

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Fixed and Mobile Services in the)	ET Docket No. 10-142
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)	

REPLY COMMENTS OF GLOBALSTAR, INC.

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Summary

Globalstar, Inc. (“Globalstar”) applauds commenters’ almost universal support for the Federal Communications Commission’s (“Commission’s” or “FCC’s”) fundamental goals in this proceeding. Virtually all commenters – from both the terrestrial wireless and mobile satellite service (“MSS”) industries – support the Commission’s (and the National Broadband Plan’s) basic objective of making additional spectrum in the MSS bands available for terrestrial broadband use. Numerous commenters also believe that a robust satellite capability must be preserved to meet the communications needs of the public safety community and consumers in rural and remote areas of the United States.

Commenters agree that the Commission should apply secondary market rules to MSS licensees in order to promote more intensive, efficient, and innovative use of MSS spectrum. Like Globalstar, numerous commenters urge the Commission to apply the same secondary market rules to MSS licensees as currently applied to terrestrial wireless, thereby permitting MSS licensees to enter into *de facto* transfer lease arrangements with prospective terrestrial operators. In addition, Globalstar agrees with commenters that the Commission should not restrict the ability of specific terrestrial wireless operators to lease MSS spectrum.

A number of parties support relaxing the existing ancillary terrestrial component (“ATC”) “gating” requirements and granting greater flexibility for terrestrial operations in MSS spectrum, arguing that this more flexible regulatory approach will yield substantial public interest benefits and help further the goals of the National Broadband Plan. In its own comments, Globalstar set forth a detailed policy blueprint, describing a less prescriptive, more flexible regulatory framework for terrestrial use of MSS spectrum. Under Globalstar’s proposed framework, MSS licensees that provide substantial satellite service would have substantial flexibility with respect to end-user equipment, customer subscriptions, the kinds of services provided, choice of technology, and lease arrangements. The Commission should move forward quickly with an NPRM that proposes such comprehensive change in the MSS bands.

To the extent possible, the Commission should incorporate technical rules for terrestrial systems in MSS spectrum that are equivalent to those rules currently applied to licensees in terrestrial wireless bands. To this end, the Commission should reject two commenters' proposed technical restrictions on terrestrial operations in Globalstar's Big LEO L-band spectrum. First, the Commission should reject Iridium's argument that expanded terrestrial operations in the Big LEO L band could harm its current or future mobile satellite services. Iridium's MSS offerings will be fully protected by the out-of-band emissions limits and other technical rules applicable to terrestrial operations at 1610-1617.775 MHz. Nor is there any technical basis for the U.S. GPS Industry Council's proposed interference mitigation requirements. The existing out-of-band emission limits for terrestrial operations in the Big LEO L band appear more than sufficient to protect GPS systems from harmful interference.

The Commission should also reject CTIA's baseless allegation that Globalstar has not made efficient use of its spectrum. CTIA distorts reality in an apparent effort to protect its incumbent members. Having invested over \$5 billion in its first- and second-generation MSS network, Globalstar is making and will continue to make full, intensive use of the Big LEO MSS band. Globalstar currently provides affordable, high-quality service to over 400,000 customers in 120 countries, and its second-generation satellite network is expected to support reliable and effective voice and data services at least until 2025.

Commenters were universally opposed to spectrum fees, which would do nothing to increase MSS licensees' existing incentive to make efficient use of their spectrum. In addition, no commenter disputed the fact that voluntary incentive auctions are ill-suited to the Big LEO MSS band, where careful coordination between Globalstar's MSS operations and terrestrial operations will be necessary to avoid harmful interference to customers' MSS offerings. Rather than rely on incentive auctions, the best way for the Commission to incorporate the Big LEO band into the nation's broadband spectrum inventory is to adopt a more flexible regulatory framework for terrestrial use of MSS spectrum.

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REPLY COMMENTS OF GLOBALSTAR, INC.

Globalstar, Inc. (“Globalstar”) hereby replies to comments on the above-captioned Notice of Proposed Rulemaking and Notice of Inquiry.¹ Globalstar applauds commenters’ strong support for the Federal Communications Commission’s (“Commission’s” or “FCC’s”) goal of eliminating regulatory barriers to terrestrial use of existing mobile satellite service (“MSS”) spectrum while ensuring that the United States maintains its robust MSS capabilities. Like Globalstar, numerous parties also favor relaxation of the current ancillary terrestrial component (“ATC”) “gating” requirements and more flexible rules for terrestrial operations in MSS spectrum. In its own comments, Globalstar presented a comprehensive proposal for a less prescriptive, more flexible regulatory framework for terrestrial use of the MSS bands. The Commission should expeditiously issue an NPRM that tentatively adopts this proposed regulatory framework, which will promote terrestrial broadband investment and generate a range of other critical public interest benefits.

¹ *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) (FCC 10-126) (“*NPRM/NOI*”).

I. COMMENTERS SUPPORT THE FCC'S FUNDAMENTAL GOALS IN THIS PROCEEDING AND THE KEY PROPOSALS IN THE NPRM

In response to the *NPRM/NOI*, commenters almost universally express support for the Commission's fundamental goals in this proceeding. Almost all commenters – from both the terrestrial wireless and MSS industries – support the Commission's (and National Broadband Plan's) basic objective of making additional spectrum in the MSS bands available for terrestrial broadband use. On the terrestrial side, CTIA commends “[t]he Commission’s effort to make additional spectrum available for mobile broadband through removing regulatory barriers to terrestrial use of MSS spectrum.”² Similarly, the MSS ATC Coalition supports the Commission’s goal of “‘creat[ing] opportunities for terrestrial use’ in the MSS bands,”³ while LightSquared “applauds the Commission’s effort to facilitate additional investment in terrestrial use of [MSS] spectrum for wireless broadband.”⁴ Numerous commenters also agree on the need to preserve satellite capability in the United States and elsewhere. The MSS ATC Coalition points out that “MSS plays a unique and valuable role in providing ubiquitous communications, mobility, and redundancy,”⁵ while AT&T cites Commissioner Mignon Clyburn’s view that the *NPRM/NOI* “underscores the importance of maintaining MSS to provide services for the needs

² Comments of CTIA – The Wireless Association® at 2 (“CTIA Comments”). In its comments, AT&T states that “to support the growth in demand for wireless broadband services and to promote the economic and technological development it stimulates, additional spectrum must be made available for wireless broadband uses.” Comments of AT&T, Inc. at 3 (“AT&T Comments”). AT& T points out that “the ever expanding demand for mobile services is exhausting the capacity of wireless networks.” *Id.* at 2. (Unless otherwise indicated, all comments cited herein were filed in ET Docket No. 10-142 on September 15, 2010.)

³ Comments of the MSS ATC Coalition at 1 (“MSS ATC Coalition Comments”).

⁴ Comments of LightSquared Subsidiary LLC at 1 (“LightSquared Comments”). *See also* Comments of Verizon Wireless at 1-2 (“Verizon Wireless Comments”); Comments of New DBSD Satellite Services G.P. at 2 (“DBSD Comments”); Comments of TerreStar Networks Inc. at 3 (“TerreStar Comments”); Comments of EchoStar Satellite Services L.L.C. at 1-2 (“EchoStar Comments”).

⁵ MSS ATC Coalition Comments at 1.

of public safety and federal government agencies, for rural areas, and for those areas that have suffered severe damage during natural disasters.”⁶

Significantly, all commenters who address the Commission’s proposals in the *NPRM* portion of its *NPRM/NOI* express basic support for them. All of these parties favor adding primary Fixed and Mobile allocations to the 2 GHz MSS band,⁷ and commenters also agree that the Commission should apply secondary market rules to MSS licensees. Verizon Wireless points out that the Commission’s spectrum leasing rules “have proven extremely effective at allowing spectrum to flow to its best and most efficient use as demand and supply conditions change,”⁸ while T-Mobile states that “[e]xtending the secondary markets regime would facilitate more intensive, efficient and innovative use” of MSS spectrum.⁹ MSS licensee TerreStar Networks points out that “[t]he secondary market procedures have a proven track record and have worked well,”¹⁰ and LightSquared argues that application of secondary market rules to MSS spectrum “would likely have the effect of accelerating deployment of ATC networks.”¹¹

⁶ ATT Comments at 15 (citation omitted). *See also* DBSD Comments at 2-3; TerreStar Comments at 12-13; Comments of Inmarsat, Inc. at 1-2, 10-11; LightSquared Comments at 11, 13; Comments of Mobile Satellite Users Association at 1-3 (Sept. 14, 2010) (“MSUA Comments”).

⁷ *See, e.g.*, CTIA Comments at 10-11; AT&T Comments at 5-7; Verizon Wireless Comments at 3-4; Comments of T-Mobile USA, Inc. at 2-4 (“T-Mobile Comments”); Comments of Cricket Communications, Inc. at 4-5 (“Cricket Comments”); TerreStar Comments at 4-5; EchoStar Comments at 4-5.

⁸ Verizon Wireless Comments at 5.

⁹ T-Mobile Comments at 4. *See also* AT&T Comments at 7-8; EchoStar Comments at 5.

¹⁰ TerreStar Comments at 5.

¹¹ LightSquared Comments at 8.

Like Globalstar, numerous commenters believe that the Commission should apply the *same* secondary market rules to MSS licensees as currently applied to terrestrial wireless.¹² AT&T states that “the MSS secondary market process should mirror the process in place for other wireless services,”¹³ while T-Mobile asserts that “there is no reason to limit the types of leases available in the MSS bands.”¹⁴ DBSD argues that “[t]o achieve the full benefits of the secondary market spectrum leasing framework, the Commission should allow MSS/ATC spectrum licensees and lessees the flexibility to choose from the full range of leasing options permitted under the existing framework.”¹⁵ As a number of commenters point out, a “mirrored” application of the secondary market rules will mean that MSS licensees can enter into *de facto* transfer lease arrangements with prospective terrestrial operators. Terrestrial wireless provider Cricket Communications cites the benefits of *de facto* transfer leasing arrangements, arguing that such arrangements in MSS spectrum “would enhance the development of MSS/ATC services and promote competition by permitting more flexible use of the spectrum. If a spectrum manager lease were the only option, potential lessees with innovative ideas and complementary assets might be deterred from entering into arrangements where they could not control their offering to the public.”¹⁶ Any concern that *de facto* transfer lessees might threaten interference to incumbent MSS operations is misplaced, since, as TerreStar points out, “*de facto* leases can be structured to ensure compliance with any relevant Commission rules or policies.”¹⁷ Certainly, as

¹² See, e.g., LightSquared Comments at 8-9; TerreStar Comments at 5-6; AT&T Comments at ii, 8.

¹³ AT&T Comments at ii.

¹⁴ T-Mobile Comments at 5.

¹⁵ DBSD Comments at 9.

¹⁶ Cricket Comments at 7.

¹⁷ TerreStar Comments at 6.

LightSquared argues, it would undermine the Commission's goals in this proceeding "to assume that it is impossible for parties to structure leases in such a way that they can meet all applicable policies and rules then in place."¹⁸

In applying the existing spectrum leasing rules to MSS licensees, Globalstar also believes that the Commission should avoid restrictions on the ability of specific terrestrial wireless operators to lease MSS spectrum. As AT&T points out, such constraints would "undermin[e] competition in the market for terrestrial use of the MSS spectrum by limiting the scope of [an MSS licensee's] potential customer base."¹⁹ In Globalstar's view, such a discriminatory approach would be inconsistent with a shift to a more flexible regulatory framework for MSS-terrestrial operations. Such restrictions would likely prevent this spectrum from being utilized by those parties that are able to put it to its best and highest use. Globalstar agrees with AT&T that, for these reasons, the Commission should eliminate the conditions applied to the acquisition of LightSquared by Harbinger Capital Partners Fund that restrict the types of commercial arrangements the combined company can enter into with AT&T and Verizon Wireless.²⁰

¹⁸ LightSquared Comments at 8-9. As Globalstar indicated in its comments, before entering into either type of leasing arrangement, MSS licensees and terrestrial operators will necessarily undertake careful technical coordination between their MSS operations and the planned terrestrial networks. As a result, any lease agreement will incorporate the terms of such coordination, thereby ensuring that terrestrial wireless operators take the steps necessary to operate in MSS spectrum on an acceptable basis. Comments of Globalstar, Inc. at 20 ("Globalstar Comments").

¹⁹ AT&T Comments at 11.

²⁰ AT&T Comments at 8-11; Verizon Wireless Comments at 6-7 n.21. *See SkyTerra Communications, Inc., Transferor and Harbinger Capital Partners Funds, Transferee; Applications for Consent to Transfer of Control of SkyTerra Subsidiary, LLC*, Memorandum Opinion and Order and Declaratory Ruling, 25 FCC Rcd 3059, ¶ 72 (2010).

Given commenters' broad support for the Commission's proposals in the *NPRM* portion of the *NPRM/NOI*, Globalstar urges the Commission to move quickly to a Report and Order on these issues as a first step toward a new regulatory framework for the MSS bands.

II. NUMEROUS COMMENTERS SUPPORT RELAXATION OF THE GATING REQUIREMENTS AND GREATER FLEXIBILITY FOR TERRESTRIAL OPERATIONS IN MSS SPECTRUM

Consistent with the National Broadband Plan's goal of "remov[ing] legacy constraints that limit the usefulness of a band for appropriate broadband services and applications,"²¹ a number of MSS and wireless industry commenters support a relaxation of the Commission's existing MSS ATC "gating" requirements and greater flexibility for terrestrial operations in MSS spectrum. These parties argue that this more flexible regulatory approach will yield substantial public interest benefits. The MSS ATC Coalition states that greater flexibility for terrestrial use of MSS spectrum "will help realize the benefits of MSS while ensuring more efficient spectrum use and additional competition for the benefit of the public."²² Noting that "certain elements of the gating criteria have become more of a limitation than an incentive to provide substantial satellite service,"²³ TerreStar says that "[p]roviding greater flexibility and regulatory certainty for MSS licensees will optimize the conditions for MSS's contributions to universal broadband service."²⁴ DBSD asserts that "[p]roviding more permanent relief from certain ATC gating criteria could provide greater regulatory certainty and stimulate the long term capital investments that are necessary for the MSS bands to be fully and efficiently utilized by consumers in the

²¹ FCC, "Connecting America: The National Broadband Plan," at 85 (rel. March 16, 2010), *available at*: <<http://download.broadband.gov/plan/national-broadband-plan.pdf>> ("National Broadband Plan").

²² MSS ATC Coalition Comments at 9.

²³ TerreStar Comments at 7.

²⁴ *Id.* at 3.

United States.”²⁵ Finally, Cricket, a terrestrial wireless service provider, points out that “more flexible rules are necessary to help unleash” the “great promise” of the MSS bands, and that greater flexibility for MSS licensees’ terrestrial operations in MSS spectrum “is the most expeditious approach to increasing the value and utility of these bands in meeting the public’s growing demand for wireless broadband service.”²⁶

Understanding the untapped potential of the MSS bands, Cricket, like Globalstar, believes strongly that the Commission should not apply an “integrated service gating requirement” that effectively mandates that all terrestrial devices operating over MSS spectrum have dual-mode capability. Cricket points out that while dual-mode devices “are indispensable to an important subset of consumers,” “[n]ot all consumers . . . will want or require the full panoply of service capabilities a hybrid MSS ATC network offers.”²⁷ Cricket understands that “[i]f an MSS/ATC venture can only provide expensive, oversized handsets and MSS-capable terminals to urban residents, these units will simply languish in the warehouse.”²⁸ Cricket accurately diagnoses the long-term harm that the current dual-mode requirement, if left intact, may cause to MSS operators and their customers:

Some consumers will have use only for ATC service, whereas others will indeed demand both MSS and ATC capabilities. Prohibiting the first group from getting only what they want and no more both confuses them and unnecessarily raises costs. In the end, failure to address the interests of such a large group of customers only weakens the very service that the “ancillary” requirement was

²⁵ DBSD Comments at 15.

²⁶ Cricket Comments at 3.

²⁷ *Id.* at 10.

²⁸ *Id.* at 2.

intended to protect. *It threatens the sustainability of MSS for the customers who need it (and those who need it really do, in light of the paucity of other options).*²⁹

To address this problem, Cricket proposes a broader “safe harbor” that would require an MSS licensee to provide a dual-mode handset only to consumers requesting one, rather than to all customers. While Globalstar believes that *any* dual-mode requirement is unnecessary and that competition will ensure that dual-mode-capable devices are available to the public, Cricket’s proposal does represent a reasonable policy option. Under Cricket’s proposal, “redundant costs of producing handsets that are not demanded would be minimized, and the market would not be unnecessarily crowded with a product that only a subset of consumers will use.”³⁰

Cricket also recognizes that the Commission’s spare satellite gating requirement imposes substantial additional costs on MSS operators and “may well deter satellite providers and their prospective partners from entering into MSS ATC arrangements.”³¹ TerreStar and LightSquared agree with this view, and they urge the Commission to eliminate the spare satellite requirement. Focusing on the on-ground spare requirement for geostationary MSS licensees, TerreStar argues that this spare satellite obligation results in a “significant amount of cost . . . sunk in building a satellite, which is then tied up for years (with ongoing costs for storage), limiting funds that might otherwise be available for service-related investment and innovation.”³² LightSquared argues that the spare requirement not only “imposes a heavy burden on MSS/ATC licensees,”³³ it is unnecessary, since “[s]atellite operators across the industry have many incentives to provide

²⁹ *Id.* at 11 (emphasis added).

³⁰ *Id.* at 11.

³¹ *Id.* at 12.

³² TerreStar Comments at 8.

³³ LightSquared Comments at 10.

replacement capacity to their customers if an in-orbit satellite fails.”³⁴ Both TerreStar and LightSquared point out that MSS licensees providing ATC service are the only satellite licensees that are subject to this spare satellite obligation.³⁵

Globalstar appreciates and supports the arguments of Cricket, TerreStar, and LightSquared on these specific ATC gating requirements. Globalstar provided a detailed policy blueprint in its comments, presenting a comprehensive proposal for a less prescriptive, more flexible regulatory framework for terrestrial use of the MSS bands.³⁶ Under Globalstar’s proposed regulatory framework, a demonstration of “substantial satellite service” would be the sole prerequisite to a grant of expanded terrestrial authority in MSS spectrum. This substantial satellite service obligation includes a more flexible geographic coverage requirement for non-geostationary (“NGSO”) MSS operators that would require service to all locations in the United States, Puerto Rico, and the U.S. Virgin Islands for at least 90 percent of the time, measured over a 24-hour period. It also eliminates the wasteful spare satellite requirement for NGSO MSS licensees (and potentially also for GSO licensees as requested by the above commenters).³⁷ To ensure continuity of coverage, NGSO MSS licensees would have to certify that, in the event of a future satellite failure, they will exercise due diligence to restore compliant MSS coverage within a reasonable period. If a satellite failure occurs following a grant of terrestrial authority, MSS licensees would be provided a reasonable time to restore coverage, and, during these restoration efforts, those licensees and any terrestrial partners will retain authority to provide terrestrial

³⁴ *Id.* at 9.

³⁵ TerreStar Comments at 9; LightSquared Comments at 9.

³⁶ Globalstar Comments at 9-20.

³⁷ *Id.* at 10-14. As indicated in Globalstar’s comments, to gain expanded terrestrial authority, MSS licensees should also be required to make their MSS offerings commercially available within their coverage area. *Id.* at 16.

wireless to customers.³⁸ Finally, MSS licensees that provide substantial satellite service would be granted flexibility for terrestrial operations similar to that enjoyed by licensees in terrestrial wireless bands. Specifically, these licensees and their terrestrial partners would have substantial flexibility with respect to end-user equipment, customer subscriptions, the kinds of services provided, choice of technology, and lease arrangements with terrestrial operators.³⁹

As described in Globalstar's comments and by other parties, such a flexible regulatory framework will yield extraordinary public interest benefits.⁴⁰ Greater terrestrial flexibility in MSS spectrum will make additional spectrum capacity almost immediately available for mobile broadband services, helping the Commission to reach the National Broadband Plan's goal of securing an additional 500 MHz of spectrum for mobile broadband use. Greater flexibility will also financially re-invigorate all MSS licensees, enabling them to maintain their critical mobile satellite services to the public safety community and consumers in rural and remote locations. Finally, by maximizing spectrum efficiency in the MSS bands, the Commission will stimulate innovation, economic growth, and improved services for consumers.

Accordingly, in order to meet the National Broadband Plan's goal of making the Big LEO band and other MSS spectrum "permanently suitable for terrestrial broadband service,"⁴¹ the Commission should expeditiously issue an NPRM that tentatively adopts this new, more flexible framework for MSS-terrestrial operations. The Commission does not have to and should not wait until it is ready to adopt the additional allocations in the 2 GHz MSS band or act on its secondary market proposal. Globalstar agrees with Cricket that "[t]he Commission need not and

³⁸ *Id.* at 14-15.

³⁹ *Id.* at 16-20.

⁴⁰ *Id.* at 20-31; *see also supra* notes 22-26.

⁴¹ National Broadband Plan at 88.

should not wait for a *Report and Order* in the current proceeding before taking further action to open these bands to greater opportunity and utilization.”⁴²

III. THE COMMISSION SHOULD REJECT PROPOSED RESTRICTIONS ON THE TERRESTRIAL USE OF GLOBALSTAR’S BIG LEO L-BAND SPECTRUM

As described in its comments, Globalstar’s nearly 20 megahertz allotment of terrestrial use spectrum can very quickly be added to the nation’s broadband “spectrum inventory,” likely more rapidly than any other portion of spectrum identified in the National Broadband Plan.⁴³ Globalstar’s authorized terrestrial use spectrum in the S band at 2483.5-2495 MHz and its L-band spectrum at 1610-1617.775 can both support a variety of terrestrial mobile broadband applications and services. Globalstar’s portion of the Big LEO L band enjoys unusually low interference and noise levels as well as highly favorable propagation characteristics, and, as a result, this band segment has among the highest data-carrying potential per hertz of any existing or anticipated commercial wireless band. Notably, the quantitative asymmetry between Globalstar’s L- and S-band terrestrial use spectrum will *not* limit the usefulness of this spectrum for terrestrial operations. Because most bandwidth consumption occurs on the downlink side (by a ratio of approximately 5:1), Globalstar’s L-band uplink and S-band downlink bands are in fact ideal for frequency pairing by a terrestrial operator. Finally, the broadband utility of Globalstar’s L-band spectrum – as well as its 11.5 megahertz of S-band spectrum – is greatly enhanced by the ongoing development of software-defined radio (“SDR”) systems and other frequency-agile

⁴² Cricket Comments at 13. This approach is consistent with the National Broadband Plan’s call for the Commission to “initiate proceedings on [its] recommendations immediately.” National Broadband Plan at 88.

⁴³ Globalstar Comments at 7-9.

technology, which will make it easier for terrestrial wireless service providers to integrate Globalstar's spectrum into their existing terrestrial networks.⁴⁴

Given the terrestrial potential of Globalstar's Big LEO spectrum and other MSS bands, the Commission, to the extent possible, should incorporate technical rules for terrestrial systems in MSS spectrum that are equivalent to those rules currently applied to licensees in terrestrial wireless bands. To this end, the Commission should reject two commenters' proposed technical restrictions on terrestrial operations in Globalstar's Big LEO L-band spectrum. First, Iridium asserts that expanded terrestrial operations in the Big LEO L band could harm its current or future mobile satellite services, and that terrestrial services in this band should therefore remain ancillary.⁴⁵ The Commission should reject this meritless claim, which is entirely unsupported by technical evidence. Iridium's MSS offerings will be fully protected by the out-of-band emissions limits and other technical rules applicable to terrestrial operations at 1610-1617.775 MHz. Thus, terrestrial operations in Globalstar's spectrum will not cause harmful interference – or any other harm – to Iridium's services above 1618.725 MHz.

If Iridium's real concern is that terrestrial use of Globalstar's Big LEO L-band spectrum will prevent Iridium from gaining access to Globalstar's Big LEO L-band spectrum, this concern should be summarily rejected by the Commission. Globalstar has spent over \$1.2 billion toward the deployment of its second-generation MSS constellation and ground infrastructure, and, once launched by mid-2011, Globalstar's satellite network will make intensive use of every available megahertz of L- and S-band spectrum in order to provide an array of services to customers around the world. Globalstar will have no excess L-band frequencies. Moreover, the Commission revised the Big LEO band plan just three years ago, taking 2.6 MHz of L-band

⁴⁴ *Id.*

⁴⁵ Comments of Iridium Satellite LLC at 9.

spectrum from Globalstar and adding it to Iridium's licensed TDMA spectrum allotment.⁴⁶

Iridium provides no reason to revisit that decision in this or any other proceeding. Iridium's extraordinary and unsubstantiated allegations regarding its future spectrum needs should have no bearing on the Commission's consideration of expanded terrestrial operations in Globalstar's Big LEO L-band spectrum.⁴⁷

Second, the U.S. GPS Industry Council ("GPS Council") proposes new technical restrictions for terrestrial operations in MSS spectrum near the 1559-1610 MHz band segment, which is allocated to the Radionavigation-Satellite Service ("RNSS") and used by Global Positioning Service ("GPS") satellites.⁴⁸ While Globalstar appreciates the obvious utility of GPS products and services and the GPS Council's explicit commitment to collaborative technical solutions, it believes that there is no technical basis for the GPS Council's proposed mitigation rules. The existing out-of-band emission limits for terrestrial mobile terminals operating at 1610-1610.775 MHz, adopted by the Commission in Globalstar's ATC licensing proceeding in 2006,⁴⁹ are more stringent than the emission limits specified in the FCC's rules.⁵⁰ Even assuming a robust terrestrial broadband build-out in Globalstar's spectrum, these limits are more

⁴⁶ *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands*, Second Order on Reconsideration, Second Report and Order, and Notice of Proposed Rulemaking, 22 FCC Rcd 19733 (2007).

⁴⁷ Following the deployment of its second-generation MSS network, Globalstar will likely experience increasing demand for its satellite services and may itself need access to additional Big LEO MSS spectrum in order to avoid near-term capacity constraints.

⁴⁸ Comments of the U.S. GPS Industry Council at 13-14.

⁴⁹ See *Globalstar LLC Request for Authority to Implement an Ancillary Terrestrial Component for the Globalstar Big LEO Mobile Satellite Service System*, Order and Authorization, 21 FCC Rcd 398, ¶¶ 23-24 (2006) ("2006 Globalstar ATC Order").

⁵⁰ 47 C.F.R. § 25.254(b)(4). Globalstar and the National Telecommunications and Information Administration agreed on these stricter emission limits during Globalstar's ATC licensing proceeding. *2006 Globalstar ATC Order* ¶¶ 23-24.

than sufficient to protect global positioning systems from harmful interference and need not be tightened further. In addition, the technical restrictions recommended by the GPS Council – including stringent power limits and maximized spectral distance from the GPS band – would eliminate the opportunity for frequency pairing described above, preclude terrestrial broadband deployment in the Big LEO L band, and thereby frustrate the goals of the National Broadband Plan and the Commission’s *NPRM/NOI*.

IV. GLOBALSTAR IS MAKING FULL USE OF ITS LICENSED BIG LEO MSS SPECTRUM

Globalstar agrees with AT&T and CTIA that a “comprehensive band plan” that “consider[s] all the spectrum available for mobile broadband services” could yield significant public interest benefits.⁵¹ In discussing the need for “an inventory of spectrum below 3 GHz,” however, CTIA incorrectly alleges that Globalstar, the world’s largest provider of mobile satellite voice and data services by subscriber count, has not made effective use of licensed spectrum.⁵² As the Commission determines its policy on the terrestrial use of MSS spectrum, it should ignore this mischaracterization of Globalstar’s MSS business. CTIA distorts reality in an apparent effort to protect its members, who could in fact benefit greatly from being able to lease MSS spectrum from Globalstar and other MSS licensees. As Globalstar described in its comments, it is making and will continue to make full, intensive use of its Big LEO MSS spectrum, as mandated by the Commission’s rules and as would be required under Globalstar’s proposed substantial satellite service requirement.⁵³ Since its founding, Globalstar has invested more than \$5 billion toward the development of its first- and second-generation global MSS

⁵¹ AT&T Comments at 15-17; CTIA Comments at 13-15.

⁵² CTIA Comments at 14-15.

⁵³ Globalstar Comments at 3-6, 10-16.

networks. Globalstar was experiencing substantial growth in subscribership and revenues until 2007, when its first-generation constellation suffered an unanticipated degradation of its S-band capability that temporarily precluded consistently reliable duplex voice and data services.

Globalstar has since bounced back by focusing on the development of affordable, consumer-oriented devices and services, most notably offering an innovative MSS device – the SPOT Satellite GPS Messenger – that plays a critical role in the provision of emergency and safety-of-life services to individual consumers beyond terrestrial wireless reach. As Globalstar indicated in its comments, the SPOT device – truly a life-saving product – has thus far been used to initiate more than 650 rescues in over 50 countries on land and at sea.

Even with the degradation of its voice service, Globalstar has continued to enjoy robust growth as a result of the commercial success of the SPOT product line. Globalstar remains the largest provider of mobile satellite voice and data services by subscriber count, providing affordable, high-quality service to over 400,000 customers in 120 countries. In addition to individual consumers, Globalstar’s customers include entities in government, the military, emergency preparedness, transportation, heavy construction, oil and gas, mining, forestry, and commercial fishing. Globalstar’s services are currently available in all areas of the world, except in central and southern Africa, Southeast Asia, and the Indian subcontinent, areas in which Globalstar is working diligently to expand coverage.

As the Commission is reviewing parties’ filings in response to the *NPRM/NOI*, Globalstar will be launching the first six satellites of its second-generation NGSO MSS constellation, scheduled for October 19, 2010. This MSS constellation and Globalstar’s new ground infrastructure will support reliable and effective voice and data services at least until 2025. Globalstar expects to be able to provide current and future customers with new service

features including advanced (and affordable) voice, two-way data, and messaging services, with uplink data speeds of 256 kbps and downlink data speeds of up to 768 kbps for fixed service and up to 256 kbps for mobile service. These second-generation offerings promise great benefits in rural and remote areas, and will bolster competition in the global marketplace for satellite services. As indicated above, Globalstar will need every megahertz of its Big LEO spectrum, at a minimum, in order to provide the array of satellite services that will become possible over its second-generation MSS network.⁵⁴ Accordingly, the Commission should reject or simply ignore CTIA's baseless claim regarding Globalstar's use of its licensed Big LEO spectrum.

V. THERE IS NO SUPPORT IN THE RECORD FOR IMPOSING SPECTRUM FEES OR IMPLEMENTING INCENTIVE AUCTIONS IN THE BIG LEO BAND

In its comments, Globalstar argued that there is no need for the Congress and Commission to impose voluntary incentive auctions or spectrum fees in the MSS bands, since adopting a more flexible regulatory framework for terrestrial operations will maximize the public interest benefits of MSS spectrum.⁵⁵ Every commenter that addresses spectrum fees opposes them. LightSquared argues that spectrum fees would add nothing to MSS licensees' existing incentive to make efficient use of their spectrum, and that fees could well make it more difficult to deploy terrestrial systems.⁵⁶ The Mobile Satellite Users Association believes that spectrum fees "would deter investment in both MSS and ATC networks,"⁵⁷ while the MSS ATC Coalition points to "the challenges of applying spectrum fees to MSS spectrum, which is internationally coordinated spectrum that may not be a fixed assignment, and involves footprints covering

⁵⁴ See *supra* note 47.

⁵⁵ Globalstar Comments at 28 n.58. Globalstar also pointed out that the Commission currently lacks legal authority to adopt these regulatory mechanisms.

⁵⁶ LightSquared Comments at 10-11.

⁵⁷ MSUA Comments at 3-4.

multiple countries.”⁵⁸ For all of these reasons, the Commission should not consider imposing spectrum fees on MSS licensees.

Similarly, no commenter expressed support for using voluntary incentive auctions in the Big LEO MSS band. While incentive auctions may make sense in the broadcast spectrum, where consumer preferences have shifted to wired media, they are ill-suited to the Big LEO MSS band, where Globalstar is currently providing MSS to its customers and will fully launch its second-generation MSS network by mid-2011. As described in Globalstar’s comments, careful coordination between Globalstar’s MSS operations and terrestrial operations in this band is necessary to avoid harmful interference to customers’ MSS offerings. If the Commission conducts an auction for separate terrestrial rights in this band – as opposed to granting MSS licensees the flexibility to enter into carefully-tailored lease arrangements with terrestrial partners – applicable non-interference obligations will likely suppress commercial interest in these spectrum rights, and terrestrial rights in the band will remain unassigned. In contrast, by adopting a more flexible regulatory framework for terrestrial operations in MSS spectrum, the Commission will expeditiously make the Big LEO MSS band a critical new component of the nation’s broadband spectrum inventory.

⁵⁸ MSS ATC Coalition Comments at 14.

VI. CONCLUSION

For the reasons described in these Reply Comments, the Commission should expeditiously issue an NPRM that proposes, in detail, a new, more flexible regulatory framework for terrestrial operations in MSS spectrum.

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