 FCC Rcd. 1962 (2003).

²⁸ *Id.* at ¶ 1.

²⁹ *Id.* at ¶ 87.

³⁰ *Id.* at ¶¶ 87-88.

The *2003 ATC Order* specifically recognized the potential for harmful interference resulting from the deployment of terrestrial base stations in the MSS bands. In the *Order*, the Commission acknowledged that its adoption of technical parameters for ATC operations was “design[ed]” to protect adjacent and in-band operations from interference from ATC.”³¹ While the FCC expected the operational parameters to be sufficient to prevent such interference from occurring, they stated that “in the unlikely event that an adjacent MSS or other operator does receive harmful interference from ATC operations . . . the ATC operator must resolve such interference.”³²

C. MSV’s Request for ATC Authority (2003)

On November 18, 2003, pursuant to the rules promulgated in the *2003 ATC Order*, MSV requested the authority to operate base stations in conjunction with its existing L-band satellite system.³³ To demonstrate that its proposed system satisfied the ATC “integrated service” rule, MSV asserted in its application that the handsets used to access its ATC network would be dual-mode devices capable of receiving both satellite and terrestrial signals. MSV’s application also sought waivers of several FCC technical rules for L-band ATC operation, arguing that the flexibility afforded by such waivers would permit the company to operate more efficiently without causing harmful interference to other MSS systems. The FCC International Bureau issued a *Public Notice* on February 9, 2004, seeking comment on the application.

Inmarsat Ventures Limited,³⁴ the only other MSS provider operating in the L-band at the time, filed comments in opposition to MSV’s application. Among other concerns, Inmarsat contended that MSV was effectively proposing to operate a primarily terrestrial network in contradiction of the FCC’s stated intention that the terrestrial component should be ancillary to MSS operations.³⁵ In addition, the National Telecommunications and Information Administration (NTIA), the Executive Branch agency principally responsible for advising the President on telecommunications policy, expressed concerns regarding the compatibility of ATC base stations with aeronautical and maritime system receivers.³⁶

D. FCC Grants MSV’s Request for ATC Authority and Modifies the MSS/ATC Rules (2004 – 2005)

³¹ *Id.* at ¶ 104.

³² *Id.* This resolution process is reiterated in Section 25.255 of the FCC Rules. It states, in relevant part, “If harmful interference is caused to other services by ancillary MSS ATC operations, either from ATC base stations or mobile terminals, the MSS ATC operator must resolve any such interference.” 47 C.F.R. § 25.255.

³³ Mobile Satellite Ventures Subsidiary LLC, Application for Minor Modification and Amendment, Report No. SAT-MOD-20031118-00333 (Nov. 18, 2003).

³⁴ The International Maritime Satellite Organization (“Inmarsat”), a United Kingdom MSS operator, is an inter-governmental organization created in 1978 to develop a global maritime satellite system to meet commercial maritime and safety communications needs of the United States and foreign countries. Its MSS use is concentrated in the “lower” portion of the L-band.

³⁵ See Mobile Satellite Ventures Subsidiary LLC Application for Minor Modification of Space Station License for AMCS-1, File Nos. SAT-MOD-20031118-00333, SAT-AMD-20031118-00332, SES-MOD-20031118-01879, *Order and Authorization*, 19 FCC Rcd. 22, 144, at ¶ 9 (Nov. 8, 2004).

³⁶ Letter from Frederick R. Wentland, Associate Administrator, NTIA Office of Spectrum Mgmt., to Edmond J. Thomas, Chief, FCC Office of Engineering & Technology (Apr. 21, 2004).

In an *Order and Authorization* dated November 8, 2004, the FCC International Bureau authorized MSV to offer an integrated MSS/ATC service to users equipped with dual-mode handsets.³⁷ In making its determination, the FCC concluded that MSV's proposal was consistent with both the Commission's "integrated service" rule and its policy that MSS-ATC licensees continue to provide "substantial" satellite service.³⁸ In accordance with the technical parameters outlined in the *2003 ATC Order*, MSV was authorized to deploy up to 1,725 terrestrial base stations in its licensed L-band frequencies. The ATC authorization granted by the November 2004 *Order*, however, remained conditioned on MSV's ability to meet the "integrated service" safe harbor by actually offering dual-mode handsets.

Later, on February 25, 2005, the FCC modified the ATC rules in response to eight petitions for reconsideration of the *2003 ATC Order (2005 ATC Order)*.³⁹ Specifically, the *2005 ATC Order* removed the *2003 Order*'s limitation on the number of terrestrial base stations that could be deployed and allowed for increases in ATC base station power "because it ha[d] been demonstrated that these increases w[ould] not cause harmful interference."⁴⁰ The FCC further stated that the revised rules were consistent with the recommendations of the USGIC and affected government agencies. Because MSV had satisfied the ATC gating criteria and agreed to comply with the OOB limits requested by the USGIC, the FCC granted its request to deploy a greater number of terrestrial base stations beyond the 1,725 limit established in the *2003 ATC Order*.

In removing the limitation on terrestrial base stations, the FCC reiterated its "intention not to allow ATC to become a stand-alone system" and clarified that it would "not permit MSS/ATC operators to offer ATC-only subscriptions, because ATC systems would then be terrestrial mobile systems separate from their MSS systems."⁴¹ Rather, the change in rules was meant to "allow MSS/ATC licensees flexibility to design their ATC in accordance with technical and market demands."⁴²

The *2005 ATC Order* also included an extensive discussion of potential overload interference from MSV's terrestrial base stations to Inmarsat's mobile satellite terminals.⁴³ The

³⁷ See Mobile Satellite Ventures Subsidiary LLC Application for Minor Modification of Space Station License for AMCS-1, File Nos. SAT-MOD-20031118-00333, SAT-AMD-20031118-00332, SES-MOD-20031118-01879, *Order and Authorization*, 19 FCC Rcd. 22, 144 (Nov. 8, 2004).

³⁸ *Id.* at ¶¶ 21-22.

³⁹ Flexibility for Delivery of Communications by Mobile Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands, *Memorandum Opinion and Order and Second Order on Reconsideration*, 20 FCC Rcd 4616 (2005).

⁴⁰ *Id.* at ¶ 1.

⁴¹ *Id.* at ¶ 33.

⁴² *Id.* at ¶ 50.

⁴³ There are two types of adjacent channel interference that can occur. The first is caused by out-of-band emissions (OOBE), which fall directly within the pass band of an adjacent-band receiver. Such emissions cannot be filtered out and can only be mitigated by (1) providing sufficient physical separation between the transmitter and receiver or (2) suppressing OOBE at the transmitter. The second type of interference is caused by "receiver overload." Receiver overload interference occurs when a strong signal from an adjacent band transmission falls just outside the pass band of a receiver, where the front end filter of the receiver can only provide limited attenuation of the unwanted signal. There are three ways to minimize receiver overload interference: (1) improve the filtering of the adjacent band receiver; (2) limit the power of the transmitter; or (3) provide physical separation between the transmitter and

issue of potential overload interference from MSV's base stations to GPS receivers does not appear to have been raised or discussed. The FCC did, however, state that it would protect GPS from harmful interference by consulting with affected government users and by adopting whatever rules might be necessary in the future. The Commission stated that these "discussions may lead to future rulemaking proposals in order to ensure that all FCC services provide adequate protection to GPS" ⁴⁴

E. Transfer of MSV's Licenses and Authorizations to SkyTerra Communications, Inc. and the Introduction of Harbinger Capital Partners (2006 – 2009)

Subsequently, on September 15, 2006, the FCC International Bureau, Wireless Competition Bureau, and Office of Engineering and Technology released a *Memorandum Opinion and Order and Declaratory Ruling (2006 ATC Order)* consenting to the transfer of control of the licenses and authorizations held by MSV from Motient to SkyTerra Communications, Inc. (SkyTerra). ⁴⁵ The *2006 Order* also included a declaratory ruling that approved specific amounts of indirect foreign equity and voting interests that would be held in MSV after control was transferred to SkyTerra. In the *Order*, the FCC noted that the application stated that approval of the transfer of control would "facilitate MSV's development of its planned integrated satellite and terrestrial network." ⁴⁶ The transfer of control of MSV to SkyTerra was completed on September 26, 2006.

On March 14, 2007, MSV and SkyTerra filed a petition with the FCC for a declaratory ruling seeking permanent authority to increase indirect foreign ownership of MSV in excess of the 25 percent benchmark set forth in section 310(b)(4) of the Communication Act of 1934. ⁴⁷ On April 27, 2007, the FCC International Bureau placed the MSV/SkyTerra petition on *Public Notice* as acceptable for filing. ⁴⁸ No opposition to or comments on the petition were received.

Harbinger Capital Partners (Harbinger), a New York-based hedge fund run by investment manager Phil Falcone, subsequently filed its own petition under section 310(b)(4) on January 11, 2008. Harbinger sought an expedited declaratory ruling that would allow it to increase its ownership in MSV up to a non-controlling 49.99 percent equity and 49.99 percent voting interest on an interim basis. ⁴⁹ On March 7, 2008, the FCC issued an *Order and Declaratory Ruling*

receiver. See Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band, *Notice of Proposed Rulemaking*, WT Docket No. 07-195, at ¶ 52 (rel. Sept. 19, 2007).

⁴⁴ *Supra* note 39, at ¶ 70.

⁴⁵ Motient Corporation and Subsidiaries, Transferors, and SkyTerra Communications, Inc., Transferee, Application for Authority to Transfer Control of Mobile Satellite Ventures Subsidiary LLC, *Memorandum Opinion and Order and Declaratory Ruling*, 21 FCC Rcd 10198 (2006). At the time of the transfer, SkyTerra's subsidiary, MSV Investors Subsidiary LLP, owned approximately 23 percent of the limited partnership interests in MSV.

⁴⁶ *Id.* at ¶ 22.

⁴⁷ See Mobile Satellite Ventures Subsidiary LLC and SkyTerra Communications, Inc., *Petition for Declaratory Ruling under Section 310 of the Communications Act*, as amended, File No. ISP-DPR-20070314-00004 (filed Mar. 14, 2007).

⁴⁸ *Public Notice*, Report No. TEL-01141NS (rel. Apr. 27, 2007).

⁴⁹ Harbinger Capital Partners Master Fund I, Ltd. And Harbinger Capital Partners Special Situations Fund, L.P., *Amended Petition for Expedited Action for Declaratory Ruling under Section 314(b) of the Communications Act*, as amended, File No. ISP-PDR-20080111-00001 (2008). The Petition for Interim Authority was originally filed on

granting (1) the MSV/SkyTerra petition for permanent authority and (2) the Harbinger petition for interim authority. In granting the petitions, the Commission stated that “we find that the public interest would not be served by prohibiting indirect foreign ownership of MSV in excess of the 25 percent benchmark set forth in section 310(b)(4) of the Act.”⁵⁰

On August 22, 2008, Harbinger filed interrelated applications with the FCC seeking authority for: (1) the transfer of control of licenses and authorizations from SkyTerra to Harbinger; (2) the transfer of control of Inmarsat’s U.S. holdings to Harbinger; and (3) a declaratory ruling that it would be in the public interest within the meaning of section 310(b)(4) of the Communications Act for Harbinger and any commonly controlled funds to own, directly or indirectly, up to 100 percent of the issued and outstanding stock of SkyTerra. In terms of spectrum allocation, the combination of SkyTerra and Inmarsat would have given Harbinger full control of the L-band, with 68 MHz of spectrum.

During the summer and fall of 2008, numerous meetings occurred between representatives of Harbinger, SkyTerra and the FCC to discuss the transfer of control applications. On December 8, 2008, MSV changed its corporate name to SkyTerra Subsidiary, LLC.

On March 4, 2009, Harbinger filed to bifurcate the interrelated transfer of control applications so that the FCC could act first on the SkyTerra/Harbinger transaction. Three weeks later, on March 27, 2009, Harbinger and SkyTerra filed an application requesting FCC approval for the transfer of control of SkyTerra to Harbinger.⁵¹ In the application, the parties asserted that the transfer “would enhance spectrum efficiency in the L-band, while solidifying the foundation for the development of an integrated satellite-terrestrial communications network that would provide critical public safety services, essentially immune to local disasters, and coverage for consumer handsets both to the most rural and underserved areas of this country and Canada and to urban centers.”⁵² They also noted that the Commission had “encouraged further private negotiations among the operators in an effort to produce more ‘efficient interference levels than regulations based on largely hypothetical cases.’”⁵³ The FCC International Bureau placed Harbinger’s application on *Public Notice* on May 1, 2009, noting that SkyTerra was “developing an integrated satellite-terrestrial communications network.”⁵⁴

January 11, 2008 and was amended twice to update and correct information contained in the original petition. The final amendment, filed on January 17, 2008, was jointly signed by Harbinger, SkyTerra and MSV. On January 29, 2008, Harbinger filed a petition for a declaratory ruling requesting permanent authority to increase its ownership interests in SkyTerra.

⁵⁰ Mobile Satellite Ventures Subsidiary LLC and SkyTerra Communications, Inc., *Petition for Declaratory Ruling under Section 310 of the Communications Act*, as amended, *Order and Declaratory Ruling*, File No. ISP-PDR-20070314-00004 (Mar. 7, 2008).

⁵¹ SkyTerra Communications, Inc., Transferor, Harbinger Capital Partners Funds, Transferee, Applications for Authority to Transfer Control of SkyTerra Subsidiary LLC, IB Docket No. 08-184 (filed Mar. 27, 2009), as amended by Letter from Joseph A. Godles, Counsel for Harbinger Capital Partners Funds, to Marlene H. Dortch, Secretary, FCC (Mar. 31, 2009).

⁵² *Id.* at 2-3.

⁵³ *Id.* at 26.

⁵⁴ SkyTerra Communications, Inc., Transferor, and Harbinger Capital Partners Funds, Transferee, Seek FCC Consent to Transfer Control of SkyTerra Subsidiary, LLC, *Public Notice*, 24 FCC Rcd 5226 (May 9, 2009).

F. Transfer of SkyTerra’s Licenses and Authorizations to Harbinger Capital Partners and SkyTerra’s Request to Modify Its ATC Authorization (April 2009 – February 2010)

While its application to transfer control of its licenses to Harbinger was pending, on April 29, 2009, SkyTerra filed an application to modify its ATC authorization. In its application, SkyTerra requested waivers of technical rules that would enable it to deploy additional terrestrial, low-power fill-in services.⁵⁵ Specifically, SkyTerra sought “to deploy an integrated terrestrial component that [was] more robust and ha[d] greater capacity than [was] permitted by the existing interference-related technical rules.”⁵⁶ In particular, SkyTerra requested FCC authorization to deploy limited, low-power microcell and femtocell base stations.⁵⁷ The application was placed on *Public Notice* on June 5, 2009.⁵⁸

On July 10, 2009, the USGIC submitted comments proposing a modification of the agreed upon OOB interference limits to account for the additional terrestrial fill-in services (microcells and femtocells) proposed by SkyTerra in its modification application.⁵⁹ The USGIC summed up SkyTerra’s proposal when it stated: “SkyTerra now proposes to deploy microcell and femtocell technology that had not been developed in 2002, and to deploy this technology ubiquitously, indoors and outdoors, and in the hundreds of thousands of units operating in the band adjacent to the GPS L-1 signal.”⁶⁰ Two months later, in a joint letter dated August 17, 2009, SkyTerra and the USGIC informed the FCC that OOB interference issues arising from the proposed increase in the number of terrestrial base stations had been resolved.⁶¹ Again, it appears that the separate issue of GPS receiver overload was neither raised nor addressed as part of the negotiations between SkyTerra and the USGIC.

Throughout the summer and fall of 2009, the FCC continued to evaluate both the proposed transfer of SkyTerra’s L-band spectrum licenses to Harbinger and SkyTerra’s request for modification of its ATC authority. Multiple meetings and discussions between the FCC, SkyTerra and Harbinger took place during this time period.

On December 11, 2009, in response to a letter from the FCC International Bureau seeking additional information about Harbinger’s plans to provide ATC,⁶² Harbinger indicated that it “plan[ned] to use ATC as core spectrum in developing an integrated satellite/terrestrial mobile

⁵⁵ Mobile Satellite Ventures Subsidiary LLC Application for Minor Modification of Space Station License (AMSC-1) Modification and Request for Expedited Consideration, IBFS File No. SAT-MOD-20090429-00047 (Apr. 29, 2009).

⁵⁶ *Id.* at 2.

⁵⁷ Femtocells are small, low-powered cellular base stations, typically designed for use in a home or business. A microcell is typically a larger low-powered cellular base station that covers a larger area.

⁵⁸ Policy Branch Information, Satellite Space Applications Accepted for Filing, *Public Notice*, Report No. SAT-00609 (June 5, 2009).

⁵⁹ Comments of the U.S. GPS Industry Council, IBFS File No. SAT-MOD-20090429-00047 (July 10, 2009).

⁶⁰ *Id.* at 2-3.

⁶¹ Letter from Bruce D. Jacobs, Shaw Pittman LLP, Counsel to SkyTerra Subsidiary, LLC & Raul Rodriguez, Leventhal, Senter & Lerman PLLC, Counsel to The U.S. GPS Industry Council, to Marlene Dortch, Secretary, FCC (August 17, 2009).

⁶² See Letter from Roderick Porter, Deputy Chief, International Bureau, FCC, to Henry Goldberg, Golberg, Godles, Wiener & Wright, Counsel to Harbinger Capital Partners Funds (Nov. 18, 2009).

broadband network that w[ould] provide both satellite and terrestrial communications . . . to provide traditional mobile satellite services to end users such as public safety and emergency services agencies, and to spur availability and demand for wireless services in rural areas underserved by current terrestrial wireless providers.”⁶³ In a subsequent February 26, 2010, letter to the FCC, Harbinger reiterated that its “network [would] employ MSS spectrum, Ancillary Terrestrial Component . . . spectrum, and terrestrial-only spectrum, as well as spectrum hosting and pooling agreements, all supplemented as appropriate with roaming agreements.”⁶⁴ Harbinger’s description of its business model made no reference to plans to provide stand-alone terrestrial services in the L-band.

G. Introduction of the National Broadband Plan and FCC Approval of the SkyTerra/Harbinger Requests (March 2010)

On March 16, 2010, the FCC released the *National Broadband Plan* which recommended that the FCC “take action to accelerate terrestrial deployments in the MSS bands,” including the L-band and 2 GHz band.⁶⁵ With regard to MSS and ATC service, the plan stated that the purpose of the previously granted ATC authorizations was to allow “MSS providers to deploy terrestrial networks to enhance coverage in areas where the satellite signal [was] attenuated or unavailable.”⁶⁶ It further clarified that FCC rules required MSS licensees to “integrate MSS and ATC services.”⁶⁷

On March 26, 2010, after receiving extensive comment from interested stakeholders, the FCC issued two orders addressing the 2009 Harbinger and SkyTerra requests. In a *Memorandum Opinion and Order and Declaratory Ruling*, the FCC granted the transfer of SkyTerra’s licenses and authorizations to Harbinger conditioned on, among other things, an aggressive build-out schedule requiring SkyTerra to construct a terrestrial network to provide coverage to at least 100 million people in the United States by December 31, 2012. In addition, the FCC placed a restriction on SkyTerra’s ability to provide service to the nation’s two largest wireless providers.⁶⁸ In a second *Order and Authorization*, the FCC modified the technical rules governing SkyTerra’s ATC authorization, including adopting the OOB limits agreed upon by the USGIC.⁶⁹ Neither order addressed the potential for GPS receiver overload from SkyTerra’s ATC operations.

⁶³ Letter from Henry Goldberg & Joseph A. Godles, Golberg, Godles, Wiener & Wright, Counsel to Harbinger Capital Partners Funds, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 08-184, at 14 (filed Dec. 11, 2009).

⁶⁴ Letter from Henry Goldberg & Joseph A. Godles, Golberg, Godles, Wiener & Wright, Counsel to Harbinger Capital Partners Funds, to Marlene H. Dortch, Secretary, FCC, IB Docket No. 08-184, at 1 (filed Feb. 26, 2010).

⁶⁵ FCC, *Connecting America: The National Broadband Plan*, at 88 (Mar. 16, 2010), available at <http://www.broadband.gov/plan/>.

⁶⁶ *Id.* at 87.

⁶⁷ *Id.*

⁶⁸ See SkyTerra Communications, Inc., Transferor, and Harbinger Capital Partners Funds, Transferee, Applications for Consent to Transfer of Control of SkyTerra Subsidiary, LLC, IB Docket No. 08-184, *Memorandum Opinion and Order and Declaratory Ruling*, 25 FCC Rcd (2010).

⁶⁹ See SkyTerra Subsidiary LLC Application for Modification Authority for an Ancillary Terrestrial Component, *Order and Authorization*, 25 FCC Rcd 3043 (2010).

H. FCC Proposes Changes to its MSS/ATC Rules and the Introduction of GPS Overload Interference Concerns (July 2010 – November 2010)

Pursuant to the *National Broadband Plan*, on July 15, 2010, the FCC released a *Notice of Proposed Rulemaking and Notice of Inquiry (NPRM and NOI)* that proposed various rule changes to the 2 GHz MSS band and considered ways to promote terrestrial use of all MSS bands.⁷⁰ In the *NPRM*, the FCC proposed to apply its secondary market policies applicable to terrestrial services to transactions involving the use of the MSS bands for terrestrial services. While noting the importance of maintaining satellite service in the MSS bands, the FCC also inquired as to whether interested parties were seeking “to offer satellite and terrestrial services independent of each other or as part of combined, integrated network offerings.”⁷¹ Five days after the FCC’s issuance of the *NPRM*, on July 20, 2010, SkyTerra changed its corporate name to LightSquared Subsidiary LLC (LightSquared).

On September 15, 2010, LightSquared filed comments on the July 2010 *NPRM* and *NOI*. In those comments, LightSquared characterized its terrestrial operations as ancillary and acknowledged its responsibility to protect other services. Although LightSquared acknowledged that it may have “to accept interference from other services” in order to protect other L-band operators, it also stated that the FCC could “make it substantially easier to implement ATC domestically in the future by expanding the definition of MSS in its rules to include ATC and thus render[] ATC a primary service.”⁷²

The same day, the USGIC filed comments which informed the FCC, for apparently the first time, that the significant expansion of terrestrial services in the L-band would create overload interference concerns for GPS.⁷³ In its comments, the USGIC stated that its previous negotiations with LightSquared revolved around OOB limits, not the overload interference that could arise from the dense deployment of newly proposed mobile terrestrial broadband services.⁷⁴ It further stated that “the OOB limits set out in the individual MSS licenses were premised on ATC operation alone . . . With the introduction of broader mobile terrestrial broadband use now being proposed in the *NPRM/NOI*, the physical characteristics of the necessary emissions from the dense deployment of this new terrestrial-only service w[ould] cause harmful interference to the . . . receiver.”⁷⁵ While it recognized the potential for overload interference, the USGIC also stated that it “believe[d] that solutions [were] available to mitigate the otherwise unavoidable harmful effects . . . and look[ed] forward to working collaboratively with interested parties to explore these issues and potential solutions.”⁷⁶

⁷⁰ See Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1626.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz, *Notice of Proposed Rulemaking and Notice of Inquiry*, 25 FCC Rcd 9481 (2010).

⁷¹ *Id.* at ¶¶ 31-34.

⁷² Comments of LightSquared Subsidiary LLC, ET Docket No. 10-142, at 12 (filed Sept. 15, 2010).

⁷³ See Comments of the U.S. GPS Industry Council in Response to Notice of Proposed Rulemaking and Notice of Inquiry, ET Docket No. 10-142 (filed Sept. 15, 2010).

⁷⁴ *Id.* at ii-iii.

⁷⁵ *Id.* at 8.

⁷⁶ *Id.* at iii.

I. LightSquared Submits an Updated Business Plan Raising GPS Concerns About the Potential for Overload Interference (November 2010 – January 2011)

On November 18, 2010, at the recommendation of the FCC, LightSquared submitted an “updated” business plan to the FCC, stating its intention to build a high-powered “nationwide network of 40,000 terrestrial base stations” and that “the capacity of its fully deployed terrestrial network across all base stations w[ould] be tens of thousands of times the capacity of either of [its] satellites.”⁷⁷ To accommodate its business plan of selling data network capacity at wholesale to other terrestrial service providers, LightSquared requested permission from the FCC to allow those service providers to offer terrestrial-only handsets. This request removed the LightSquared business plan from the safe harbor of the ATC “integrated services” rule. While LightSquared acknowledged that it and its predecessors has originally “planned to use dual-mode handsets exclusively[,]” the company argued that its new business plan still satisfied the “integrated services” rule because the rate card it would present to its wholesale customers would list only a combined satellite/terrestrial price.⁷⁸ LightSquared posited that, if the FCC determined that any element of LightSquared’s integrated services showing would require a waiver, “there [was] ample basis for granting one” under the Commission’s waiver standards.⁷⁹

The following day, the FCC International Bureau placed LightSquared’s request on *Public Notice* with an abbreviated period for initial comment.⁸⁰ After LightSquared’s request became public, the GPS industry, GPS users and affected Federal agencies objected to LightSquared’s planned deployment based on the potential for GPS overload interference. In comments filed with the FCC on December 2, 2010, the USGIC explained that “the end result of LightSquared’s updated business model . . . [was] that it propose[d] to provide a primary terrestrial wireless service with ancillary MSS, the exact opposite of the original premise of the service embodied in the current rules and its L-band ATC license.”⁸¹ The USGIC also expressed its concerns regarding overload interference to GPS devices to the NTIA.⁸²

On January 12, 2011, NTIA submitted a letter to FCC Chairman Julius Genachowski expressing its concerns with overload interference to GPS and cautioning that LightSquared’s proposal “raise[d] significant interference concerns that warrant full evaluation”⁸³ NTIA noted that “it recognized in 2002 that facilitating the introduction of ATC services in spectrum

⁷⁷ See Letter from Jeffrey J. Carlisle, Executive Vice President for Regulatory Affairs & Public Policy, LightSquared, to Marlene H. Dortch, Secretary, FCC, SAT-MOD-20101118-00239, at 6-7 (filed Nov. 18, 2010).

⁷⁸ *Id.* at 1, 6-7.

⁷⁹ *Id.* at Narrative at 1.

⁸⁰ Satellite Space Applications Accepted for Filing, *Public Notice*, Report No. SAT-00738 (rel. Nov. 19, 2010). The original *Public Notice* provided for a 10-day period for initial comments. In response to a request for extension from CTIA, the International Bureau extended the comment deadline to December 2, 2010, with replies due December 9, 2010. See LightSquared Subsidiary LLC Request for Modification of its Authority for an Ancillary Terrestrial Component, SAT-MOD-20101118-00239, *Order* (rel. Nov. 26, 2010).

⁸¹ Comments of the U.S. GPS Industry Council, IBFS File No. SAT-MOD-20101118-00239, at 3 (filed Dec. 2, 2010).

⁸² Letter from Charles L. Trimble, Chairman, USGIC, to Karl Nebbia, Associate Administrator, Office of Spectrum Mgmt., NTIA, IBFS File No. SAT-MOD-20101118-00239 (filed Dec. 13, 2010).

⁸³ Letter from Lawrence E. Strickling, Assistant Sec’y for Comm’n and Info., U.S. Dep’t of Commerce, to Julius Genachowski, Chairman, FCC, IBFS File No. SAT-MOD-20101118-00239, at 1 (filed Jan. 12, 2011).

used for MSS could lead to an attendant increase in interference to GPS receivers”⁸⁴ NTIA further explained, however, that due to “the expected limited deployment of ATC base stations at the time under the FCC’s order granting ATC authority, NTIA believed that the FCC could address the potential interference to GPS receivers by establishing limits on emissions in the GPS frequency bands.”⁸⁵

J. FCC Grants LightSquared a Conditional Waiver of the ATC “Integrated Services” Rule and Establishment of the Technical Working Group (January 2011 - Present)

On January 26, 2011, the FCC International Bureau issued an *Order and Authorization (Conditional Waiver Order)* modifying LightSquared’s ATC authorization.⁸⁶ While the FCC denied LightSquared’s request for a determination that its updated business plan was consistent with prevailing MSS/ATC rules, the agency granted LightSquared a conditional waiver of the “integrated services” rule, thus permitting the company’s wholesale customers to offer terrestrial-only mobile handsets to their retail users.

According to the FCC, in granting the waiver, it considered several factors including: (1) “LightSquared’s provision of substantial satellite service in the L-Band”; (2) “its ongoing efforts to coordinate with other L-Band operators and make substantial investments to rationalize operations in the L-Band”; (3) “the steps it ha[d] taken to promote an MSS/ATC marketplace that include[d] dual-mode satellite/terrestrial devices”; and (4) “its deployment of a 4G satellite/terrestrial network in the L-Band pursuant to unique and substantial terrestrial buildout requirements.”⁸⁷ The *Waiver Order* imposed certain conditions to ensure that LightSquared would continue to provide a commercially competitive satellite service and develop and make available dual-mode devices.⁸⁸

The *Order and Authorization* was also specifically conditioned on the establishment of a Technical Working Group (TWG) that showed that LightSquared’s deployment of terrestrial service in the L-band would not cause widespread, harmful interference to GPS devices. In the *Order*, the FCC described that “Commission staff w[ould] work with NTIA, LightSquared, and the GPS community, including appropriate Federal agencies, to establish a working group to fully study the potential for overload interference to GPS devices and to identify any measures necessary to prevent harmful interference to GPS.”⁸⁹ Furthermore, the FCC stated that the TWG process “must be completed to the Commission’s satisfaction before LightSquared commence[d] offering commercial services pursuant to th[e] waiver on its L-band frequencies.”⁹⁰

⁸⁴ *Id.* at 2.

⁸⁵ *Id.*

⁸⁶ See LightSquared Subsidiary LLC Request for Modification of its Authority for an Ancillary Terrestrial Component, *Order and Authorization*, 26 FCC Rcd 566 (2011).

⁸⁷ *Id.* at ¶ 1.

⁸⁸ See *id.* at ¶ 36.

⁸⁹ *Id.* at ¶ 41.

⁹⁰ *Id.*

The FCC set a date of February 25, 2011, for LightSquared to submit an initial report and required the TWG to submit progress reports each month. According to the FCC, “[t]he process w[ould] be complete[d] once the Commission, after consultation with NTIA, conclude[d] that the harmful interference concerns ha[d] been resolved”⁹¹

At the direction of the Executive Steering Group (ESG) of the interagency National Executive Committee for Space-Based Positioning, Navigation and Timing (PNT ExCom), the National Space-Based PNT Systems Engineering Forum (NPEF) was tasked with coordinating the TWG’s “work plan, test planning, and field test activities with the FCC, LightSquared, NTIA and the [PNT ExCom] departments and agencies[.]”⁹² The TWG, which was co-chaired by LightSquared and the USGIC, conducted the required testing throughout the spring and summer of 2011.⁹³

On June 14, 2011, after conducting an independent assessment of the effects of LightSquared’s planned deployment on GPS receivers, the ESG sent a letter to NTIA Administrator Lawrence Strickling stating that “[b]ased on the NPEF’s testing and analysis, the [ESG] recommend[ed] that the [FCC] rule that LightSquared [could not] commence commercial services per its planned deployment for terrestrial operations . . . due to harmful interference to GPS operations.”⁹⁴ The ESG letter also stated that the participating agencies of the PNT ExCom were “committed to coordinate with the NTIA and the FCC to test and evaluate the feasibility of alternative signal configurations, and to discuss how the recent tests . . . might inform current FCC ATC MSS L-band authorizations.”⁹⁵

On June 30, 2011, pursuant to the terms of the *Conditional Waiver Order*, LightSquared submitted the Final Report of the TWG to the FCC.⁹⁶ With the report, LightSquared also submitted recommendations to address the problems identified by the TWG.⁹⁷ Specifically, LightSquared agreed to: (1) operate at lower power than permitted by its existing FCC

⁹¹ *Id.* at ¶ 43.

⁹² See National Space-Based Positioning, Navigation and Timing Systems Engineering Forum, *Task Statement: Assessment of LightSquared Terrestrial Broadband System Effects on GPS Receivers and GPS-dependent Applications* (Feb. 9, 2011), available at <http://www.gps.gov/spectrum/lightsquared/docs/2011-02-NPEF-lightsquared-task.pdf>.

⁹³ The Technical Working Group submitted progress reports to the FCC on February 25, 2011, March 15, 2011, April 15, 2011 and May 16, 2011.

⁹⁴ Letter from Teri M. Takai, ESG Co-Chair, U.S. Dep’t of Defense & Joel M. Szabat, ESG Co-Chair, U.S. Dep’t of Transp., to Lawrence E. Strickling, Assistant Sec’y for Comm’n and Info., U.S. Dep’t of Commerce (June 14, 2011).

⁹⁵ *Id.*

⁹⁶ Technical Working Group Report, Final Report, IBFS File No. SAT-MOD-20101118-00239 (filed June 30, 2011). Pursuant to the *Conditional Waiver Order*, LightSquared was required to submit the final report no later than June 15, 2011. On June 15, 2011, the FCC International Bureau granted LightSquared’s request for an extension of time to file the Final Report through July 1, 2011.

⁹⁷ See Letter from Henry Goldberg, Counsel for LightSquared Subsidiary LLC, Goldberg, Godles, Wiener & Wright, to Marlene H. Dortch, Secretary, FCC (June 30, 2011). On September 6, 2011, representatives of LightSquared met with the FCC to propose further modifications to LightSquared’s ATC authority, including power-on-the-ground limitations. See Letter from Jeffrey J. Carlisle, Executive Vice President for Regulatory Affairs & Public Policy, LightSquared, to Marlene H. Dortch, Secretary, FCC (Sept. 7, 2011). See also LightSquared Subsidiary LLC, *Operational and Design Solutions for GPS Devices*, Presentation to FCC (Sept. 6, 2011).

authorizations; (2) accept a “standstill” in the terrestrial use of its upper 10 MHz frequencies immediately adjacent to the GPS band; (3) commence terrestrial commercial operations only on the lower 10 MHz portion of its spectrum; and (4) coordinate and share the cost of finding a solution for at-risk GPS devices.⁹⁸

Later that day, the FCC issued a *Public Notice* requesting comment on the report and recommendations.⁹⁹ According to the *Public Notice*, the TWG process “identified significant technical issues related to potential LightSquared operations in the upper portion of the L-Band . . . [including] potentially significant interference between LightSquared operations in the upper portion of the band and various GPS receivers.”¹⁰⁰ In addition, according to the FCC, the testing “also identified some interference issues in the lower 10 MHz portion of the band.”¹⁰¹

On July 6, 2011, NTIA Administrator Strickling wrote a letter transmitting the report and recommendations of the NPEF to FCC Chairman Genachowski. In it, Strickling stated that the “results of the[] measurements clearly demonstrate[d] that implementing the [LightSquared] planned deployment for terrestrial operations pose[d] a significant potential for harmful interference to [GPS] services. Thus, the concerns stated in [his] letter to [Chairman Genachowski] dated January 12, 2011, remain[ed] unresolved.”¹⁰² Administrator Strickling also noted, however, that NPEF’s report and recommendations did not consider the modification plans submitted by LightSquared with the final TWG report. Because NPEF’s “tests were limited in scope and did not consider or test other configurations of the LightSquared system[,]” Administrator Strickling voiced his support for additional testing to determine the impact of LightSquared’s modification proposals.¹⁰³ He further recommended that “the FCC continue to withhold authorization for LightSquared to commence commercial operations until all the test data [could] be analyzed and all valid concerns [had] been resolved.”¹⁰⁴

One month later, on September 9, 2011, NTIA Administrator Strickling submitted a letter to the co-chairs of the ESG charging the agency with validating the testing done by the TWG.¹⁰⁵ Specifically, Strickling requested that the ESG “work with LightSquared to develop as expeditiously as possible a joint testing plan to validate data on the performance of cellular and personal/general navigation” GPS receivers in light of LightSquared’s modified proposal.¹⁰⁶

In reaction to the more than 3,000 comments received in response the *Conditional Waiver Order* and based on the recommendations of the NTIA, the FCC released another *Public Notice*

⁹⁸ See Comment Deadlines Established Regarding the LightSquared Technical Working Group Report, *Public Notice*, 26 FCC Rcd 9284 (2011).

⁹⁹ *Id.* at 2.

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² Letter from Lawrence E. Strickling, Assistant Sec’y for Comm’n and Info., U.S. Dep’t of Commerce, to Julius Genachowski, Chairman, FCC (July 6, 2011).

¹⁰³ *Id.* at 1.

¹⁰⁴ *Id.*

¹⁰⁵ See Letter from Lawrence E. Strickling, Assistant Sec’y for Comm’n and Info., U.S. Dep’t of Commerce, to Teri M. Takai, ESG Co-Chair, U.S. Dep’t of Defense & Joel M. Szabat, ESG Co-Chair, U.S. Dep’t of Transp. (Sept. 9, 2011).

¹⁰⁶ *Id.* at 1.

on September 13, 2011, calling for additional interference testing.¹⁰⁷ In an October 5, 2011, letter to NTIA, the PNT ExCom accepted the call for further testing.

After conducting the validation testing in October and November 2011 and analyzing the data over the next several months, PNT ExCom wrote to NTIA to inform the agency of its findings. In a January 13, 2012, letter to Administrator Strickling, the PNT ExCom co-chairs wrote that “[i]t was the unanimous conclusion of the test findings . . . that both LightSquared’s original and modified plans for its proposed mobile network would cause harmful interference to many GPS receivers.”¹⁰⁸ One month later, after NTIA completed its independent evaluation of the validation testing results, Administrator Strickling sent a letter to FCC Chairman Genachowski “conclud[ing] that LightSquared’s proposed mobile broadband network [would] impact GPS services and that there [was] no practical way to mitigate the potential interference at [that] time.”¹⁰⁹

On February 15, 2012, one day after receiving NTIA’s review of PNT ExCom’s testing, the FCC International Bureau issued a *Public Notice* seeking comment as to whether it should (1) vacate the January 2011 waiver of the “integrated services” rule “due to LightSquared’s inability to address satisfactorily the legitimate interference concerns surrounding its planned operations”; or (2) modify LightSquared’s license “to suspend indefinitely LightSquared’s underlying ATC authorization, first granted in 2004”¹¹⁰

The Commission received extensive comment in response to the February 15, 2012, *Public Notice*. As of the date of this hearing, however, the FCC has not yet made a final determination as to whether LightSquared’s waiver should be vacated or its ATC license suspended. In the meantime, after failing to come to an agreement with its creditors about restructuring the company’s debt, LightSquared filed for Chapter 11 bankruptcy protection on May 14, 2012.¹¹¹ Despite the filing, LightSquared has continued to express its “willingness to consider a comprehensive solution that would allow it to deploy a nationwide 4G wireless broadband network while addressing concerns raised by the GPS industry.”¹¹²

IV. ISSUES

The following issues may be addressed during the hearing:

¹⁰⁷ See Status of Testing in Connection with LightSquared’s Request for ATC Commercial Operating Authority, *Public Notice*, IB Docket No. 11-109 (rel. Sept. 13, 2011).

¹⁰⁸ Letter from Ashton B. Carter, PNT ExCom Co-Chair, Deputy Sec’y, U.S. Dep’t of Defense & John Porcari, PNT ExCom Co-Chair, Deputy Sec’y, U.S. Dep’t of Transp., to Lawrence E. Strickling, Assistant Sec’y for Commc’n and Info., U.S. Dep’t of Commerce (Jan. 13, 2012).

¹⁰⁹ Letter from Lawrence E. Strickling, Assistant Sec’y for Commc’n and Info., U.S. Dep’t of Commerce, to Julius Genachowski, Chairman, FCC (Feb. 14, 2012).

¹¹⁰ See International Bureau Invites Comments on NTIA Letter Regarding LightSquared Conditional Waiver, *Public Notice*, IB Docket No. 11-109 (rel. Feb. 15, 2012).

¹¹¹ According to its bankruptcy filing, as of February 2012, LightSquared held \$4.5 billion in assets and \$2.29 billion in liabilities.

¹¹² Letter from James H. Barker, Outside Counsel to LightSquared Subsidiary LLC, Latham & Watkins, to Marlene H. Dortch, Secretary, FCC (Sept. 14, 2012).

1. Did the FCC adequately considered the interests of other MSS operators and GPS providers throughout the course of its LightSquared deliberations?
2. In the view of the FCC, is the overload interference to GPS receivers caused by (1) LightSquared improperly transmitting its signals into the GPS band or (2) GPS receivers failing to adequately filter transmissions from adjacent frequency bands?
3. When did the FCC become aware of the possibility of overload interference to GPS receivers caused by the operation of terrestrial base stations in the L-band? Should the FCC have anticipated this issue prior to granting the January 2011 *Conditional Waiver*?
4. How does the expansion of terrestrial operations in the MSS bands factor into the goals and objectives of the *National Broadband Plan*?

V. STAFF CONTACTS

If you have any questions regarding this hearing, please contact Todd Harrison or Dan Tyrrell of the Committee staff at (202) 225-2927.