

JB 11-109

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

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In the Matter of)	
)	
LightSquared Subsidiary LLC)	SAT-MOD-20101118-00239
)	Call Sign: S2358
Request for Modification of its Authority for an)	
Ancillary Terrestrial Component)	

ORDER AND AUTHORIZATION

Adopted: January 26, 2011

Released: January 26, 2011

By the Chief, International Bureau:

I. INTRODUCTION

1. In this Order and Authorization (Order), we grant LightSquared Subsidiary LLC (LightSquared), a Mobile Satellite Service (MSS)¹ licensee in the L-Band,² a conditional waiver of the Ancillary Terrestrial Component (ATC) "integrated service" rule. On November 18, 2010, LightSquared submitted an application for modification of its existing ATC authorization, asserting that the services it plans to offer would meet the Commission's integrated service requirements for MSS/ATC for L-Band MSS systems.³ In considering LightSquared's request, and in granting this waiver, we considered several factors, including LightSquared's provision of substantial satellite service in the L-Band, its ongoing efforts to coordinate with other L-Band operators and make substantial investments to rationalize operations in the L-Band to enable use of this spectrum for both MSS and ATC broadband services, the steps it has taken to promote an MSS/ATC marketplace that includes dual-mode satellite/terrestrial devices, and its deployment of a 4G satellite/terrestrial network in the L-Band pursuant to unique and substantial terrestrial buildout requirements. We attach conditions to the waiver, drawn from commitments made by LightSquared in its request, to ensure that LightSquared's proposed service offering – both its improved satellite service and its ancillary terrestrial component – will achieve the purposes of the integrated service rule. We also attach conditions to address concerns that commenters

¹ The Commission's rules define MSS to be: "A radiocommunication service: (1) Between mobile earth stations and one or more space stations, or between space stations used by this service; or (2) Between mobile earth stations by means of one or more space stations." 47 C.F.R. § 2.1(c).

² "L-Band" broadly refers to the frequency range from one to two gigahertz, a portion of which is allocated for MSS operations. Specifically, 1525-1559 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. See 47 C.F.R. § 2.106. LightSquared is licensed for MSS operation in portions of the 1525-1544 MHz and 1545-1559 MHz downlink bands and the 1626.5-1645.5 MHz and 1646.5-1660.5 MHz uplink bands. These frequency bands, which are denoted in the Commission's rules as the "1.5/1.6 GHz L-Band," also may be authorized for domestic ATC operation. See Footnote US380 to the United States Table of Frequency Allocations, 47 C.F.R. § 2.106.

³ LightSquared Subsidiary LLC Request for Modification of its Authority for an Ancillary Terrestrial Component, SAT-MOD-20101118-00239 (filed Nov. 18, 2010) ("LightSquared ATC Modification Request").

and the National Telecommunications and Information Administration (NTIA) have raised about potential interference with Global Positioning System (GPS) receivers.

II. BACKGROUND

A. LightSquared and the L-Band

2. LightSquared is an MSS licensee authorized to provide service in portions of the L-Band.⁴ In particular, LightSquared operates using two geostationary satellites that cover North America: MSAT-2, a U.S.-licensed satellite launched in 1995, and MSAT-1, a Canadian-licensed satellite launched in 1996.⁵ It also is authorized to operate a “next-generation” replacement satellite for MSAT-2—SkyTerra-1⁶—which was launched on November 14, 2010.⁷

3. LightSquared has provided MSS since 1996.⁸ Using MSAT-1 and MSAT-2, LightSquared provides voice and low-speed data services to customers for various applications, including: (1) land-based applications (e.g., voice, asset tracking); (2) maritime applications; and (3) government applications (e.g., disaster relief). These services are available in North and Central America, the Caribbean, Hawaii and coastal waters.⁹ LightSquared’s system currently serves federal, state and local agencies involved in public safety and emergency response operations, including organizations such as the Federal Emergency Management Agency, the Coast Guard, and local fire and police departments.¹⁰ LightSquared also

⁴ See generally SkyTerra Communications, Inc., Transferor and Harbinger Capital Partners Funds, Transferee Applications for Consent to Transfer Control of SkyTerra Subsidiary, LLC, IB Docket No. 08-184, *Memorandum Opinion and Order and Declaratory Ruling*, 25 FCC Rcd 3059 (IB, OET, WTB, rel. March 25, 2010) (“*SkyTerra/Harbinger Order*”). The *SkyTerra/Harbinger Order* provides background and history on the corporate structure and transactions that led to Harbinger Capital Partners Funds obtaining control of MSS licensee SkyTerra Subsidiary, LLC (now known as LightSquared). *Id.* at 3060-3064, ¶¶ 2-8; see also LightSquared ATC Modification Request, Narrative at 1 n.1; <http://www.lightsquared.com/press-room/press-releases/introducing-lightsquared-revolutionizing-the-u-s-wireless-industry-2/> (last visited Jan. 7, 2011).

⁵ See *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3061, ¶ 3. MSAT-1 operates at 106.5° W.L., while MSAT-2 operated until recently at 101.3° W.L. SkyTerra Subsidiary LLC, *Order and Authorization*, 25 FCC Rcd 2022, at 2023, ¶ 3 (Sat. Div., Int’l. Bur., March 1, 2010) (“*Second Generation Additional Frequencies Order*”); IBFS File No. SAT-MOD-20100412-00575 (granting request to operate MSAT-2 at 103.3 WL). LightSquared also holds fixed and mobile earth station licenses, section 214 authorizations, experimental licenses and a mobile itinerant license associated with these satellites and a planned MSS-ATC network. *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3061, ¶ 3.

⁶ Mobile Satellite Ventures Subsidiary LLC, *Order and Authorization*, 20 FCC Rcd 9572 (Int’l. Bur. 2005).

⁷ Press Release, “LightSquared Announces the Successful Launch of Next-Generation Satellite” (Nov. 15, 2010), at <http://www.lightsquared.com/press-room/press-releases/lightsquared-announces-the-successful-launch-of-next-generation-satellite/> (last visited Jan. 7, 2011). On December 14, 2010, LightSquared notified the Commission that the L-Band reflector on SkyTerra-1 had successfully deployed. Letter from Jeff Carlisle, Executive Vice President, Regulatory Affairs & Public Policy, LightSquared, to Marlene H. Dortch, Secretary, Federal Communications Commission, SAT-MOD-20101118-00239 (filed Dec. 15, 2010) (Carlisle Dec. 15, 2010 Letter).

⁸ Throughout this Order, we generally refer to LightSquared and its predecessors in interest all as “LightSquared,” unless otherwise indicated. LightSquared predecessors in interest include SkyTerra Communications, Inc. (SkyTerra), Mobile Satellite Ventures (MSV), Motient Services Inc. and American Mobile Satellite Company (AMSC). The initial L-Band license currently held by LightSquared was issued in 1989. *Order and Authorization*, 4 FCC Rcd 6041 (1989), *remanded by Aeronautical Radio, Inc. v. FCC*, 928 F.2d 428 (D.C. Cir. 1991); *Final Decision on Remand*, 7 FCC Rcd 266 (1992); *aff’d, Aeronautical Radio, Inc. v. FCC*, 983 F.2d 275 (D.C. Cir. 1993); see also AMSC Subsidiary Corporation, *Memorandum Opinion and Order*, 8 FCC Rcd 4040 (1993).

⁹ See <http://www.skyterra.com/network/coverage-area.cfm> (last visited Jan. 7, 2011).

¹⁰ SkyTerra Subsidiary LLC, Application for Modification and Waiver, File No. SAT-MOD-20090813-00089, at 2.

provides fleet management and other services to the transportation and natural resources industries.¹¹ Its MSS customer base continues to expand.¹²

4. In November 2004, the International Bureau first granted LightSquared the authority to operate ATC facilities providing voice and data communication for users equipped with dual-mode MSS/ATC devices.¹³ In March 2010, the Bureau modified LightSquared's ATC authority to afford additional flexibility for the technical design of LightSquared's ATC network, thereby enabling LightSquared to operate with greater capacity and improved spectrum efficiency.¹⁴ Currently, however, LightSquared is not offering any terrestrial service using its ATC authority, as it is in the process of constructing its satellite/terrestrial network (discussed below) and has just launched its first next-generation satellite that will be part of that network.

5. LightSquared has taken several steps to coordinate with other MSS L-band operators, in an effort to optimize the use of L-Band spectrum in North America for MSS and ATC use.¹⁵ LightSquared has access to approximately 20 megahertz of spectrum across the entire L-Band, with exact portions(s) determined through coordination.¹⁶ Until recently the coordination process in the L-band was driven by narrowband applications and most of the spectrum was divided into slivers of as little as a few kilohertz between the five operators.¹⁷ LightSquared has been coordinating with the other satellite operators through private, commercial agreements to rationalize the operators' respective spectrum assignments and operations to enable more efficient use of the band. In December 2007, LightSquared concluded a coordination arrangement with Inmarsat that provides a framework by which L-Band spectrum use over North America can be rationalized, allowing LightSquared and Inmarsat, for the first time, to have contiguous blocks of spectrum that in turn will facilitate the provision of both MSS and ATC broadband services in this band.¹⁸ These changes require substantial expenditures, including the transition from

¹¹ SkyTerra Subsidiary LLC, Application for Modification and Waiver, File No. SAT-MOD-20090813-00089, at 2.

¹² For example, LightSquared recently announced that it entered into an agreement with the Indian Health Service of the U.S. Department of Health and Human Services to provide satellite service to American Indian and Alaska Native communities until 2020. See LightSquared ATC Modification Request, Narrative at 8; <http://www.lightsquared.com/press-room/press-releases/lightsquared-and-the-indian-health-service-partner-for-remote-communications-for-the-indian-health-system/> (last visited Jan. 7, 2011).

¹³ Mobile Satellite Ventures Subsidiary LLC Application for Minor Modification of Space Station License for AMSC-1, File Nos. SAT-MOD-20031118-00333, SAT-MOD-20031118-00332, SES-MOD-20031118-01879, *Order and Authorization*, 19 FCC Red 22144 (Int'l Bur. 2004) ("MSV ATC Order").

¹⁴ See SkyTerra Subsidiary LLC Application for Modification Authority for an Ancillary Terrestrial Component, File No. SAT-MOD-20090429-00047, Call Sign: AMSC-1, File No. SAT-MOD-20090429-00046, Call Sign: S2358, File No. SES-MOD-20090429-00536, Call Sign: E980179, *Order and Authorization*, 25 FCC Red 3043 (Int'l Bur., rel. March 26, 2010) ("2010 SkyTerra ATC Modification Order").

¹⁵ L-Band operations are subject to international coordination. See International Telecommunication Union Table of Frequency Allocations, Note 5.354. In North America, there are five satellite operators in the L-Band, one each from the United States, Mexico, Canada, the United Kingdom, and Russia, subject to a Memorandum of Understanding for inter-system coordination. See Report No. IN 96-16, June 25, 1996; *2010 SkyTerra ATC Modification Order*, 25 FCC Red at 3045, ¶ 5.

¹⁶ See Establishing Rules and Policies for the Use of Spectrum for Mobile Satellite Services in the Upper and Lower L-band, IB Docket No. 96-132, *Report and Order*, 17 FCC Red 2704, 2705, 2712, at ¶¶ 1, 19 (2002).

¹⁷ See Comments of SkyTerra Subsidiary LLC in GN Dockets 09-47, 09-51, 09-137, at 6 (filed Oct. 23, 2009).

¹⁸ In addition, an agreement with Russia and Canada exists. Finally, LightSquared continues to try to develop an arrangement with Mexico to complete the coordination process. See *Second Generation Additional Frequencies Order*, 25 FCC Red at 2022, ¶ 12.

legacy equipment. In August 2010, LightSquared and Inmarsat began the process of implementing Phase 1 of the arrangement, wherein LightSquared will pay Inmarsat \$337.5 million over 15 months.¹⁹ Next-generation broadband systems require large, contiguous blocks of spectrum. Unlike other MSS bands, much of the L-band spectrum will not be suitable for broadband without such coordination.

6. *SkyTerra/Harbinger Order*. LightSquared obtained its MSS L-band authorizations when the International Bureau, the Office of Engineering and Technology, and the Wireless Telecommunications Bureau (the “Bureaus”) approved the transfer of control of SkyTerra Communications Inc. to the Harbinger Capital Partners Funds in March 2010.²⁰ In evaluating this transaction, the Bureaus considered LightSquared’s plans to construct an integrated satellite/terrestrial “fourth generation” (“4G”) mobile broadband network, which would primarily use LightSquared’s ATC authority and its next generation satellites to provide more advanced services than are possible using LightSquared’s current MSS system.²¹ The network would provide both voice and broadband data mobile services nationwide, including to rural areas that lack service from existing terrestrial providers. LightSquared proposed to use its satellite/terrestrial network to provide services on a wholesale basis to a variety of retail distribution customers, increasing competition and benefitting consumers.²² LightSquared committed that its network would cover 100 percent of the U.S. population via the satellite component.²³ In addition to satellite coverage, LightSquared has committed to a buildout schedule of its 4G terrestrial service that will provide United States population coverage of at least 100 million by December 31, 2012, at least 145 million by December 31, 2013, and at least 260 million by December 31, 2015.²⁴

7. In approving this transfer of control, we observed that if LightSquared successfully deploys its integrated satellite/terrestrial 4G network, it will be able to provide mobile broadband communications in areas where it is difficult or impossible to provide coverage by terrestrial base stations (such as in remote or rural areas and non-coastal maritime regions), as well as at times when coverage may be unavailable from terrestrial-based networks (such as during natural disasters).²⁵ We also noted that LightSquared’s more powerful new satellites could enable the use of small handsets that are very similar to terrestrial handsets in terms of cost and form factor.²⁶ Moreover, commercial and technological developments suggest the potential for deployment of market-changing broadband networks and mass-market consumer devices that include satellite-enabled broadband coverage.²⁷ We concluded that LightSquared’s proposed integrated satellite/terrestrial 4G mobile broadband network, if realized, could

¹⁹ See <http://www.lightsquared.com/press-room/press-releases/lightsquared-delivers-notice-to-inmarsat-triggering-re-banding-of-l-band-radio-spectrum-in-north-america/> (last visited Jan. 7, 2011) (“During implementation of Phase 1, LightSquared will make a series of payments to Inmarsat totalling [sic] \$337.5 million”). LightSquared also has the option of implementing Phase 2, which would make an additional 20 megahertz accessible to LightSquared. Phase 2 may be exercised at any time up until January 2013, but would involve substantial additional costs to LightSquared. *Id.*

²⁰ See generally *SkyTerra/Harbinger Order*, 25 FCC Rcd 3059. The approval followed a one year review process.

²¹ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3085, ¶ 55.

²² *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3085, ¶ 55.

²³ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3085, ¶ 56.

²⁴ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3085, ¶ 56.

²⁵ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3085-87, ¶¶ 55, 60.

²⁶ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3086-87, ¶ 60.

²⁷ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3087, ¶ 61.

provide several public interest benefits.²⁸ These include: providing additional broadband capacity when the use of such services is increasing exponentially;²⁹ enhancing competition among mobile wireless providers: as a wholesale provider, increasing innovation and investment in new consumer devices; and enhancing traditional MSS offerings by making mobile wireless broadband available in unserved areas and for public safety and homeland security purposes.³⁰ We conditioned our approval on LightSquared moving forward with its plan to construct its proposed integrated satellite/terrestrial 4G broadband network that would use the ATC authority to facilitate broadband service to most of the U.S. population.³¹

B. LightSquared ATC Modification Request

8. In its November 18, 2010, application, LightSquared states that it is providing an “update” of its plans for offering an integrated service.³² LightSquared explains that its plans for providing service have evolved since the initial grant of its ATC authority to its predecessor (MSV) in 2004 and that its current business plan differs from that of its predecessor, which had demonstrated compliance with the Commission’s integrated service requirements by planning to use dual-mode handsets exclusively.³³ LightSquared asserts that the services it plans to offer would meet the Commission’s integrated service requirements.³⁴ LightSquared also states that, if the Commission should determine that any element of LightSquared’s integrated service showing would require a waiver, “there is ample basis for granting one” under the Commission’s waiver standards.³⁵

9. LightSquared asserts that its service would be “integrated” in several different respects. First, LightSquared states that its network will be technically integrated as a single network because all traffic, satellite and terrestrial, will use the “same integrated core network and business/operations support systems.”³⁶ Second, when offering L-Band based service to its wholesale customers, LightSquared proposes to offer only “integrated pricing,”³⁷ and will not offer terrestrial-only subscriptions to these customers.³⁸ Third, LightSquared states that it is making substantial investments “to ensure that dual-

²⁸ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3087, ¶ 62.

²⁹ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3087, ¶ 62; *see also* Connecting America: The National Broadband Plan, Recommendation 5.8.4, pp. 84-85, 87-88 (“*National Broadband Plan*”); *Mobile Broadband: The Benefits of Additional Spectrum*, OBI Technical Paper No. 6, Federal Communications Commission Omnibus Broadband Initiative at 2, 4-5, 17-19, 26 (Oct. 21, 2010).

³⁰ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3087-88, ¶¶ 62, 68-71.

³¹ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3087-88, ¶¶ 71-73.

³² LightSquared ATC Modification Request, Narrative at 1.

³³ LightSquared ATC Modification Request, Narrative at 1; *see MSV ATC Order*, 19 FCC Rcd at 22150-51, ¶¶ 20-21 (determining that MSV’s proposed dual-mode handset was consistent with the integrated service requirement under § 25.149(b)(4)(i)).

³⁴ *See* Light Squared ATC Modification Request; Letter from Jeffrey J. Carlisle, Executive Vice President, Regulatory Affairs and Public Policy, LightSquared, to Marlene H. Dortch, Secretary, Federal Communications Commission (Nov. 18, 2010) at 3-7 (“Narrative”), attached to LightSquared ATC Modification Request (cited throughout as “LightSquared ATC Modification Request, Narrative”).

³⁵ *See* LightSquared ATC Modification Request, Narrative at 10.

³⁶ LightSquared ATC Modification Request, Narrative at 4.

³⁷ LightSquared ATC Modification Request, Narrative at 6 (“The only price available to customers not selecting LightSquared’s satellite-only price will be an integrated MSS/ATC price.”).

³⁸ LightSquared ATC Modification Request, Narrative at 7. LightSquared may offer its wholesale customers volume discounts, but “will not offer exceptions or carve-outs from integrated pricing.” *Id.*

mode devices will be available to users of its network.³⁹ LightSquared states that it is investing over \$50 million to underwrite the costs of developing a Qualcomm dual-mode chipset, related components, and an associated satellite ground station infrastructure.⁴⁰ The chipset will enable a single end-user device to communicate with both LightSquared's ATC and satellite networks.⁴¹ LightSquared asserts that its "subsidization of dual-mode technology has given, and will continue to give, its retail customers ample incentive to make dual-mode devices available to end-users."⁴²

10. LightSquared also states that it will continue to provide substantial satellite service and with its next generation satellite, will offer significantly improved satellite service. LightSquared states that it is in the process of upgrading its satellite capabilities with its SkyTerra-1 satellite, on which it has spent \$600 million to construct, launch, and insure.⁴³ Significantly, LightSquared claims that the capabilities of this satellite will lead to dramatic improvements in the form factor and cost of satellite-enabled devices.⁴⁴ Due, in part, to these advancements, LightSquared states that it intends to add new satellite-only customers, including in rural and public safety markets, and to double the number of satellite-enabled devices available to the market between 2011 and 2015.⁴⁵

11. Finally, LightSquared makes a number of commitments and assurances (collectively "commitments") in its request. These commitments are designed to show that it is both offering substantial satellite service and taking meaningful steps to encourage the creation of a marketplace for satellite/terrestrial services and devices.⁴⁶ Specifically, LightSquared makes the following commitments:

- "LightSquared will actively market its satellite service and will offer commercially competitive rates for the service,"⁴⁷
- "LightSquared will allocate L-band spectrum nationwide to satellite service to ensure that the full capacity of LightSquared's satellite system will be available to its customers. This allocation will include a minimum of 6 MHz dedicated exclusively to the provision of satellite service, and the actual amount used will be well in excess of this level."⁴⁸
- "LightSquared's satellites will be capable of providing service across all of the L-band MSS frequencies the Commission has authorized LightSquared to operate on in the United States.

³⁹ LightSquared ATC Modification Request, Narrative at 4.

⁴⁰ LightSquared ATC Modification Request, Narrative at 4. LightSquared claims that its investment in the development of a Qualcomm dual-mode chipset, it "has ensured that an initial range of dual-mode chipsets will be available to device manufacturers on pricing terms equal to those which apply to the same chipsets without satellite protocol." *Id.* at 5.

⁴¹ LightSquared ATC Modification Request, Narrative at 4.

⁴² LightSquared ATC Modification Request, Narrative at 6.

⁴³ LightSquared ATC Modification Request, Narrative at 7-8.

⁴⁴ LightSquared ATC Modification Request, Narrative at 8 ("What once was a 40-pound device the size of a suitcase that bore a \$4,000 price tag will have been reduced to a smartphone that can be purchased for a few hundred dollars or a data card that will cost under \$100.").

⁴⁵ LightSquared ATC Modification Request, Narrative at 8.

⁴⁶ *See* LightSquared ATC Modification Request, Narrative 4-7, 9.

⁴⁷ LightSquared ATC Modification Request, Narrative at 9.

⁴⁸ LightSquared ATC Modification Request, Narrative at 9.

The same will be true for satellite-only and dual-mode devices accessing LightSquared's satellites."⁴⁹

- "LightSquared is taking and will continue to take commercially reasonable measures to ensure that dual-mode MSS/ATC component parts (*e.g.*, chipsets and radio frequency (RF) elements) are available from one or more mainstream component suppliers. LightSquared will ensure that its investment in dual-mode chipsets and devices result in readily available dual-mode data cards by the third quarter of 2011 and dual-mode smartphones by the second quarter of 2012."⁵⁰
- "LightSquared's integrated MSS/ATC service offerings will be commercially competitive and will include a substantial satellite component."⁵¹
- "Except for satellite-only service, LightSquared will only offer rate cards with integrated MSS/ATC pricing. LightSquared will not offer terrestrial-only pricing or subscriptions."⁵² LightSquared "will have both a satellite-only and an integrated rate. When a LightSquared customer pays the integrated rate, the customer will have access to both the terrestrial and satellite networks for that single rate."⁵³
- "LightSquared will ensure that the public and all of its actual and potential customers are notified of the availability of integrated service offerings to its retailer customers by posting descriptions of its integrated devices, pricing and technology to its website and updating these descriptions as necessary to capture any changes over time."⁵⁴
- LightSquared will "ensure that dual-mode devices will be available to users of its network. It is underwriting . . . the cost of developing a Qualcomm dual-mode chipset, related components, and an associated satellite ground station infrastructure. The dual-mode chipset will make it possible for a single device to communicate with LightSquared's L-band satellites and with its L-band ATC base stations. . . . LightSquared has ensured that an initial range of dual-mode chipsets will be available to device manufacturers on pricing terms equal to those which apply to the same chipsets without the satellite protocol software. The agreement, whose term is 15 years, also provides for the availability of the satellite protocol in future chipsets on commercially reasonable terms. . . . [M]anufacturers will be able to offer satellite-capable devices to the company's retailers at prices equal to those of functionally identical devices without satellite capability."⁵⁵

⁴⁹ LightSquared ATC Modification Request, Narrative at 9.

⁵⁰ LightSquared ATC Modification Request, Narrative at 5.

⁵¹ LightSquared ATC Modification Request, Narrative at 6.

⁵² LightSquared ATC Modification Request, Narrative at 4.

⁵³ LightSquared ATC Modification Request, Narrative at 6. LightSquared further states that "[f]or each GB of terrestrial usage, the customer will receive 500 kB of satellite usage, with a competitively-priced, usage-sensitive charge for satellite usage above this amount." *Id.*, as corrected by Letter from Jeffrey J. Carlisle, Executive Vice President, Regulatory Affairs and Public Policy, LightSquared, to Marlene H. Dortch, Secretary, Federal Communications Commission, File Nos. SAT-MOD-20101118-00239, SES-AMD-20101118-01452 (filed Nov. 19, 2010) ("LightSquared Erratum").

⁵⁴ LightSquared ATC Modification Request, Narrative at 6.

⁵⁵ LightSquared ATC Modification Request, Narrative at 4-5.

- LightSquared is subsidizing the development “of dual-mode technology, and will continue to give its retail customers ample incentive to make dual-mode devices available to end-users.”⁵⁶
- “The satellite and terrestrial components of LightSquared’s network will be integrated technically. All traffic, whether it passes through the satellite or terrestrial conduits, will be processed and handled by the same integrated core network and business/operations support systems (‘B/OSS’). Similarly, a single set of Regional Aggregation Centers and National Data Centers will be used for satellite and terrestrial traffic. From an operational perspective, therefore, there is no separate ‘satellite network’ or ‘terrestrial network.’ There is only a single ‘integrated network,’ making for a seamless customer experience and thus a technically integrated network.”⁵⁷
- “LightSquared will not provide any preferential terms for [its] customers that offer [terrestrial-only] service. . . . Moreover, LightSquared commits that it will not institute policies or practices that would discourage its customers from offering integrated MSS/ATC service.”⁵⁸
- “[O]nce commercial MSS/ATC operations have begun, LightSquared will file reports with the Commission every six months providing the number of terminals in service falling into each of three categories: MSS only, dual-mode MSS/ATC, and terrestrial-only.”⁵⁹
- “LightSquared will file status reports with the Commission every calendar quarter once dual-mode devices are commercially available, reporting the availability of dual-mode MSS/ATC component parts.”⁶⁰

C. Public Notice

12. On November 19, 2010, the International Bureau issued a public notice seeking comment on LightSquared’s request for modification of its ATC authority.⁶¹ In the public notice, we also sought comment on whether the Commission should waive the requirements of the integrated service rule in the event the information that LightSquared presented does not establish compliance with the applicable requirements.⁶² On November 26, 2010, in response to a request filed by CTIA,⁶³ the International Bureau extended the comment period, with comments due on December 2, 2010, and replies due on December 9, 2010.⁶⁴ We have received numerous comments.⁶⁵

⁵⁶ LightSquared ATC Modification Request, Narrative at 6.

⁵⁷ LightSquared ATC Modification Request, Narrative at 4.

⁵⁸ LightSquared ATC Modification Request, Narrative at 7.

⁵⁹ LightSquared ATC Modification Request, Narrative at 9.

⁶⁰ LightSquared ATC Modification Request, Narrative at 5-6.

⁶¹ Policy Branch Information, Satellite Space Applications Accepted for Filing, Report No. SAT-00738, *Public Notice* (rel. Nov. 19, 2010) (“*Comment Public Notice*”) (establishing that comments were due not later than November 29, 2010, and replies not later than December 6, 2010).

⁶² *Id.*

⁶³ CTIA – The Wireless Association® Request for Extension of Comment and Reply Comment Deadlines (filed Nov. 24, 2010).

⁶⁴ LightSquared Subsidiary LLC Request for Modification of its Authority for an Ancillary Terrestrial Component, SAT-MOD-20101118-00239, *Order*, DA 10-2243 (IB, Sat. Div., rel. Nov. 26, 2010).

III. INTEGRATED SERVICE RULE

13. In its request, LightSquared asserts that the services that it plans to offer would meet the Commission's integrated service requirements.⁶⁶ As discussed below, we find that LightSquared's proposed service does not satisfy the integrated service rule, as set forth in Section 25.149(b)(4) of the Commission's rules. In the section that follows, we discuss whether the requirements of this rule should be waived with respect to LightSquared and its operations in the L-Band.

A. Mobile Satellite Service Ancillary Terrestrial Component Rules

14. The Commission adopted the ATC regime in 2003 to permit flexibility in the delivery of communications by MSS providers by enabling them to integrate ATC into their MSS networks.⁶⁷ ATC consists of terrestrial base stations and mobile terminals that re-use frequencies assigned for MSS to enhance MSS coverage.⁶⁸ Below, we discuss several key aspects of the MSS/ATC gating criteria rules that are applicable to LightSquared's request.

15. To ensure that MSS operators seeking to provide terrestrial service using ATC authority achieve the purposes for which the regime was enacted, Section 25.149(b) of the Commission's rules establishes several prerequisites—collectively known as the “gating criteria”—that an MSS operator must demonstrate it will satisfy to obtain ATC authority.⁶⁹ The purpose of the gating criteria is to ensure that the added terrestrial component remains ancillary to the principal MSS offering.⁷⁰ The gating criteria require that an MSS operator must provide “substantial” satellite service and must offer “integrated” MSS and ATC service.⁷¹

16. The Commission requires MSS/ATC operators to maintain the capability of providing continuous satellite service over the entire geographic area of satellite coverage required in the

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⁶⁵ See *infra* paras. 19-21.

⁶⁶ See generally LightSquared ATC Modification Request, Narrative.

⁶⁷ 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, 18 FCC Rcd 1962, 1964-65, at ¶ 1 (2003) (“*ATC Report and Order*”), modified by *Order on Reconsideration*, 18 FCC Rcd 13590 (2003), reconsidered in part in *Memorandum Opinion and Order and Second Order on Reconsideration*, 20 FCC Rcd 4616 (2005) (“*ATC Second Reconsideration Order*”), further reconsideration pending; see *ATC Second Reconsideration Order*, 20 FCC Rcd at 4619, ¶ 9 (in allowing MSS operators to integrate ATC into their MSS operations, the Commission determined that permitting ATC will achieve numerous goals and provide numerous public interest benefits – including enhancing MSS spectrum efficiency; expanding the consumer market for MSS, leading to greater economies of scale and lower prices for consumers; enabling operators to offer a single consumer device to communicate with both the satellite and terrestrial network; and strengthening competition for telecommunications services) (citing *ATC Report and Order*, 18 FCC Rcd at 1974-79, ¶¶ 22, 24-26, 28, 30).

⁶⁸ See generally *ATC Report and Order*; see also Fixed and Mobile Services in the Mobile Satellite Service Bands at 1525-1559 MHz and 1626.5-1660.5 MHz, 1610-1625.5 MHz and 2483.5-2500 MHz, and 2000-2020 MHz and 2180-2200 MHz, ET Docket No. 10-142, *Notice of Proposed Rulemaking and Notice of Inquiry*, 25 FCC Rcd 9481, 9482-83, at ¶ 5 (rel. July 15, 2010) (“*2010 MSS NPRM/NOI*”).

⁶⁹ *ATC Second Reconsideration Order*, 20 FCC Rcd at 4623-24, ¶ 19 (summarizing the “gating criteria”); see 47 C.F.R. § 25.149(b).

⁷⁰ *ATC Report and Order*, 18 FCC Rcd at 1964-65, ¶¶ 1-2.

⁷¹ *ATC Second Reconsideration Order*, 20 FCC Rcd at 4623-24, ¶ 19 (internal citations omitted); see 47 C.F.R. §§ 25.149(b)(1-3) (substantial satellite service), (b)(4) (integrated service). MSS operators also are restricted to offering ATC only in their authorized MSS frequencies. *ATC Second Reconsideration Order*, 20 FCC Rcd at 4623-24, ¶ 19 (internal citation omitted); 47 C.F.R. § 25.149(b)(5).

Commission's rules, maintain spare satellites to replace destroyed or degraded satellites expeditiously, and ensure commercial availability of service throughout the mandatory geographic coverage area.⁷² Importantly, the Commission expressly rejected requiring that the satellite service constitute the predominant or primary use of an MSS/ATC system, or that a specific percentage of an MSS/ATC operator's network capacity be reserved exclusively for MSS.⁷³ The Commission concluded that such a restriction would limit spectrum efficiency.⁷⁴ Substantial satellite service is, in effect, both an independent requirement and a precondition for integrated service, in that it establishes a requirement that satellite capability must be present at a certain level in an MSS/ATC system.

17. The Commission has provided two different ways for an MSS/ATC operator to establish that it meets the integrated service requirements.⁷⁵ First, the operator may satisfy a safe-harbor provision by offering only dual-mode handsets. For purposes of the integrated service rule, a dual-mode handset "shall consist of a handset which, when sold to the consumer, contains all the hardware and software necessary to acquire and communicate via both the operator's MSS system's signal and its ATC system's signal."⁷⁶ Alternatively, a party not offering dual-mode handsets may demonstrate other evidence of providing integrated service to the public, "through technical, economic or any other substantive showing that the primary purpose of the MSS licensee's system remains the provision of MSS."⁷⁷ To ensure that ATC remains ancillary to the primary MSS, the Commission stated that, for purposes of the integrated service rule, MSS/ATC operators may not offer subscribers terrestrial-only service.⁷⁸ As noted above, LightSquared's predecessor's ATC authorization was based upon meeting the dual-mode safe harbor provision in the rule.

B. Summary of Record / Positions of the Parties

18. LightSquared asserts that its proposed wholesale service offering meets the gating criteria, including both the substantial satellite service rules and the integrated service rule.⁷⁹ LightSquared states that it is and will continue to offer substantial MSS as a stand-alone offering.⁸⁰ LightSquared claims that it satisfies the integrated service rule because: (1) its network will be technically and operationally

⁷² *ATC Second Reconsideration Order*, 20 FCC Rcd at 4623-24, ¶ 19 (internal citations omitted); see 47 C.F.R. § 25.149(b)(1-3).

⁷³ *ATC Report and Order*, 18 FCC Rcd at 2014-15, ¶ 99; *ATC Second Reconsideration Order*, 20 FCC Rcd at 4623-24, ¶ 19.

⁷⁴ *ATC Report and Order*, 18 FCC Rcd at 2014-15, ¶ 99.

⁷⁵ *ATC Second Reconsideration Order*, 20 FCC Rcd at 4623-24, ¶ 19; *ATC Report and Order*, 18 FCC Rcd at 2008-09, ¶¶ 87-88. The integrated service rule, set forth in Section 25.149(b)(4), states:

"*Integrated Services.* MSS ATC licensees shall offer an integrated service of MSS and MSS ATC. Applicants for MSS ATC may establish an integrated service offering by affirmatively demonstrating that: (i) The MSS ATC operator will use a dual-mode handset that can communicate with both the MSS network and the MSS ATC component to provide the proposed ATC service; or (ii) Other evidence establishing that the MSS ATC operator will provide an integrated service offering to the public."

47 C.F.R. § 25.149(b)(4).

⁷⁶ *ATC Second Reconsideration Order*, 20 FCC Rcd at 4627, ¶ 29.

⁷⁷ *ATC Report and Order*, 18 FCC Rcd at 2009, ¶ 88.

⁷⁸ *ATC Second Reconsideration Order*, 20 FCC Rcd at 4628, ¶ 33 (internal citations omitted).

⁷⁹ LightSquared ATC Modification Request, Narrative at 10.

⁸⁰ LightSquared ATC Modification Request, Narrative at 8-9.

integrated as a single network; (2) it will offer only integrated MSS/ATC pricing (except for satellite-only pricing); and (3) it is making substantial investments in the creation of a satellite/terrestrial service offering that is designed so that integrated service are made available to consumers at competitive prices.⁸¹ Further, LightSquared makes a number of commitments to bolster its claims of providing substantial satellite service and integrated satellite/terrestrial service.⁸²

19. Commenters raised a number of issues, both in support of, and in opposition to, the LightSquared ATC Modification Request. Commenters supporting the application state that different MSS/ATC operators have different business plans and that the Commission should employ a flexible, case-by-case evaluation of compliance with the gating criteria.⁸³ Some parties also argue that the LightSquared proposal is consistent with the Commission's goals of advancing mobile, including mobile broadband, competition and with advancing rural broadband deployments.⁸⁴

20. Conversely, several parties advance arguments in opposition to LightSquared's request. First, they raise procedural issues, arguing that the comment cycle was too short⁸⁵ and that the issues raised in this proceeding should be resolved in a rulemaking proceeding of general applicability, including the *2010 MSS NPRM/NOI*.⁸⁶ Second, some commenters argue that LightSquared fails to satisfy the gating criteria, claiming that the LightSquared proposal does not comply with the integrated service rule⁸⁷ or that it is inconsistent with the ancillary nature of ATC operations.⁸⁸ Third, commenters contend that, if LightSquared is granted any relief, it should not receive preferential treatment with regard to other MSS operators.⁸⁹ Fourth, several commenters express concern that enhanced terrestrial use in the MSS L-band under LightSquared's proposal could have harmful consequences with respect to GPS and related uses in adjacent bands, and request that the Commission address the proposal as part of a larger

⁸¹ LightSquared ATC Modification Request, Narrative at 3-7.

⁸² See *supra* para. 11 (discussing LightSquared commitments).

⁸³ See DBSD Reply at 5; Free Press, *et al.*, Reply at 6; Globalstar Reply at 6-7; TerreStar Comments at 5-9.

⁸⁴ See Free Press, *et al.*, Reply at 1-5 (grant of LightSquared's proposal will advance competition); Open Range Comments at 4 (grant of LightSquared's proposal will support rural deployments); RCA Reply at 1-2, 4-7 (same). A number of individual and local government entities also filed brief comments generally supporting the LightSquared ATC Modification Request. See, e.g., John Scarpati Comments.

⁸⁵ See AT&T Comments at 8-9 (comment cycle too short under Section 25.154 of the Commission's rules); Wireless Communications Association International, Inc. (WCAI) Petition to Deny at 6-10 (comment cycle too short under statute and Commission rules); U.S. GPS Industry Council Comments at 7-9 (same); *but see* LightSquared Reply at 5-12, 16-18 (comment cycle comports with Commission requirements); Free Press, Media Access Project, the New America Foundation, and Public Knowledge (Free Press, *et al.*) Reply at 8 (same). (Although Free Press, *et al.*, styled its filing in this proceeding as "Comments," because they were filed on the day of the reply comment deadline, we refer to them as "Free Press, *et al.*, Reply" throughout this item.)

⁸⁶ See AT&T Comments at 4, 7-10; Blue Sky Reply at 1-2; CTIA Comments at 1, 6-8; Iridium Comments at 4-5; U.S. GPS Industry Council Comments at 2-6; Verizon Wireless Comments at 1, 8-9; WCAI Petition to Deny at 10-13; *but see* LightSquared Reply at 22-25; Free Press, *et al.*, Reply at 7 (arguing that LightSquared's service is consistent with Commission rules).

⁸⁷ See AT&T Comments at 5-7 (LightSquared presents a "novel" interpretation of integrated service that is inconsistent with the requirement); Verizon Wireless Comments at 5-7; *but see* LightSquared Reply at 21-29 (LightSquared will be offering integrated service); Free Press, *et al.*, Reply at 5-6; T-Mobile Reply at 6-7.

⁸⁸ See AT&T Comments at 7; CTIA Comments at 7; U.S. GPS Industry Council Comments at 3-5; Verizon Wireless Comments at 2-5; 7-8; *but see* LightSquared Reply at 22-25; Free Press, *et al.*, Reply at 7.

⁸⁹ See AT&T Comments at 4, 7, 10; Globalstar Reply at 6-7.

rulemaking that would address these concerns.⁹⁰ The National Telecommunications and Information Administration (NTIA) also has filed a letter expressing concern about the potential for adverse impact on GPS and other Global Navigation Satellite System (GNSS) receivers, as well as maritime and aeronautical emergency communication systems, and Inmarsat receivers used by Federal agencies.⁹¹

21. In addition, some parties comment on the appropriate scope of relief, if any is granted. Some commenters argue that other similarly situated MSS/ATC licensees should be able to obtain similar relief to any granted to LightSquared.⁹² In particular, Globalstar states that it should be able to obtain flexibility in the application of the integrated service rule for its Big LEO band operations that is similar to any flexibility afforded to LightSquared through an analogous license modification or waiver proceeding.⁹³ Conversely, others argue that any relief granted should be limited to LightSquared and its operations in the MSS L-band spectrum.⁹⁴ Finally, AT&T posits a number of conditions that should be applied to any relief granted LightSquared.⁹⁵

C. Sufficiency of the Comment Cycle

22. AT&T, the U.S. GPS Industry Council, and WCAI argue that the LightSquared ATC Modification Request constitutes a “major” modification of its ATC license, and that, therefore, Section 309(d) of the Communications Act⁹⁶ and Section 25.154 of the Commission’s rules⁹⁷ require that we

⁹⁰ See, e.g., CTIA Comments at 8-9 (Commission should engage interested parties to address concerns regarding interference from terrestrial L-band operations before commencement of service by LightSquared); U.S. GPS Industry Council Comments at 1-6 (Commission should terminate the LightSquared proceeding and address in rulemaking); WCAI Reply at 1-9 (same); U.S. GPS Industry Council Letter to Marlene Dortch, Notice of *Ex Parte* Presentation, filed January 7, 2011 (U.S. GPS Council January 7, 2011 *Ex Parte*) (proposing that industry and government work together to conduct technical analysis of the potential for interference); Letter from Nicholas E. Calio, President and CEO, Air Transport Association, to Julius Genachowski, Chairman, Federal Communications Commission (filed Jan. 7, 2011); Letter from Edward M. Bolen, President and CEO, National Business Aviation Association, to Julius Genachowski, Chairman, Federal Communications Commission (filed Jan. 7, 2011); U.S. GPS Industry Council Letter to Commissioners (filed Jan. 25, 2011); see also AT&T Comments at 13-14 (rules to protect GPS operations may need to be revised to account for increased interference potential); but see LightSquared Reply at 18-21 (LightSquared will comply with existing interference requirements).

We note that one commenter introduced certain press reports indicating that LightSquared had some operational difficulties with the antenna reflector on the SkyTerra-1 satellite, whose “operational and overall functionality plays a vital role in this [LightSquared ATC] Modification Request, as it pertains to the requisite ATC [g]ating [r]equirements.” Blue Sky Information Services Reply at 2. LightSquared has indicated that the L-Band reflector has been successfully deployed. Carlisle Dec. 15, 2010 Letter at 1.

⁹¹ Letter from Lawrence E. Strickling, Assistant Secretary for Communications and Information, U.S. Department of Commerce, to Julius Genachowski, Chairman, Federal Communications Commission (filed Jan. 12, 2011) (“NTIA Letter”) at 1. GNSS is a system that incorporates GPS, GLONASS, and other space-based and ground-based segments to support all forms of navigation.

⁹² See DBSD Reply at 1; Free Press, *et al.*, Reply at 6; Globalstar Reply at 1-7.

⁹³ Globalstar Comments at 5.

⁹⁴ See AT&T Comments at 12-13; Iridium Comments at 1, 4 (any relief granted LightSquared should be inapplicable to the MSS Big LEO spectrum band).

⁹⁵ AT&T Comments at 11-12 (arguing that (1) the SkyTerra/Harbinger spectrum leasing and wholesale conditions should be reconsidered; (2) any relief granted LightSquared should be restricted to LightSquared’s dealings with unaffiliated customers; and (3) that to monitor (2), LightSquared should be required to provide the Commission with notice of its wholesale arrangements).

⁹⁶ 47 U.S.C. § 309(d).

provide at least 30 days public notice for comment.⁹⁸ In response, LightSquared and Free Press, *et al.*, maintain that LightSquared's request is a minor modification and therefore not subject to the 30-day public notice requirement.⁹⁹ The issue is whether the pleading cycle in the instant case provides sufficient notice and opportunity to comment on the issues raised with respect to LightSquared's request, both its request for modification of its ATC authority and consideration of whether the integrated service rule should be waived.

23. We conclude that the pleading cycle for LightSquared's request—in which the *Comment Public Notice* was issued on November 19, 2010, with comments due on December 2, 2010, and reply comments due on December 9, 2010—is sufficient for the decisions we make herein. With regard to LightSquared's request for license modification, we need not reach the issue of whether it should be classified as major or minor modification for purposes of establishing a pleading cycle, because even assuming for the sake of argument that the modification request in this proceeding should be classified as major, the pleading cycle established in the *Comment Public Notice* complies with the requirements of the Communications Act.¹⁰⁰ Moreover, we note that we do not grant LightSquared's modification application on the grounds that it requested, but instead we modify LightSquared's MSS/ATC authorization pursuant to the conditional waiver that we grant in this Order below. As explained further in Section III.D below, we take this action in part because we agree with parties that argue that LightSquared's proposal does not comply with the Commission's integrated service rule. Thus, even if those parties were not given all the time specified in Section 25.154 of the Commission's rules, they have no basis to assert that they suffered any prejudice regarding this issue as a result. Regarding our waiver analysis, discussed in Section IV below, there is no set pleading cycle for waiver requests specified in the Communications Act or the Commission's rules. Therefore, we must determine only whether the pleading cycle meets the requirements of due process. In other words, we must determine whether the time given to interested parties to file comments was adequate to allow those parties to comment in a meaningful manner.¹⁰¹ In this proceeding, we have developed a sizable record.¹⁰² As discussed herein, a number of commenters have filed full and complete pleadings. There is no indication that the time permitted for comments and replies precluded interested parties from participating fully in this proceeding. Accordingly, we disagree

(Continued from previous page)

⁹⁷ 47 C.F.R. § 25.154.

⁹⁸ AT&T Comments at 8-9; U.S. GPS Industry Council Comments at 7-9; WCAI Petition to Deny at 6-10.

⁹⁹ LightSquared Reply at 5-12, 16-18; Free Press, *et al.*, Reply at 8.

¹⁰⁰ Section 309(b) of the Communications Act, 47 U.S.C. § 309(b), prohibits the Commission from acting on any license modification application, with certain exceptions not applicable here, earlier than 30 days after public notice. The 30-day period ran on December 20, 2010, and we are taking action on LightSquared's application after that date. Section 309(d)(1) of the Communications Act, 47 U.S.C. § 309(d)(1), permits any party in interest to file a petition to deny any such application at any time before the Commission acts on that application, unless the Commission specifies by rule a shorter filing period, but not less than 30 days after public notice, for petitions to deny filed in response to certain classifications of applications. As the commenters note, the Commission has specified such a pleading cycle, *i.e.*, 30 days after public notice, with respect to petitions to deny applications filed pursuant to Part 25. See Section 25.154 of the Commission's rules, 47 C.F.R. § 25.154. The *Comment Public Notice* specified that the filing schedules in Section 25.154 would apply to the applications listed therein, with the exception of "comments" and "replies" filed in response to LightSquared's modification application. In other words, the filing date for "petitions to deny" LightSquared's application was 30 days after the *Comment Public Notice*, consistent with Section 25.154 of the Commission's rules and Sections 309(b) and 309(d)(1) of the Communications Act.

¹⁰¹ See *Grannis v. Ordean*, 234 U.S. 385, 394, 34 S.Ct. 779, 783, 58 L.Ed. 1363 (1914); see also *Kropat v. FAA*, 162 F.3d 129, 132 (D.C. Cir., 1998); *Johnson v. United States*, 628 F.2d 187, 194 (D.C. Cir. 1980) (the Fifth Amendment "only requires that a person receive his 'due' process, not every procedural device that he may claim or desire").

¹⁰² See *supra* Section III.B.

with commenters that assert that they were not given an adequate opportunity to comment on the issues raised.

D. Failure to Satisfy the Rule

24. We find that LightSquared fails to satisfy the integrated service rule set forth in Section 25.149(b)(4) of the Commission's rules.¹⁰³ The Commission has interpreted the integrated service rule as prohibiting ATC-only subscriptions.¹⁰⁴ Although LightSquared does not, itself, intend to offer ATC-only subscriptions to its wholesale customers, it contemplates that its customers may well offer ATC-only subscriptions to consumers. As AT&T and Verizon Wireless assert, we find that the Commission was clear that application of the rule was intended to prevent such ATC-only subscriptions.¹⁰⁵ The fact that LightSquared developed a wholesale business model that may not have been specifically contemplated when the Commission enacted and subsequently interpreted the MSS/ATC rules does not change this analysis. We likewise find that LightSquared's decision to offer service on a wholesale basis does not relieve LightSquared of the requirement to comply with Section 25.149(b)(4) of the Commission's rules. LightSquared may not convey to its customers operational rights that LightSquared itself does not possess.¹⁰⁶ As such, we agree with AT&T, CTIA, the U.S. GPS Industry Council, and Verizon Wireless and disagree with LightSquared, Free Press, *et al.*, and T-Mobile, and find that LightSquared's wholesale customers cannot offer terrestrial-only service to their subscribers without violating LightSquared's obligations under the rules.¹⁰⁷ We turn now to whether to grant LightSquared a waiver of the integrated service rule.¹⁰⁸

IV. WAIVER OF INTEGRATED SERVICE RULE

25. We find the totality of the facts and circumstances surrounding LightSquared's proposal, including the specific commitments it makes in its filing and several unique circumstances of

¹⁰³ 47 C.F.R. § 25.149(b)(4). LightSquared does not assert that it meets the first prong of the integrated service rule, which creates a safe harbor for MSS/ATC operators that provide dual-mode handsets. Rather, LightSquared asserts that it satisfies the second prong of the rule by demonstrating via "other evidence" that it offers integrated service. See LightSquared ATC Modification Request, Narrative at 3-7; LightSquared Reply at 21-29.

¹⁰⁴ *ATC Second Reconsideration Order*, 20 FCC Red at 4628, ¶ 33 ("We clarify that 'integrated service' as used in this proceeding and required by 47 C.F.R. § 25.149(b)(4) forbids MSS/ATC operators from offering ATC-only subscriptions."):

¹⁰⁵ See *ATC Second Reconsideration Order*, 20 FCC Red at 4628, ¶ 33; see also AT&T Comments at 6 (LightSquared's "plan appears to be in conflict with previous Commission statements on the intended purpose of ATC authority and the operation of its ATC gating criteria"); Verizon Wireless Comments at 2-5.

¹⁰⁶ See Verizon Wireless Comments at 3-5 (drawing analogies to the Commission's secondary market rules and policies, under which the licensee may not convey rights to third party spectrum lessees that the licensee does not itself possess).

¹⁰⁷ Because we find the wholesale nature of LightSquared's business plan an insufficient basis to determine that it complies with the integrated service rule, we decline to adopt AT&T's proposals that we limit any relief we grant to LightSquared's arrangements with non-LightSquared affiliates and to require LightSquared to provide the Commission with notice of its individual wholesale arrangements. See AT&T Comments at 12. We need not address these issues again, below, when addressing the waiver of the integrated service rule because the waiver grant is not premised on the wholesale nature of LightSquared's business plan. See *infra* paras. 29-36. We also decline to address AT&T's request to reconsider two of the conditions in the *SkyTerra/Harbinger Order* because that request is beyond the scope of this proceeding. See AT&T Comments at 12-13.

¹⁰⁸ See LightSquared ATC Modification Request, Narrative at 10. Having found that LightSquared fails to satisfy the integrated service rule, we need not address here opposing commenters' other arguments. Rather, we address them, as appropriate, in the following waiver section. See *infra* Section IV.

LightSquared's activities in the MSS L-band, to be consistent with the public interest and the purpose of the MSS/ATC gating criteria. For the reasons provided below, we find good cause to grant LightSquared a conditional waiver of Section 25.149(b)(4) of the Commission's rules for services provided by LightSquared using its MSS L-band spectrum.

A. Waiver Standard

26. The Commission may waive its rules for good cause shown.¹⁰⁹ A rule may be waived where the particular facts make strict compliance inconsistent with the public interest.¹¹⁰ In making this determination, the Commission may take into account considerations of hardship, equity, or more effective implementation of overall policy on an individual basis.¹¹¹ Waiver of the Commission's rules is therefore appropriate if special circumstances warrant a deviation from the general rule and such deviation will serve the public interest.¹¹² For the reasons provided below, we find good cause to grant LightSquared a conditional waiver of Commission rule 25.149(b)(4), the integrated service rule.¹¹³

B. Procedural Treatment of Request as Waiver Filing

27. In its request LightSquared states that "[i]f . . . the Commission believes that any element of LightSquared's showing requires a waiver, there is ample basis for granting one under applicable standards."¹¹⁴ LightSquared also cites the applicable waiver standard in its request.¹¹⁵ WCAI and AT&T argue that LightSquared's filing with respect to whether the Commission could issue a waiver is procedurally defective. WCAI points to LightSquared's Form 312 filing, where LightSquared did not indicate that it was requesting a waiver.¹¹⁶ AT&T states that LightSquared should have submitted a formal request for waiver, and that its filing does not meet the procedural or substantive requirements for a waiver request.¹¹⁷

28. We find that LightSquared's filing provides sufficient basis for our addressing its request as one for waiver, given that the *Comment Public Notice* specifically sought comment not only on LightSquared's request for ATC modification, but also on whether to waive the requirements of the integrated service rule. As we discuss above, we conclude that the commenters had adequate notice and opportunity to comment on the issues raised by LightSquared in its request.¹¹⁸

¹⁰⁹ 47 C.F.R. § 1.3; *see also WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969), *cert. denied*, 409 U.S. 1027 (1972).

¹¹⁰ *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

¹¹¹ *WAIT Radio*, 418 F.2d at 1159; *Northeast Cellular Tel.*, 897 F.2d at 1166.

¹¹² *NetworkIP, LLC v. FCC*, 548 F.3d 116, 125-28 (D.C. Cir. 2008); *Northeast Cellular*, 897 F.2d at 1166.

¹¹³ *See* 47 C.F.R. § 25.149(b)(4).

¹¹⁴ LightSquared ATC Modification Request, Narrative at 10.

¹¹⁵ LightSquared ATC Modification Request, Narrative at 10 n.10, *citing WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir., 1969).

¹¹⁶ WCAI Petition to Deny at 13-14 (noting that LightSquared indicated that it was not requesting a waiver when answering Question 35 on Form 312).

¹¹⁷ AT&T Comments at 11.

¹¹⁸ *See supra* paras. 22-23.

C. Waiver Analysis

29. In light of the totality of the facts and circumstances before us, we find good cause to waive the integrated service rule, subject to conditions, with respect to LightSquared's L-band authorization. We believe that, in this specific instance, a conditional waiver will better serve the public interest and the goals of the Commission's MSS/ATC gating criteria, including the integrated service rule, than would strict application of the integrated service rule to LightSquared. Specifically, we find that the totality of the facts and circumstances considered as a whole—including LightSquared's (1) provision of substantial MSS; (2) ongoing investments to rationalize the MSS L-band spectrum for improved MSS and MSS/ATC use; (3) investment in the creation of a dual-mode MSS/ATC service offering; (4) unique terrestrial buildout requirements; and (5) specific commitments made to achieve the Commission's MSS and MSS/ATC goals—collectively serve to promote the public interest and the purpose of the integrated service rule and, therefore, warrant our grant of a conditional waiver of the integrated service rule.

30. *Provision of Ubiquitous, Nationwide MSS.* LightSquared is already a significant and substantial provider of MSS. LightSquared has provided MSS since 1996, and presently provides service to a variety of different entities, including federal, state, and local agencies involved in public safety and emergency response operations. In addition, LightSquared continues to advance and develop its MSS offerings, having invested \$600 million to construct and launch its next-generation, broadband capable satellite,¹¹⁹ and plans to significantly grow its satellite user base.¹²⁰ LightSquared's current service offerings and demonstrated commitment to providing MSS provide a measure of assurance that a waiver of the integrated service rule will not obviate the overall purpose of the gating criteria to "ensure that the added terrestrial component remains ancillary to the principal MSS offering."¹²¹ We find unpersuasive comments that argue otherwise.

31. *Rationalization of MSS L-band for Improved MSS and MSS/ATC Use.* LightSquared is making significant efforts to rationalize narrow, interleaved bands of L-band spectrum, held by several international operators, into contiguous blocks that will support next-generation broadband technologies for both mobile satellite and terrestrial use. As explained above, in December 2007, LightSquared entered into a coordination arrangement with Inmarsat to enable the two entities to reconfigure their combined MSS L-band spectrum so that they can utilize larger, contiguous blocks of spectrum. LightSquared, pursuant to its triggering Phase I of the arrangement in August 2010, will pay Inmarsat an additional \$337.5 million to allow for the transition of legacy equipment. Proceeding with future phases of the arrangement would result in even larger blocks of contiguous spectrum being made available for the provision of superior MSS and satellite/terrestrial broadband services. The Commission has recognized that these types of operator to operator arrangements, especially in the L-band, should be encouraged and are preferable to "regulations based largely on hypothetical cases."¹²² A grant of a waiver here will enable LightSquared to implement its proposed satellite/terrestrial service offering and increase its capacity to advance the ongoing rationalization of L-band spectrum use. Indeed, in the absence of a

¹¹⁹ See LightSquared ATC Modification Request, Narrative at 2, 7-8.

¹²⁰ See LightSquared ATC Modification Request, Narrative at 8.

¹²¹ See *ATC Report and Order*, 18 FCC Red at 1964-65, ¶¶ 1-2. In addition, as noted above, LightSquared has announced that it entered into an agreement with the Indian Health Service to provide satellite service to American Indian and Alaska native communities until 2020.

¹²² See *2010 SkyTerra ATC Modification Order*, 25 FCC Red at 3045, 3046, ¶ 7; *ATC Second Reconsideration Order*, 20 FCC Red at 4633, ¶ 47; *Cf. ATC Report and Order*, 18 FCC Red at 2036, ¶ 143 ("While we adopt rules to prevent harmful interference, we do not intend to prohibit L-band MSS operators from agreeing to less restrictive limitations on MSS ATC. We support and encourage private negotiations among interested parties in the [L-Band] and will consider waiver requests of these rules based on negotiated agreements."); see also 47 C.F.R. § 25.253(a)(2) and (3), 47 C.F.R. § 25.253(c)(3).

waiver, the substantial public benefit of rationalizing MSS L-band spectrum might not be realized any time soon.

32. Grant of the waiver enhances LightSquared's ability to rationalize the MSS L-band spectrum through private arrangements, thus supporting deployment of broadband satellite and satellite/terrestrial services in the band. As such, a waiver is consistent with the purpose of the gating criteria because it will ensure that the L-band is capable of supporting next-generation MSS and broadband satellite/terrestrial services that cannot otherwise be deployed in the L-band today. Unlike other MSS bands, much of the L-band spectrum will not be suitable for broadband without such coordination.

33. *Investment in Dual-Mode Service and Device Offerings.* LightSquared's filing demonstrates a commitment to developing an integrated MSS/ATC marketplace, including dual-mode devices. As noted above, LightSquared states that it has invested over \$50 million towards this end.¹²³ LightSquared maintains that because of the outcome of these investments, manufacturers will be able to make integrated MSS/ATC devices available at prices equal to functionally identical terrestrial-only devices.¹²⁴ LightSquared claims that integrated satellite/terrestrial data cards will be available by the third quarter of 2011 and integrated satellite/terrestrial smartphones by the second quarter of 2012.¹²⁵ Moreover, as the record shows, LightSquared's actions will improve the ability of small, rural wireless providers to utilize ubiquitous MSS spectrum and the MSS/ATC device marketplace being advanced by LightSquared.¹²⁶ LightSquared offers to submit quarterly status reports to demonstrate that integrated satellite/terrestrial component parts remain available from mainstream component suppliers.¹²⁷ The expected result of these investments further assures us that, consistent with the purpose of the integrated service rule, services and devices will be readily available on commercially attractive terms to serve marketplace demand for integrated MSS/ATC capabilities.

34. *Unique Terrestrial Buildout Obligations in the MSS L-band.* Under the *SkyTerra/Harbinger Order*, LightSquared must satisfy significant terrestrial buildout milestones for its integrated satellite/terrestrial 4G network using the MSS L-band. Specifically, separately from its satellite coverage, LightSquared must provide coverage to at least 100 million people by the end of 2012, at least 145 million people by the end of 2013, and at least 260 million people by the end of 2015.¹²⁸ As the Bureau stated in the *SkyTerra/Harbinger Order*, if LightSquared succeeds in reaching these milestones to build out its integrated satellite/terrestrial 4G mobile broadband network, certain public interest benefits will have been achieved. Deployment of LightSquared's network will expand the capabilities of traditional MSS offerings and make terrestrial mobile wireless broadband service available to a wider variety of users. For example, we expect that LightSquared will actively market to rural areas that do not currently have access to broadband services.¹²⁹ The public safety and homeland security communities will also benefit from a broadband service that is readily available when they are operating in or transitioning between urban, suburban, or rural environments. The Bureau noted that LightSquared's network will

¹²³ LightSquared ATC Modification Request, Narrative at 4.

¹²⁴ LightSquared ATC Modification Request, Narrative at 5.

¹²⁵ *See id.*

¹²⁶ *See* Open Range Comments at 4; Rural Cellular Association Comments at 4-5.

¹²⁷ LightSquared ATC Modification Request, Narrative at 5-6.

¹²⁸ *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3085, 3088-89, 3098, ¶¶ 56, 72, App. B (Harbinger Business Plan Letter of March 26, 2010) at Attach. 2.

¹²⁹ *See* Rural Cellular Association Reply at 4 ("LightSquared's commitments, together with the attractiveness of an integrated MSS/ATC service to rural service providers, give ample assurance that the mobile broadband subscriber utilizing the service will continue to receive the benefits of an integrated MSS/ATC offering").

enhance competition for terrestrial mobile wireless broadband services, giving consumers additional options when choosing a broadband service provider.¹³⁰ As LightSquared demonstrated in the context of the Harbinger/SkyTerra transaction, the expansive terrestrial network capable of communicating with MSS/ATC integrated devices will complement and help advance its next-generation of MSS.¹³¹ Additionally, LightSquared's commitments in the *SkyTerra/Harbinger Order* indicate to us that integrated satellite/terrestrial services will be a significant part of their business, even if its showing above does not comport with the strict letter of the integrated service rule.

35. *LightSquared Commitments.* Finally, LightSquared offers numerous commitments, many of which we impose as waiver conditions, below, to ensure consistency with the purposes of the gating criteria and the integrated service rule. First, the conditions will ensure that LightSquared actively markets MSS that is available nationwide and accessible across LightSquared's MSS L-band spectrum. Second, the conditions, combined with LightSquared's prior and ongoing investments, will ensure market availability of dual-mode devices and, equally importantly, ensure that LightSquared has economic incentives to promote the use of MSS/ATC by making the cost of these devices competitive with similar terrestrial-only devices. Finally, the conditions place filing obligations on LightSquared that will permit the Commission to monitor key indicators of whether outcomes consistent with the purpose of the gating criteria and the public interest actually materialize. If they do not, the Bureau can take further action to modify LightSquared's ATC authority, as needed. We emphasize that we analyze these commitments in the context of the totality of the facts and circumstances surrounding LightSquared's proposal.

D. Action and Conditions

36. We therefore grant LightSquared a waiver of the integrated service rule set forth in Section 25.149(b)(4) of the Commission's rules, and permit LightSquared to proceed with its proposed service offerings, subject to the following conditions:

- I. *Ensuring market availability of substantial MSS*
 - A. LightSquared shall make available and actively market a commercially competitive satellite service.
 - B. LightSquared shall dedicate at least 6 MHz of MSS L-band spectrum, nationwide, exclusively to satellite service.
 - C. LightSquared shall ensure that its satellite(s) are capable of operating across the entirety of LightSquared's MSS L-band spectrum.
 - D. LightSquared shall ensure that satellite-capable devices (both integrated MSS/ATC devices and satellite-only devices) using its MSS L-band spectrum are capable of operating across the entirety of LightSquared's MSS L-band spectrum.
- II. *Ensuring market availability of commercially competitive satellite/terrestrial services and devices*
 - A. LightSquared shall offer commercially competitive satellite/terrestrial service offerings with an integrated unit rate that includes a substantial¹³² quantity of satellite capacity.

¹³⁰ Free Press, *et al.*, Reply at 1-5 (LightSquared plan will enhance mobile and mobile broadband competition).

¹³¹ See *SkyTerra/Harbinger Order*, 25 FCC Rcd at 3096-97, App. B (Harbinger Business Plan Letter of March 26, 2010) at Attach. 1 at 1-2.

¹³² We note that, in its commitments, LightSquared stated that its customers "will receive 500 kB of satellite usage, with a competitively-priced, usage-sensitive charge for satellite usage above this amount." LightSquared ATC Modification Request, Narrative at 6 (as corrected by LightSquared Erratum).

LightSquared shall adequately notify the public and all of its potential and actual customers of the availability of these integrated service offerings.

- B. LightSquared shall ensure that integrated, dual-mode MSS/ATC-capable L-Band devices are readily available in the marketplace no later than September 30, 2011, for datacards and no later than the June 30, 2012, for smartphones.
- C. To promote retail availability of MSS/ATC-capable devices at prices equal to those of functionally identical devices without satellite capability, LightSquared shall ensure, via subsidy as necessary, that component parts essential for MSS/ATC devices (including chipsets and RF elements) are widely available from mainstream supplier(s) on pricing terms equal to those that apply to equivalent components without MSS/ATC capability. LightSquared shall adequately notify the public and all of its potential and actual customers of the availability of this subsidy.
- D. LightSquared shall ensure that it uses a single, technically integrated network (including its core network and business and operations support systems) for all MSS/ATC traffic, regardless of whether the traffic passes through satellite or terrestrial conduits.
- E. LightSquared shall not offer preferential terms to customers that offer terrestrial-only service, or otherwise discourage its customers from offering integrated MSS/ATC.

III. *Reporting Requirements*

- A. LightSquared shall submit to the Commission, beginning on April 30, 2011, semi-annual filings that identify the number of terminals on, and active users of, its network that fall under each of the following categories MSS-only; MSS/ATC; and terrestrial-only. The information contained in these filings shall be current as of the end of the calendar quarter (*i.e.*, March 31 or September 30) immediately preceding the date the filing is due to be filed with the Commission.
- B. LightSquared shall submit to the Commission, beginning on April 30, 2011, quarterly filings that identify the availability of dual-mode components (including, chipsets and RF elements) from mainstream component supplier(s). The information contained in these filings shall be current as of the end of the calendar quarter (*i.e.*, March 31, June 30, September 30, or December 31) immediately preceding the date the filing is due to be filed with the Commission.

37. *Scope of waiver.* In light of the totality of the facts and circumstances unique to LightSquared's proposal, discussed above—including LightSquared's (1) provision of substantial MSS; (2) ongoing investments to rationalize the MSS L-band spectrum for improved MSS and MSS/ATC use; (3) investment in the creation of a dual-mode MSS/ATC service and device marketplace; (4) unique terrestrial buildout requirements; and (5) specific commitments to support the purposes of the MSS/ATC gating criteria by offering ubiquitous, nationwide satellite service and taking action to create an MSS/ATC service and device marketplace where none appears to exist today—we find good cause to grant LightSquared a waiver of Section 25.149(b)(4) of the Commission's rules, the integrated service rule, subject to conditions. We emphasize that the waiver is predicated on the specific combination of facts and circumstances before us. As such, and consistent with the comments of Iridium and AT&T, we limit the scope of this conditional waiver to LightSquared in its use of MSS L-band spectrum.¹³³

¹³³ See Iridium Comments at 1, 4; AT&T Comments at 12-13. We reiterate that the relief we are granting LightSquared is based on the specific totality of the facts before us. Should the totality of the facts with regard to another, future applicant be different, our analysis would need to take into account the differences and the disparate facts. Thus, arguments regarding how we should address hypothetical, future, filings are irrelevant to our waiver (continued....)

38. *Licensee-specific waiver.* The relief that we grant falls squarely within that provided in a licensee-specific waiver. We performed an individual assessment of the application before us—in light of the rules and the Commission’s waiver standard. We therefore reject commenter arguments that we should instead address the remaining issues concerning the gating criteria raised in this proceeding in an industry-wide rulemaking proceeding. We neither modify the Commission’s MSS/ATC rules or policies generally, nor seek to examine them generally for all MSS operators or all MSS spectrum.¹³⁴

V. GPS AND OTHER INTERFERENCE CONCERNS

A. GPS-Related Interference Concerns

39. Several commenters raise concerns about potential interference to GPS receivers and other devices that may result from operation of LightSquared’s base stations,¹³⁵ while LightSquared asserts that it continues to meet its obligations with regard to addressing interference concerns.¹³⁶ NTIA also expresses concern that LightSquared’s services could adversely impact GPS and other GNSS receivers, and asks that the Commission address these inference issues before interference occurs.¹³⁷ We emphasize that any potential interference to GPS is a significant concern, and note that the Spectrum Task Force at the Commission recently established an internal technical working group dedicated to examining this issue.

40. The U.S. GPS Industry Council proposes that NTIA, working with industry and government technical experts, examine the potential for interference within a reasonable time frame, not to exceed 90 days.¹³⁸ In its letter, NTIA states that, if the Commission grants LightSquared’s request, the Commission should establish a process that will ensure the interference issues are resolved prior to LightSquared’s offering service that could cause interference, and that will motivate all parties to move expeditiously and in good faith to resolve the issues.¹³⁹ NTIA further states that it stands ready to work with the Commission, LightSquared, and affected parties and concerned Federal agencies to address these interference concerns.¹⁴⁰ More recently, LightSquared states that it takes the concerns raised by the GPS community about possible overload of GPS devices by LightSquared’s base stations very seriously, and that it is appropriate for interested parties to devote resources to a solution as soon as possible.¹⁴¹

(Continued from previous page)

analysis here. *Cf.* Globalstar Reply at 6-7 (arguing Globalstar “should be able to obtain similar terrestrial flexibility through an analogous . . . waiver request”).

¹³⁴ We decline to adopt AT&T’s proposal that any relief granted in this proceeding be contingent on the Commission adopting rules in the pending MSS rulemaking and affirmatively applying any new rules to LightSquared. Such a proposal is beyond the scope of this proceeding.

¹³⁵ GPS receivers are used for many types of applications ranging from synchronizing base stations in wireless networks to location-based services involving consumer devices such as wireless handsets and personal navigation devices.

¹³⁶ LightSquared Reply Comments at 19-21. LightSquared also notes that it and its predecessor MSV have entered into multiple agreements with the U.S. GPS Industry Council to address concerns about potential interference. *Id.* at 19-20.

¹³⁷ NTIA Letter at 1.

¹³⁸ U.S. GPS Industry Council January 7, 2011 *Ex Parte* at 2 (arguing that LightSquared’s application not be granted until this analysis is transmitted to the Commission).

¹³⁹ NTIA Letter at 1.

¹⁴⁰ NTIA Letter at 1.

¹⁴¹ Letter from Sanjiv Ahuja, Chairman and CEO of LightSquared, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed Jan. 21, 2011) (LightSquared January 21 *Ex Parte* Letter) at 1. We note that LightSquared previously has met with NTIA officials regarding establishment of an industry working group.

LightSquared professes confidence that the issues can be resolved without delaying deployment of its network. At the same time, in order to address the concerns raised, LightSquared states that it would accept, as a condition of the grant of its request, the creation of a process to address interference concerns regarding GPS and, further, that this process must be completed to the Commission's satisfaction before LightSquared commences offering commercial service, pursuant to the approval of its request, on its L-Band MSS frequencies.¹⁴² Further, LightSquared commits to working diligently and cooperatively with the Commission, NTIA and the Federal agencies, and the GPS community to help resolve the interference issues through a rigorous process that can address these issues in a comprehensive manner.¹⁴³

41. We agree on the need to address the potential interference concerns regarding GPS as LightSquared moves forward with plans to deploy and commence commercial operations on its network.¹⁴⁴ Further, we believe that establishing a working group that brings LightSquared and the GPS community together to address these interference issues expeditiously would serve the public interest. We envision a working group in which cooperative and candid discussions can ensue, and where information, including proprietary information, can be shared among the participants with appropriate measures in place to protect the confidentiality of that information. Commission staff will 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. As a condition of granting this waiver, the process described below addressing the interference concerns regarding GPS must be completed to the Commission's satisfaction before LightSquared commences offering commercial service pursuant to this waiver on its L-band MSS frequencies.

42. As an additional condition of granting this waiver, we require LightSquared to help organize and fully participate in the working group described above. The working group shall focus on analyzing a variety of types of GPS devices for their susceptibility to overload interference from LightSquared's terrestrial network of base stations, identifying near-term technical and operational measures that can be implemented to reduce the risk of overload interference to GPS devices, and providing recommendations on steps that can be taken going forward to permit broadband wireless services to be provided in the L-Band MSS frequencies and coexist with GPS devices. Because the GPS interference concerns stem from LightSquared's transmissions in its authorized spectrum rather than transmissions in the GPS band, the Commission expects full participation by the GPS industry in the working group and expects the GPS industry to work expeditiously and in good faith with LightSquared to ameliorate the interference concerns.

43. Further, we require that LightSquared submit an initial report to the FCC and NTIA by February 25, 2011, that includes a work plan outlining key milestones for the overall analyses. In addition, LightSquared must submit progress reports on the 15th day of each succeeding month or first business day thereafter. The first of these reports must at a minimum include base station transmitter characteristics, categories of GPS devices and their representative performance characteristics, and test plans and procedures. LightSquared is further required to submit a final report no later than June 15, 2011, that includes the working group's analyses of the potential for overload interference to GPS devices from LightSquared's terrestrial network of base stations, technical and operational steps to avoid such interference, and specific recommendations going forward to mitigate potential interference to GPS devices. The Bureau reserves the right to adjust the reporting dates and requirements in consultation with

¹⁴² LightSquared January 21 *Ex Parte* Letter at 1.

¹⁴³ LightSquared January 21 *Ex Parte* Letter at 2.

¹⁴⁴ The conditions adopted herein do not affect LightSquared's obligation to meet the buildout commitments established in the *SkyTerra/Harbinger Order*.

NTIA. The process will be complete once the Commission, after consultation with NTIA, concludes that the harmful interference concerns have been resolved and sends a letter to LightSquared stating that the process is complete.

B. Other Interference Concerns

44. In its letter, NTIA also raised concerns about the impact of LightSquared's proposed operations on priority and preemptive access requirements for L-Band aeronautical and maritime safety services,¹⁴⁵ and in connection with Department of Defense (DoD) use of Inmarsat L-Band services.¹⁴⁶ Both concerns were also raised previously by NTIA and addressed in the *2010 SkyTerra ATC Modification Order*. With respect to priority and preemptive access, the *2010 SkyTerra ATC Modification Order* required LightSquared to "present the Commission and NTIA no later than six months prior to commencement of commercial ATC operation with any [new air interface protocol], a more detailed written demonstration of how operation with such protocol(s) will comply with the requirements of US308 and US315."¹⁴⁷ With respect to DoD use of Inmarsat L-Band service, the *2010 SkyTerra ATC Modification Order* indicated that the Commission expects LightSquared "to continue to work with the DoD in order to resolve DoD's concerns" and that it is "incumbent upon Inmarsat and its customers . . . to work in good faith now to mitigate any negative impacts resulting from changes in spectrum use."¹⁴⁸ Nothing in this Order is intended to alter those requirements or expectations in any way. We agree with NTIA, however, that in addressing these matters consistent with the *2010 SkyTerra ATC Modification Order*, LightSquared will need to address any impact that may be caused by its ATC operations, and any attendant increase in duty cycles or potential for interference. Furthermore, we remind all parties that the *2010 SkyTerra ATC Modification Order* was premised on Inmarsat's and LightSquared's willingness to share technical information and cooperate with interested parties to develop effective solutions to any interference concerns that may arise as a result of the Inmarsat/LightSquared arrangement.¹⁴⁹

VI. ORDERING CLAUSES

45. Accordingly, IT IS ORDERED, pursuant to Section 309 of the Communications Act, 47 U.S.C. § 309, and Section 0.261 of the Commission's rules, 47 C.F.R. § 0.261, that Application File No. SAT-MOD-20101118-00239 IS GRANTED IN PART AND DENIED IN PART, and LightSquared Subsidiary LLC's authorization for Ancillary Terrestrial Component operations (Call Sign: S2358) is modified to include authority to provide terrestrial service as described in its application, and subject to the conditions specified in paragraphs 36 and 41-43 of this Order.

¹⁴⁵ NTIA Letter at 4. NTIA states a concern that a shift toward terrestrial-only use of L-Band could reduce or eliminate access to the spectrum for aeronautical and maritime safety services.

¹⁴⁶ *Id.* at 5. NTIA observes that the potentially increased duty cycle from terrestrial-only uses may increase the probability of interference to Inmarsat receivers used by DoD.

¹⁴⁷ *2010 SkyTerra ATC Modification Order*, 25 FCC Rcd at 3054, 3057-58, ¶¶ 33, 46. US 308 and US315 are footnotes concerning priority and preemptive access that appear in the U.S. Table of Frequency Allocations, 47 C.F.R. § 2.106.

¹⁴⁸ *2010 SkyTerra ATC Modification Order* 25 FCC Rcd at 3056, ¶ 39; *see also* Letter from Diane J. Cornell, Vice President Government Affairs, Inmarsat, to Marlene H. Dortch, Secretary, Federal Communications Commission (filed Jan. 18, 2011) (noting that LightSquared and Inmarsat are engaged in coordination efforts designed "to ensure that Inmarsat's USG customers will be able to continue operating on the Inmarsat mobile satellite network during and after the implementation of LightSquared's planned ATC system").

¹⁴⁹ *2010 SkyTerra ATC Modification Order*, 25 FCC Rcd at 3054, 3056, ¶¶ 32, 39.

46. IT IS FURTHER ORDERED that this authorization is further subject to the representations and limiting specifications in the application for modification; the previously-established terms and conditions for operation of the SkyTerra-1 satellite¹⁵⁰ and associated ATC facilities, except as modified herein; and the Commission's applicable rules and regulations, except as explicitly waived herein.

47. IT IS FURTHER ORDERED that a partial waiver of the integrated service requirement, 47 C.F.R. § 25.149(b)(4), IS GRANTED to LightSquared, subject to the conditions specified in paragraph 36 and 41-43 of this Order.

48. IT IS FURTHER ORDERED that LightSquared may commence offering commercial service on its MSS L-band frequencies under the authority granted herein only upon the completion of the process for addressing interference concerns relating to GPS, as set forth in paragraphs 41-43 of this Order. As further detailed in paragraphs 41-43 of this Order, LightSquared shall help organize and fully participate in a GPS interference technical working group, and shall submit working group reports to the Commission and to NTIA. An initial report shall be submitted on February 25, 2011. Progress reports shall be submitted on a monthly basis thereafter, due on the 15th day of each month (or, if that day is a holiday as defined in 47 C.F.R. § 1.4(e)(1), on the first business day thereafter), and the final report shall be submitted no later than June 15, 2011. The process will be complete once the Commission, after consultation with NTIA, sends a letter to LightSquared stating that the process is complete.

49. IT IS FURTHER ORDERED that the reports required in paragraphs 36 and 43, above, must be filed with the Commission's Secretary, referencing SAT-MOD-20101118-00239, and copies must be sent by email to IB-SATFO@fcc.gov.

50. IT IS FURTHER ORDERED that the Wireless Communications Association International, Inc.'s Petition to Deny IS DENIED.

51. IT IS FURTHER ORDERED that this Order is effective upon release. Petitions for reconsideration under 47 C.F.R. § 1.106 or applications for review under 47 C.F.R. § 1.115 may be filed within thirty days of the release date. See 47 C.F.R. § 1.4(b)(2).

Federal Communications Commission

Mindel De La Torre
Chief, International Bureau

¹⁵⁰ Thus, this Order does not alter or eliminate the previously-imposed bandwidth limits on L-Band operation via SkyTerra-1. See *Mobile Satellite Ventures Subsidiary LLC, Order and Authorization*, 20 FCC Rcd 9752, 9757 ¶ 14, 9773 ¶ 56 (Int'l Bur. 2005).