

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

In the Matter of
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
ET Docket No. 10-142

NOTICE OF PROPOSED RULEMAKING
AND NOTICE OF INQUIRY

Adopted: July 15, 2010

Released: July 15, 2010

Comment Date: (30 days after date of publication in the Federal Register)
Reply Comment Date: (45 days after date of publication in the Federal Register)

By the Commission: Chairman Genachowski, Commissioners Copps, McDowell, Clyburn, and Baker
issuing separate statements.

I. INTRODUCTION

1. Today we take steps to make additional spectrum available for new investment in mobile
broadband networks while ensuring that the United States maintains robust mobile satellite service
capabilities. Mobile broadband is emerging as one of America’s most dynamic innovation and economic
platforms. Yet tremendous demand growth will soon test the limits of spectrum availability. As observed
in the National Broadband Plan, 90 megahertz of spectrum allocated to the Mobile Satellite Service
(MSS) – in the 2 GHz band, Big LEO band, and L-band – are potentially available for terrestrial mobile
broadband use.1 In this Notice of Proposed Rulemaking (NPRM) and Notice of Inquiry (NOI), we seek
to remove regulatory barriers to terrestrial use, and to promote additional investments, such as those
recently made possible by a transaction between Harbinger Capital Partners and SkyTerra
Communications,2 while retaining sufficient market-wide MSS capability.

2. In the NPRM, we make two proposals. First, we propose to add co-primary Fixed and
Mobile allocations to the 2 GHz band, consistent with the International Table of Allocations. This
allocation modification is a precondition for more flexible licensing of terrestrial services within the band.
Second, we propose to apply the Commission’s secondary market policies and rules applicable to

1 Connecting America: The National Broadband Plan, Recommendation 5.8.4, p.87 (2010) (National Broadband
Plan). This figure consists of 40 megahertz of the 2 GHz band, 40 megahertz of the L-band, and 10 megahertz of
the Big LEO band.

2 See SkyTerra Communications, Inc., Transferor and Harbinger Capital Partners Funds, Transferee, Applications
for Consent to Transfer of Control of SkyTerra Subsidiary, LLC, IB Docket No. 08-184, Memorandum Opinion and
Order and Declaratory Ruling, 25 FCC Rcd 3059 (IB, OET, WTB 2010).

terrestrial services to all transactions involving the use of MSS bands for terrestrial services in order to create greater predictability and regulatory parity with bands licensed for terrestrial mobile broadband service.

3. In the NOI, we request comment on further steps we can take to increase the value, utilization, innovation, and investment in MSS spectrum generally. Building upon the proposed Fixed and Mobile allocations in the 2 GHz band, and to address, in part, the recommendations of the National Broadband Plan for increasing terrestrial deployment on spectrum currently allocated for MSS, we inquire about approaches for creating opportunities for full use of the 2 GHz band for stand-alone terrestrial uses while ensuring that an appropriate portion of the step-up in the value of the band inures to the public interest. The NOI requests comment on other ways to promote innovation and investment throughout the MSS bands while also ensuring market-wide mobile satellite capability to serve important needs like disaster recovery and rural access.

II. BACKGROUND

4. MSS is a radiocommunication service involving transmission between mobile earth stations and one or more space stations.³ MSS systems can provide communications in areas where it is difficult or impossible to provide communications coverage via terrestrial base stations, such as remote or rural areas and non-coastal maritime regions, and at times when coverage may be unavailable from terrestrial-based networks, such as during natural disasters.⁴ Three frequency bands that are allocated to the MSS are capable of supporting broadband service:⁵ the 2 GHz Band from 2000-2020 MHz and 2180-2200 MHz,⁶ the Big LEO Band from 1610-1626.5 MHz and 2483.5-2500 MHz,⁷ and the L-band from 1525-1559 MHz and 1626.5-1660.5 MHz.⁸

5. In 2003, the Commission adopted rules for licensing and operation of ancillary terrestrial component (ATC) facilities by MSS operators.⁹ ATC consists of terrestrial base stations and mobile

³ See 47 C.F.R. § 2.1(c).

⁴ See *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-band, and the 1.6/2.4 GHz Bands*, IB Docket No. 01-185, ET Docket No. 95-18, *Notice of Proposed Rulemaking*, 16 FCC Rcd 15,532 at ¶ 1 (2001) (*MSS Flexibility NPRM*).

⁵ MSS is also provided in the Little LEO band from 137-138 MHz, 148-150.05 MHz, and 400.15-401 MHz. 47 C.F.R. § 25.202(a)(3). We have excluded this band from this discussion because it is unsuitable for provision of terrestrial broadband services.

⁶ The Notice of Proposed Rulemaking section below discusses the Region 2 and U.S. allocations for the 2 GHz MSS band.

⁷ The Big LEO band at 1610-1626.5 MHz is allocated on a primary basis in Region 2 and in the U.S. for Mobile Satellite Service, and on a co-primary basis for Aeronautical Radionavigation and Radiodetermination Satellite Services. Radioastronomy has a co-primary allocation at 1610.6-1613.8 MHz in Region 2 and the U.S. The 2483.5-2500 MHz band is allocated on a primary basis in Region 2 and in the U.S. for Mobile Satellite Service. In Region 2 there are also co-primary allocations for Radiodetermination Satellite, Fixed, Mobile and Radiolocation Services. In the U.S. there are co-primary allocations at 2483.5-2495 MHz for the Radiodetermination Satellite Service and at 2495-2500 MHz co-primary allocations for Fixed, Mobile and Radiodetermination Satellite Services.

⁸ The L-band at 1525-1559 MHz is allocated on a primary basis in Region 2 and in the U.S. for Mobile Satellite Service, and at 1525-1535 MHz in Region 2 on a co-primary basis for Space Operation Services and on a secondary basis for Earth Exploration Satellite, Fixed, and Mobile Services. At 1626.5-1660.5 MHz is allocated on a primary basis in Region 2 and in the U.S. for Mobile Satellite Service, and 1660-1660.5 MHz is co-primary with Radio Astronomy Service.

⁹ Operation of ATC networks is permitted in certain spectrum allocated for Mobile-Satellite use under a footnote to the United States Table of Allocations. 47 C.F.R. § 2.106, footnote US380. When we coordinated this item with NTIA, they indicated that the service rules for MSS ensure compatible operation with Federal systems in and (continued....)

terminals to enhance coverage in areas where the satellite signal is attenuated or unavailable, re-using frequencies assigned for MSS operations.¹⁰ An MSS licensee may request blanket authority under its satellite authorization for operation of ATC stations in the United States.¹¹ The Commission adopted rules establishing several “gating criteria” that MSS operators must meet in order to obtain ATC authority.¹² First, to ensure that ATC will be ancillary to the provision of MSS, the Commission adopted a general requirement that MSS operators must provide substantial satellite service.¹³ In order to meet the substantial service requirement, an MSS operator must provide continuous satellite service in specified geographic areas,¹⁴ maintain spare satellites¹⁵ and make MSS commercially available throughout the required coverage area.¹⁶ To remain consistent with the Mobile-Satellite allocation¹⁷ and service rules, the Commission also required MSS-ATC licensees to offer a truly integrated service.¹⁸ Finally, as indicated in the *ATC Second Reconsideration Order*, “any MSS operator wishing to incorporate ATC into its system must meet the gating criteria for each spectrum band in which it wishes to provide ATC.”¹⁹

6. The deployment of MSS and ATC in the 2 GHz band has been a slow process. In 1997, the Commission reallocated 70 megahertz of spectrum for the 2 GHz MSS band,²⁰ which was reduced to 40 megahertz in 2003.²¹ The MSS allocation required the relocation of Broadcast Auxiliary Services (BAS) incumbents from the 2000-2020 MHz uplink band and Fixed point-to-point microwave incumbents from

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adjacent to the bands allocated to the MSS, but that a more detailed review would be appropriate if changes to those rules are required.

¹⁰ 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, *Report and Order and Notice of Proposed Rulemaking*, 18 FCC Rcd 1962 (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.

¹¹ *ATC Report and Order* at ¶ 240. An individual, site-specific license must be obtained for any ATC base station that presents an aviation-hazard issue or for which an Environmental Assessment must be prepared. *Id.* at ¶ 239; also see 47 CFR §§ 1.1307, 17.4, and 17.7.

¹² These gating criteria are set forth in 47 CFR § 25.149.

¹³ *ATC Report and Order* at ¶¶ 72-86.

¹⁴ 47 CFR § 25.149(b)(1).

¹⁵ 47 CFR § 25.149(b)(2).

¹⁶ 47 CFR § 25.149(b)(3).

¹⁷ The Commission explained that ATC authority permits licensees to deploy MSS ATC subject to several conditions designed in part to ensure the allocation remains first and foremost a satellite service. See *ATC Report and Order* at ¶ 31.

¹⁸ 47 C.F.R. § 25.149(b)(4); *ATC Report and Order* at ¶¶ 87-88; *ATC Second Reconsideration Order*. The integrated service requirement can be satisfied by use of a dual-mode handset that can communicate with both the MSS satellite and ATC network or by submitting evidence demonstrating that the service they propose to offer will be integrated.

¹⁹ *ATC Second Reconsideration Order* at ¶ 34.

²⁰ Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, ET Docket No. 95-18, *First Report and Order and Further Notice of Proposed Rule Making*, 12 FCC Rcd 7388 at ¶ 14 (1997) (*MSS First Report and Order*).

²¹ Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, ET Docket No. 99-81, *Third Report and Order, Third Notice of Proposed Rule Making and Second Memorandum Opinion and Order*, 18 FCC Rcd 2223 at ¶ 28 (2003) (*AWS Third Report and Order*).

the 2180-2200 MHz downlink band, which has been a lengthy process.²² One 2 GHz band operator, currently identified in the Commission's records under the name of New DBSD Satellite Services G.P. (formerly New ICO Satellite Services G.P.) (DBSD), launched a satellite in April 2008 and has stated that it plans to offer mobile video, navigation and emergency assistance services (Mobile Interactive Media (MIM)) to vehicles or mobile personal communication devices.²³ However, DBSD, which is in the process of emerging from bankruptcy, has no definite plans as to when it will begin commercial satellite service.²⁴ TerreStar Networks Inc. (TerreStar) launched a satellite in July 2009 and plans to offer integrated satellite and terrestrial voice, data and video services.²⁵ TerreStar has announced plans to initiate commercial satellite service under a roaming and distribution agreement with AT&T for an integrated smartphone.²⁶ Although TerreStar and DBSD have received ATC authority, neither has commercial ATC stations in operation.²⁷

7. In the L-band and Big LEO MSS bands, MSS is more established and the Commission has taken additional steps to promote the development of ATC. The L-band in the United States is shared by Inmarsat, the largest commercial MSS operator in the world,²⁸ and SkyTerra Communications, Inc. (SkyTerra), which provides MSS in the United States and Canada. SkyTerra's ATC authority was recently modified to provide additional flexibility for the technical design of the ATC network, allowing for greater capacity and improved spectrum efficiency,²⁹ and the transfer of control of SkyTerra to Harbinger Capital Partners Funds (Harbinger) was recently approved.³⁰ SkyTerra/Harbinger plan to

²² See, e.g., Improving Public Safety Communications in the 800 MHz Band, *Report and Order and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 02-55, ET Docket No. 00-258 and ET Docket No. 95-18, 24 FCC Rcd 7904 at ¶¶ 5-23 (2009).

²³ 2008 Annual Report of ICO Communications (Holdings) Ltd., SEC Form 10-K, 6 (March 31, 2009); See also DBSD North America Alpha Trials (available at http://www.ico.com/_about/tech/dbsd-north-america-alpha-trials.php).

²⁴ *Bench Decision on Confirmation*, DBSD North America, Inc., Case No. 09-13061 (REG), at 7, 12-14 (Bankr. S.D.N.Y. issued Oct. 26, 2009).

²⁵ 2009 Annual Report of TerreStar Corp., Amendment No. 1, SEC Form 10-K, 1-2 (May 5, 2010).

²⁶ *Introducing the TerreStar Genus Smartphone*, available at <http://www.terrestar.com/genus.php>. The terrestrial portion of the smartphone operates in another frequency band using AT&T's terrestrial wireless network.

²⁷ See TerreStar Networks Inc., Application for Blanket Authority to Operate Ancillary Terrestrial Component Base Stations and Dual-Mode MSS-ATC Mobile Terminals in the 2 GHz MSS Bands, *Order and Authorization*, 25 FCC Rcd 228 (Int'l Bur. 2010); New ICO Satellite Services G.P., Application for blanket authority to operate Ancillary Terrestrial Component base stations and dual-mode MSS-ATC mobile terminals in the 2 GHz MSS bands, *Order and Authorization*, 24 FCC Rcd 171 (Int'l Bur. 2009).

²⁸ The Inmarsat 4 (I-4) satellite network consists of three satellites and offers world-wide coverage with broadband capabilities. See Comments of Inmarsat PLC, In the Matter of Report to Congress Regarding the ORBIT Act, IB Docket No. 09-48, April 29, 2009 at 2. See also http://www.inmarsat.com/About/Our_satellites/default.aspx?language=EN&textonly=False. Inmarsat has not sought ATC authority, but is permitted to do so under our rules.

²⁹ SkyTerra Subsidiary LLC Application for Modification Authority for an Ancillary Terrestrial Component, File Nos. SAT-MOD-20090429-00047/00046, SES-MOD-20090429-00536, *Order and Authorization*, 25 FCC Rcd 3043 (Int'l Bur. 2010). Up to 40 megahertz of spectrum may be available for ATC in the L-band depending on the efforts of the L-band operators to rationalize the spectrum assignments through the international process. *National Broadband Plan*, p.87.

³⁰ 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 (WTB, OET 2010) reconsideration pending (*SkyTerra/Harbinger Order*).

launch two “next-generation” satellites in the 2010-2011 timeframe that will be capable of providing high-speed broadband services to small customer handsets approximately the size of cell phones. They also plan to construct an integrated national satellite/terrestrial “fourth generation” mobile broadband network,³¹ using spectrum from the L-band (10 megahertz now, and an additional 30 megahertz in the future through a cooperation agreement with Inmarsat) and 13 megahertz of terrestrial spectrum to which SkyTerra/Harbinger has access.³² The approval of the SkyTerra/Harbinger transfer was conditioned on adherence to certain voluntary commitments Harbinger made regarding the construction and operation of a proposed integrated satellite/terrestrial “fourth generation” mobile broadband network.³³

8. In the Big LEO band, both Iridium and Globalstar provide worldwide voice and data communications,³⁴ and only Globalstar has requested ATC authority (which it has received).³⁵ Globalstar has indicated that it plans to collaborate with one or more terrestrial partners to offer MSS bundled together with ATC broadband service.³⁶ In 2007, Globalstar and Open Range Communications, Inc. (Open Range) filed a notification with the Commission indicating that they had entered into a “spectrum manager lease agreement” whereby Open Range would be deploying terrestrial broadband service in several markets, pursuant to Globalstar’s ATC authority, using spectrum in the 2.4 GHz MSS band.³⁷ In 2008, the Commission modified Globalstar’s ATC authority for certain technical requirements and waived the ATC gating criteria on an interim basis and subject to certain conditions, found that the Commission’s ATC policies specifically contemplated spectrum leasing arrangements, and allowed Globalstar and its lessee Open Range Communications Inc. to deploy ATC service in the 2483.5-2495 MHz band.³⁸

³¹ “Fourth generation” networks provide speeds to end users commensurate with technologies such as 3GPP Long Term Evolution (LTE) or Worldwide Interoperability for Microwave Access (WiMAX) standards.

³² *SkyTerra/Harbinger Order* at Attachment 1 at 1. In addition, SkyTerra/Harbinger indicated that they were discussing with other Commission licensees the possibility of “pooling” spectrum, whereby the MSS and other spectrum would be incorporated into the infrastructure of the terrestrial wireless network. *Id.*

³³ *SkyTerra/Harbinger Order* at ¶ 72 and Attachment 2.

³⁴ Due to satellite equipment failures, Globalstar’s two-way service is currently not continuously available. *See* letter dated July 13, 2007 to the Acting Chief of the International Bureau from William F. Adler, Secretary of Globalstar Licensee LLC, in IBFS File No. SAT-STA-20070713-00098.

³⁵ 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 (Int’l Bur. 2006). Globalstar is permitted to operate ATC at 1610-1617.775 MHz and 2483.5-2495 MHz. 47 C.F.R. § 25.149(a)(2)(iii).

³⁶ Globalstar Licensee LLC, Application for Modification of License for Operation of Ancillary Terrestrial Component Facilities, *Order and Authorization*, File No. SAT-MOD-20080516-00106, 23 FCC Rcd 15975 at ¶ 5 (2008) (*Globalstar Waiver Order*).

³⁷ *Id.* at ¶¶ 5-7; *See* Globalstar Licensee LLC and OpenRange Communications Inc. – Notification of Spectrum Manager Lease Agreement, File No. SAT-MOD-20080516-00106, filed Nov. 14, 2007. At the time (just as today), the MSS rules had no established procedures with respect to entering into spectrum leasing arrangements to provide terrestrial services pursuant to an MSS licensee’s ATC authorization. In terming its leasing arrangement as a “spectrum manager leasing arrangement,” Globalstar was drawing upon the “spectrum manager” model established with regard to spectrum leasing arrangement in the Wireless Radio Services. *See* discussion below, in section III. B.

³⁸ *Globalstar Waiver Order* at ¶¶ 21-23, 24-27, 28-33. ATC operation is conditioned on Globalstar providing two-way MSS operations for the required geographic coverage area by July 1, 2010, and two-way MSS to customers equipped with dual-mode MSS-ATC terminals by July 1, 2011. Globalstar has petitioned for a sixteen-month extension of these dates. Request for Modification of Waiver Conditions, Globalstar Licensee LLC, File No. SAT-MOD-20091214-00152, filed Dec. 14, 2009. The July 1, 2010 deadline has been extended until August 2, 2010. Globalstar Licensee LLC Application for Modification of License to Extend Dates for Coming into Compliance (continued....)

III. NOTICE OF PROPOSED RULEMAKING

9. Today we take steps to make additional spectrum available for mobile broadband services, while ensuring that America has robust mobile satellite service capability to meet public safety, rural connectivity, federal government, and other important needs. In this Notice of Proposed Rulemaking we propose to take a number of actions to further our goal of enabling the provision of terrestrial broadband services in the MSS bands. In the 2 GHz MSS band, we propose to add co-primary Fixed and Mobile allocations to the existing Mobile-Satellite allocation. While this action in itself does not change the status of the existing MSS licensees and the Commission's service rules for MSS and ATC networks, it lays the groundwork for providing additional flexibility in use of the 2 GHz spectrum in the future. In keeping with this proposed flexible allocation for the 2 GHz MSS band, if an MSS license is cancelled for any reason we also propose not to assign any additional spectrum for MSS in this band to either the existing MSS licensees or to a new MSS entrant. To further our goal of increasing the provision of terrestrial broadband services in the MSS bands, we also propose to apply the Commission's terrestrial secondary market spectrum leasing rules and procedures to transactions involving terrestrial use of MSS spectrum in the 2 GHz, Big LEO and L-bands.

A. 2 GHz MSS Band Allocation

10. We tentatively conclude to add primary Fixed and Mobile allocations to the 2000-2020 MHz and 2180-2200 MHz bands. This allocation will be co-primary with the existing Mobile-Satellite allocation for these bands. By making this allocation we lay the groundwork for future flexibility in use of this spectrum and will bring our allocation for this band into harmony with international allocations. Currently, the 1980-2010 MHz band is allocated to Fixed, Mobile, and Mobile-Satellite (Earth-to-space) on a primary basis while the 2170-2200 MHz band is allocated to the Fixed, Mobile, and Mobile-Satellite (space-to-Earth) on a primary basis in the international table for all regions.³⁹ The 2010-2025 MHz band is allocated to Fixed, Mobile, and Mobile-Satellite (Earth-to-space) on a primary basis in Region 2 (North and South America) and to Fixed and Mobile on a primary basis in other regions.

11. We note that prior to 1997 both the 2 GHz MSS uplink and downlink bands were allocated for Fixed and Mobile services⁴⁰ and used predominantly by BAS⁴¹ and Fixed Service (FS) licensees in the 2000-2020 MHz and 2180-2200 MHz bands, respectively. In 1997 the Commission reallocated the 1990-2025 MHz band to Mobile-Satellite (Earth-to-space) and the 2165-2200 MHz band to Mobile-Satellite (space-to-Earth).⁴² Later, in 2003 the Commission reallocated 30 megahertz in the 1990-2000 MHz, 2020-2025 MHz, and 2165-2180 MHz bands for Fixed and Mobile services on a primary basis.⁴³ The 2003 reallocation retained the remaining 40 megahertz of spectrum in the 2000-2020 MHz and 2180-2200 MHz bands for MSS use.⁴⁴ A footnote to the Table of Frequency Allocations permits MSS operators to operate ATC in conjunction with their MSS networks despite the fact that these bands are not presently

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with Ancillary Terrestrial Component Rules, File No. SAT-MOD-20091214-00152, *Order*, DA-10-1225 (IB June 30, 2010).

³⁹ See 47 C.F.R. § 2.106.

⁴⁰ See 47 C.F.R. § 2.106 (1996).

⁴¹ 47 C.F.R. §§ 74.602, 78.18(a)(6), 101.803(b). The band is also authorized for use by the Cable Television Relay Service (CARS) and the Local Television Transmission Service (LTTS). For purposes of this proceeding, we will refer to all three of these services under the collective term "BAS."

⁴² *MSS First Report and Order* at ¶ 14.

⁴³ *AWS Third Report and Order* at ¶ 28.

⁴⁴ *Id.*

allocated for Fixed and Mobile uses.⁴⁵ Because we are proposing that a Fixed and Mobile allocation be added to these bands, this footnote would no longer be necessary for the 2 GHz band. We propose to modify this footnote to remove the 2000-2020 MHz and 2180-2200 MHz bands. The current footnote is still necessary for the Big LEO and L-band MSS because these bands have no Fixed and Mobile allocations in the International Table.

12. Two footnotes in the Allocation Table, NG156 and NG168, permit certain BAS and FS licensees to continue to operate on a primary basis in the 2 GHz MSS band until December 9, 2013 (the sunset date for the band).⁴⁶ After the sunset date, any remaining licensees will operate on a secondary basis. In proposing to add primary Fixed and Mobile allocations to these bands, we are not proposing to change this relationship. The incumbent BAS and FS licensees will continue to operate with primary status until they are relocated or until the sunset date.⁴⁷ However, we tentatively conclude to amend these two footnotes to clarify that ATC operations by MSS will continue to be permitted on a primary basis after the sunset date but that existing Fixed and Mobile operations (*i.e.* the incumbent BAS and FS licensees) will become secondary on the sunset date.⁴⁸

13. The proposal to add Fixed and Mobile allocations is the first step to providing additional flexibility to the 2 GHz MSS bands.⁴⁹ The existing service rules continue to permit MSS and ATC operation and are not altered by the re-introduction of a Fixed and Mobile allocation to the band.⁵⁰ The existing MSS licensees, both of which have launched satellites, will continue to be able to operate under the terms of their licenses and must continue to comply with all of the Commission's existing ATC rules.⁵¹ In the NOI, we seek comment on additional steps to create the opportunity for expanded use of the 2 GHz band for terrestrial services.

⁴⁵ 47 C.F.R. § 2.106 footnote US380 (“In the bands 1525-1544 MHz, 1545-1559 MHz, 1610-1645.5 MHz, 1646.5-1660.5 MHz, 2000-2020 MHz, 2180-2200 MHz, and 2483.5-2500 MHz, a non-Federal licensee in the mobile-satellite service (MSS) may also operate an ancillary terrestrial component in conjunction with its MSS network, subject to the Commission's rules for ancillary terrestrial components and subject to all applicable conditions and provisions of its MSS authorization.”).

⁴⁶ 47 C.F.R. § 2.106 footnotes NG156 and NG168. BAS licensees in the 2000-2020 MHz band with an initial application receipt date prior to June 27, 2000 and FS licensees in the 2180-2200 MHz band with an initial application receipt date prior to January 16, 1992 shall operate on a primary basis until the sunset date.

⁴⁷ If the incumbents refuse relocation, they will convert to secondary status as provided by the Commission's rules. The Commission is considering issues related to the relocation of the BAS incumbents in a separate proceeding. *Improving Public Safety Communications in the 800 MHz Band, Report and Order and Order and Further Notice of Proposed Rulemaking*, WT Docket No. 02-55, ET Docket No. 00-258 and ET Docket No. 95-18, 24 FCC Rcd 7904 (2009).

⁴⁸ We recognize that further modifications to these footnotes may be necessary if new Fixed and Mobile service licenses are issued in the band, but we will not address that issue at this time.

⁴⁹ This item does not propose to alter the primary MSS allocation under the Emerging Technologies relocation policies. See *AWS Third Report and Order* at n.104 (Commission declined to apply the Emerging Technologies (ET) relocation policies to MSS entrants when it reallocated a portion of the 2 GHz MSS band for AWS because, at the time, the purposes of the ET relocation policy were not implicated, *i.e.*, prevent disruption to customers and minimize economic impact on licensees).

⁵⁰ See 47 C.F.R. §§ 25.101-701; *The Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, IB Docket No. 99-81, *Report and Order*, 15 FCC Rcd 16127 (2000); *ATC Report and Order* at ¶¶ 66-206.

⁵¹ We note specifically that fixed and mobile stations operating in the 2 GHz Band must comply with existing MSS ATC service rules specified in 47 C.F.R. 25.252, as well as the limits on the radiated power of out-of-band emissions in the 1559-1610 MHz band, among others, from ATC base and mobile stations according to the technical and operational conditions specified in the ATC authorizations.

14. We also believe that in the event that one or both of the 2 GHz MSS licenses were to be returned or cancelled for any reason, the returned spectrum could be used for terrestrial mobile broadband deployment. We last addressed the issue of “returned spectrum” in 2005, and concluded at that time that assigning each systems’ 10 megahertz of spectrum in each direction of transmission (20 megahertz per system) would serve the public interest. In reaching that conclusion, we considered alternative proposals that some, or all, of the returned spectrum be reallocated to other services, or made available for use by other MSS systems.⁵²

15. We propose that, in the event a 2 GHz MSS license is returned or cancelled, the spectrum covered by the license should not be assigned to the remaining licensee, or made available for a new MSS licensee. Assigning the returned spectrum under the existing satellite licensing rules would potentially limit options for flexible use and promotion of fixed/mobile deployment. Moreover, deployment of fixed and mobile services under the ATC framework may be substantially delayed by requirements for prior satellite deployment.⁵³ Accordingly, the returned spectrum would not be declared available for further licensing under the satellite licensing rules. As we explain in the accompanying NOI, we are exploring ways to promote the development of terrestrial mobile services. It is in the public interest to retain flexibility on how best to assign the spectrum, should it become available, until we make final decisions in this proceeding.

16. We seek comment on all of these proposals.

B. Secondary Market Rules and Procedures for Terrestrial Services in MSS Bands

17. We seek to modify the Commission’s policies and procedures with regard to spectrum leasing arrangements between MSS licensees and third parties for the provision of terrestrial services using MSS spectrum. Specifically, we propose to subject spectrum leasing arrangements between an MSS operator in the 2 GHz, Big LEO, and L-bands and a third party entity involving the use of MSS spectrum for the provision of terrestrial services to the Commission’s general secondary market spectrum leasing policies and rules that currently apply to wireless terrestrial services. This proposal would apply to all terrestrial use of the MSS spectrum in the 2 GHz, Big LEO, and L-bands, which currently consists of ATC operations, but in the future may include other terrestrial operations in the 2 GHz MSS band.⁵⁴ The proposal aims to provide greater regulatory predictability and parity, so that a common set of policies and rules applies for spectrum leasing arrangements involving the provision of terrestrial services, independent of the underlying allocation.

18. In 2003, in order to promote more efficient use of terrestrial wireless spectrum through secondary market transactions while also eliminating regulatory uncertainty, the Commission adopted a comprehensive set of policies and rules to govern spectrum leasing arrangements between licensees and spectrum lessees.⁵⁵ The *Secondary Markets First Report and Order* established policies and rules – including notification and/or approval procedures – by which terrestrially-based Wireless Radio Service

⁵² Use of Returned Spectrum in the 2 GHz Mobile Satellite Service Frequency Bands, IB Docket Nos. 05-220, 05-221, *Order*, 20 FCC Rcd 19696 (2005), *reconsideration pending*.

⁵³ MSS licensees are required to make satellite service commercially available throughout their required coverage area before beginning ATC service. Consequently, a new MSS entrant would have to delay commencing ATC service while constructing and launching a satellite.

⁵⁴ As explained above, there are some BAS and FS operations in the 2 GHz MSS band. This proposal does not apply to these operations, which will lose primary status at the December 9, 2013 sunset date. Nor are we proposing to extend these terrestrial spectrum leasing policies to MSS leasing arrangements (e.g., transponder leases) that do not involve spectrum associated with terrestrial operations.

⁵⁵ Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 20604 (2003) (*Secondary Markets First Report and Order*), *Erratum*, 18 FCC Rcd 24817 (2003).

licensees holding “exclusive use” spectrum rights could lease some or all of the spectrum usage rights associated with their licenses to third party spectrum lessees, which then would be permitted to provide wireless services consistent with the underlying license authorization.⁵⁶ Through these actions, the Commission sought to promote more efficient, innovative, and dynamic use of the terrestrial spectrum, expand the scope of available wireless services and devices, enhance economic opportunities for accessing spectrum, and promote competition among terrestrial wireless service providers.⁵⁷ The Commission’s secondary markets policies and rules were designed to ensure that the spectrum leasing arrangements would be consistent with statutory requirements, including the requirements of Section 310(d) with respect to transfers of spectrum rights to third parties,⁵⁸ and that the Commission would have the opportunity to evaluate, in a streamlined process, the various public interest considerations that might arise.⁵⁹ At that time, the Commission decided not to extend these terrestrial spectrum leasing policies and rules to the satellite services (such as MSS), for which an established set of policies and rules pertaining to satellite-capacity transponder leasing was already in effect.⁶⁰

19. The 2004 *Secondary Markets Second Report and Order*⁶¹ built upon this spectrum leasing framework by, for example, establishing immediate approval procedures for categories of terrestrial spectrum leasing arrangements that do not raise potential public interest concerns (such as concerns relating to foreign ownership or competition),⁶² and extending the spectrum leasing policies to additional

⁵⁶ *Secondary Markets First Report and Order* at ¶¶ 8-9, 12-13, 91-92. Wireless Radio Services do not include satellite services. 47 C.F.R. § 1.907. Under these secondary market policies and rules, the service rules and policies applicable to the licensee under its license authorization – including all technical, interference, and operational rules – apply to the spectrum lessee as well. *Secondary Markets First Report and Order* at ¶¶ 91-92; see 47 C.F.R. §§ 1.9020(c)-(d), 1.9030 (c)-(d), 1.9035(c)-(d). The rules and procedures for spectrum leasing arrangements are set forth in Part 1, Subpart X. 47 C.F.R. §§ 1.9001 *et seq.*

⁵⁷ *Secondary Markets First Report and Order* at ¶ 2.

⁵⁸ *Secondary Markets First Report and Order* at ¶¶ 46-81 (revising the Commission’s standard for determining whether spectrum leasing arrangements constitute a transfer of *de facto* control under Section 310(d) in the context of the Wireless Radio Services); see also 47 C.F.R. § 1.9010.

⁵⁹ *Secondary Markets First Report and Order* at ¶¶ 4, 91-92, 123-125, 150-159, 180. The Commission provided for two different types of spectrum leasing arrangements – (1) spectrum manager leasing arrangements, which do not involve a transfer of *de facto* control under Section 310(d) and (2) *de facto* transfer leasing arrangements, which do involve a transfer of *de facto* control. For notifications regarding proposed spectrum manager leasing arrangements, the parties are required to file the notification at least 21 days in advance of commencing operations, and the notification will be placed on public notice for comment; the Commission could prevent the leasing arrangement from going into effect (or continuing) if it found that the public interest was not being served (e.g., where competitive harms were present). *Id.* at ¶¶ 123-125. Applications for *de facto* transfer leasing arrangements are subject to approval in a streamlined, 21-day approval process unless the Commission determined that the public interest was not being served. *Id.* at ¶¶ 150-159.

⁶⁰ *Id.* at ¶¶ 204-212. See also Establishment of Domestic Communication-Satellite Facilities by Nongovernmental Entities, Docket No. 16495, *Report and Order*, 22 FCC 2d 86 (1970); Domestic Fixed-Satellite Transponder Sales, CC Docket No. 82-45, *Memorandum Opinion, Order and Authorization*, 90 FCC 2d 1238 (1982), *aff’d sub nom. World Communications, Inc. v. FCC*, 735 F.2d 1465 (D.C. Cir. 1984); Amendment of the Commission’s Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems and DBSC Petition for Declaratory Rulemaking Regarding the Use of Transponders to provide International DBS Service, IB Docket No. 95-41, *Report and Order*, 11 FCC Rcd 2429 (1996).

⁶¹ Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, WT Docket No. 00-230, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503 (2004) (*Secondary Markets Second Report and Order*).

⁶² *Id.* at ¶¶ 4, 10-50.

Wireless Radio Services as well as Public Safety services.⁶³ The Commission has continued to add terrestrial services to this secondary market spectrum leasing framework, including the Advanced Wireless Services in 2003 (when the service rules were adopted for this new service)⁶⁴ and the Broadband Radio Services and Educational Broadband Services in 2004 (when the rebanding plan for these services in the 2.5 GHz band was adopted).⁶⁵

20. In its 2008 *Globalstar Modification Order*, the Commission determined that its ATC policies specifically contemplated that an MSS licensee might lease access to MSS spectrum to a third-party ATC provider (provided that the ATC gating requirements are met).⁶⁶ The Commission also found that the particular MSS/ATC spectrum leasing arrangement between MSS licensee Globalstar and terrestrial provider Open Range was consistent with Commission policy, including the statutory requirement relating to transfers of control under Section 310(d) as that requirement is interpreted under the standard set forth in the *Secondary Markets First Report and Order* for Wireless Radio Services.⁶⁷ While the Commission did not expressly adopt the terrestrial Wireless Radio Services spectrum leasing policies for MSS/ATC spectrum leasing arrangements, it nonetheless applied the statutory interpretation relating to those policies to the particular lease of MSS spectrum associated with Globalstar's ATC authorization.⁶⁸

21. As noted above, SkyTerra/Harbinger also has proposed various arrangements that involve the use of MSS spectrum in the provision of terrestrial services. In particular, it plans to combine MSS L-band spectrum and terrestrial spectrum in the 1.4 GHz and 1670-1675 MHz bands (some of which was obtained in the secondary market through the terrestrial spectrum leasing rules), and also proposes to include the use of additional terrestrial spectrum licensed or controlled by other Commission licensees with which it may enter into spectrum arrangements, as part of its network.⁶⁹ The approval of the SkyTerra/Harbinger transaction by the Chiefs of the International Bureau, the Office of Engineering and Technology, and the Wireless Telecommunications Bureau addressed similar issues related to the leasing, or use, of MSS spectrum by third parties insofar as the approval included adoption of Harbinger's voluntary commitment to obtain prior Commission approval before entering into certain business arrangements with the largest and second largest wireless providers at the time of the arrangement.⁷⁰ As

⁶³ *Id.* at ¶¶ 51-60. The Commission did not extend these rules to satellite services. At that time, no commenters had proposed extending the spectrum leasing rules for Wireless Radio Services to any satellite services. *Id.* at ¶ 66.

⁶⁴ Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands, WT Docket No. 02-353, *Report and Order*, 18 FCC Rcd 25162 (2003) (*AWS-1 Service Rules Report and Order*); *Order on Reconsideration*, 20 FCC Rcd 14058 (2005).

⁶⁵ Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands, WT Docket Nos. 03-66, 03-67, 02-68, 00-230, MM Docket No. 97-217, *Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 14165 at ¶¶ 177-181 (2004).

⁶⁶ *Globalstar Waiver Order* at ¶ 25.

⁶⁷ Specifically, the Commission found that the leasing arrangement was consistent with a "spectrum manager" leasing arrangement under its spectrum leasing policies for Wireless Radio Services. As such, the lease did not involve a transfer of *de facto* control, and no prior Commission approval was required. *Id.* at ¶¶ 25-26. Furthermore, the Commission found that the parties' notification to the Commission of the proposed spectrum leasing arrangement before operations commenced – which provided detailed information and various certifications about the lease as well as the parties' respective responsibilities – was consistent with the Commission's spectrum leasing policies for Wireless Radio Services, which requires that spectrum leasing parties provide notification to the Commission, including certain specified information about the arrangement, in advance of commencing operations under the lease. *Id.* at ¶ 27.

⁶⁸ *Id.* at ¶¶ 24-27.

⁶⁹ See *supra* ¶ 7; *SkyTerra/Harbinger Order*, Attachment 1.

⁷⁰ *SkyTerra/Harbinger Order* at ¶ 72 and Attachment 2.

Globalstar, SkyTerra/Harbinger, and other MSS providers realize their plans to offer high-speed broadband services to consumers using terrestrial networks under their ATC authority, the services they offer have the potential to expand the services offered in the overall market of mobile terrestrial wireless services and enhance competition in this larger mobile marketplace.⁷¹

22. Given these developments in the use of MSS spectrum for the provision of terrestrial services through various secondary market arrangements, we now propose to subject MSS/ATC spectrum leasing arrangements to the same general policies and rules – including notification and/or approval procedures – that we currently apply to spectrum leasing arrangements involving Wireless Radio Services.⁷² We expect that technological advancements will enable MSS licensees and their spectrum lessees to use their ATC authority to provide mobile broadband services similar to those provided by terrestrial mobile providers and enhance competition in the mobile broadband sector.⁷³ As the kinds of terrestrial services that will be offered using MSS spectrum converges with those services offered by terrestrial mobile providers, we tentatively conclude that spectrum leasing arrangements associated with both should be treated consistently. Such action would create greater predictability, consistency, and transparency between all spectrum leasing arrangements involving terrestrially-based mobile service offerings. Further, this would ensure that the Commission would have the opportunity to evaluate, in a streamlined process, the various public interest considerations that might arise with respect to MSS/ATC spectrum leasing arrangements. We seek comment on these proposals.

23. We start with the premise that the Commission’s general spectrum leasing framework currently applicable to all terrestrial Wireless Radio Services spectrum leasing arrangements should apply to MSS/ATC spectrum leasing arrangements. Accordingly, we would require that leasing parties submit specified information and certifications (including information about the parties, the amount and geographic location of the spectrum involved, and other overlapping terrestrial-use spectrum holdings of the parties) to the Commission in advance of any operations that would be permitted pursuant to the proposed transaction.⁷⁴ As with proposed spectrum leasing arrangements involving Wireless Radio Services, to the extent a proposed arrangement does not raise potential public interest concerns, the transaction would be subject to immediate processing or approval,⁷⁵ whereas to the extent potential public

⁷¹ See *supra* ¶¶ 6-8; see also Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services, WT Docket No. 09-66, *Fourteenth Report* at ¶ 37 (May 20, 2010) (*Fourteenth Mobile Competition Report*).

⁷² See generally 47 C.F.R. §§ 1.9001 *et seq.* (Part 1, Subpart X – Spectrum Leasing). Currently, terrestrial operations in the MSS spectrum are governed by the ATC rules and authorizations. As noted above, the secondary market policies and rules do not alter the underlying service rules and policies that apply to the licensee and, in turn, the spectrum lessee. We note that the existing MSS ATC service rules for the 2 GHz Band (47 C.F.R. 25.252), L-Band (47 C.F.R. 25.253), and Big LEO Band (47 C.F.R. §25.524) require coordination with radio astronomy stations (see also 47 C.F.R. § 25.213); accommodate Global Maritime Distress and Safety System and Aeronautical Mobile-Satellite (Route) Service emergency communications; protect the Search and Rescue Satellite-Aided Tracking Earth stations, and restrict on out-of-band emissions in the radionavigation satellite service band used by Global Positioning System. The Commission intends to coordinate any future grant of ATC authority with NTIA, pursuant to the general notification process, to assure adequate protection of the GPS. See *ATC Second Reconsideration Order* ¶ 71.

⁷³ See *Fourteenth Mobile Competition Report* at ¶ 37 (describing developments in the MSS spectrum bands).

⁷⁴ This could be in the form of a notification, such as for a spectrum manager leasing arrangement that did not involve transfer of *de facto* control, or an application.

⁷⁵ See *Secondary Markets Second Report and Order* at ¶¶ 15-28, 47-50; 47 C.F.R. § 1.9020(e)(2) (immediate processing for spectrum manager leasing arrangements); § 1.9030(e)(2) (immediate approval procedures for *de facto* transfer leasing arrangements).

interest concerns were raised (e.g., potential competitive harms⁷⁶) the transaction would be subject to streamlined procedures as the Commission evaluated whether the public interest would be served by the proposed transaction.⁷⁷

24. We also seek comment on whether only a subset of the spectrum leasing policies and rules applicable to Wireless Radio Services should be applied to terrestrial use of MSS spectrum relating to ATC services, and if so, which ones. For instance, considering that the ATC rules require use of an integrated MSS/ATC network, should MSS licensees and potential lessees of MSS/ATC spectrum only be permitted to enter into spectrum manager leasing arrangements,⁷⁸ or should they also have the option of entering into *de facto* transfer leasing arrangements, as permitted in the Wireless Radio Services?⁷⁹ As the Commission evaluates whether a particular MSS/ATC spectrum arrangement raises potential competitive concerns, what considerations should it take into account, and should those differ in any respect from its current considerations of potential competitive harms under the existing spectrum leasing policies applicable to terrestrial mobile services? We propose to require that parties seeking to enter into MSS/ATC spectrum leasing arrangements file the requisite information using the form used for spectrum leasing arrangements involving the Wireless Radio Services.⁸⁰ We also seek comment on how the adoption of industry-wide MSS/ATC spectrum leasing rules should affect existing MSS leasing arrangements. What other concerns or issues do commenters think should be addressed? We invite commenting parties to address any aspect of the approach we are proposing.

25. Finally, we seek comment on whether the Commission's secondary market policies and rules for terrestrial wireless services need to be modified to accommodate spectrum leasing arrangements or other secondary market transactions involving non-ATC terrestrial use of spectrum allocated or co-allocated to MSS, such as the proposals discussed in the NOI below.

IV. NOTICE OF INQUIRY

26. In this Notice of Inquiry, we launch a broader inquiry into how we can best increase the value, utilization, innovation and investment in the spectrum for terrestrial services throughout the 2 GHz, Big LEO and L-bands, while ensuring that the United States market, as a whole, continues to have robust mobile satellite service capabilities. As an initial matter, we focus on flexibility for deploying new mobile broadband services under the proposed co-primary Fixed and Mobile allocations in the 2 GHz band. We also are interested in additional options for increasing terrestrial use of the Big LEO and L-bands.

⁷⁶ Spectrum leasing arrangements, like license assignments or transfers of control, potentially raise competitive issues, and thus are subject to the same Commission policies pertaining to competition. *Secondary Markets First Report and Order* at ¶¶ 116-119, 147. If a proposed spectrum leasing arrangement raises the potential for competitive harm, the transaction will not be subject to immediate processing or approval. *Secondary Markets Second Report and Order* at ¶¶ 25-27, 49 (spectrum leasing arrangements are subject to the Commission's competition policies associated with the provision of mobile services). In the *Secondary Markets Second Report and Order*, the Commission noted that spectrum leasing arrangements involving MSS spectrum where ATC is permissible potentially raised competitive concerns similar to those involving other terrestrial mobile services. *Id.* at ¶ 26.

⁷⁷ See *Secondary Markets Second Report and Order* at ¶¶ 14-50; *Secondary Markets First Report and Order* at ¶¶ 123-125, 151-159, 181; 47 C.F.R. §§ 1.9020(e)(1); 1.9030(e)(1).

⁷⁸ As noted above, Globalstar's spectrum leasing arrangement with Open Range is a "spectrum manager" leasing arrangement. In spectrum manager leasing arrangements, the MSS licensee retains *de facto* control and acts as a "spectrum manager" by maintaining an active, ongoing oversight role over the spectrum lessee. See generally *Secondary Markets First Report and Order* at ¶¶ 94-125.

⁷⁹ See generally *Secondary Markets First Report and Order* at ¶¶ 126-181; 47 C.F.R. §§ 1.9020; 1.9030.

⁸⁰ 47 C.F.R. §§ 1.913(a)(5), 1.9003.

A. Utilizing the 2 GHz Band for Terrestrial Services

27. The current licensees, DBSD and TerreStar, are authorized to use the entire allocated 40 megahertz for MSS and related ATC operations. We seek comment on how best to encourage the growth of new mobile broadband services in the 2 GHz Band under the proposed co-primary Fixed and Mobile allocations in a way that will attract investment.

28. The National Broadband Plan recommends that Congress consider expressly expanding the FCC's authority to enable it to conduct incentive auctions in which incumbent licensees may relinquish rights in spectrum assignments to other parties or to the FCC in exchange for a portion of the proceeds realized by the auction of new spectrum licenses.⁸¹ That is, existing licensees could, on a voluntary basis, relinquish bandwidth in exchange for a portion of the proceeds from an auction for the new licenses authorizing terrestrial only services. Would voluntary incentive auctions, if Congress were to grant such authority to the FCC, be an appropriate mechanism for providing an option for incumbent 2 GHz MSS licensees to vacate the band in favor of mobile broadband providers operating on new licenses?

29. Alternatively, are there other approaches that could create licenses that would attract the substantial investment necessary to launch new mobile broadband services in the 2 GHz band and that are within the Commission's existing legal authority? Should existing 2 GHz MSS licensees be given the option to return some of their spectrum (which we could then auction to new terrestrial licensees) while concurrently modifying the MSS licensees' authorizations to allow them to operate terrestrial networks under the proposed Fixed and Mobile allocations instead of under the current ATC service rules? What is an appropriate metric for assessing how much bandwidth should be returned in exchange for modifying the existing MSS licenses? What, if any, additional conditions – such as build-out requirements for terrestrial networks – are appropriate or necessary to serve the public interest?

30. As noted in the National Broadband Plan, the 2 GHz MSS band is adjacent to the Advanced Wireless Services-2 paired "J" block at 2020-2025 MHz and 2175-2180 MHz.⁸² In any of the scenarios discussed above, would the opportunity to integrate the J Block and 2 GHz MSS spectrum help attract new investment and utilization of new mobile broadband networks in the 2 GHz band? If so, we seek comment on how the Commission could and whether it should take into account such potential as it decides how to increase utilization of the 2 GHz MSS spectrum for terrestrial use.

B. Increasing Value, Utilization, Innovation and Investment in all MSS Bands

31. As noted above, the Commission already has taken additional steps to promote the development of ATC in the Big LEO and L-bands. Are there any other actions that the Commission could take that would increase terrestrial use of the MSS bands? Are there any such actions that would specifically apply to the Big LEO or L-bands? Are there any value or investment promoting actions that might apply to MSS spectrum generally? Are there various incentives that the Commission could apply to help ensure that the public receives the maximum benefits from the use of the spectrum?⁸³

⁸¹ *National Broadband Plan*, Recommendation 5.4, p. 81.

⁸² See *National Broadband Plan*, Recommendation 5.8.3, p. 87. The Advanced Wireless Services-2 J block at 2020-2025 MHz is adjacent to the MSS band at 2000-2020 MHz and at 2175-2180 MHz to the MSS band at 2180-2200 MHz. The Commission has proposed service and technical rules for the paired "J" block. Service Rules for Advanced Wireless Services in the 1915-1920 MHz, 1995-2000 MHz, 2020-2025 MHz and 2175-2180 MHz Bands, WT Docket 04-356, WT Docket 03-353, *Notice of Proposed Rulemaking*, 19 FCC Rcd 19263 (2004); Services Rules for Advanced Wireless Services in the 2155-2175 MHz Band, WT Docket Nos. 07-195, 04-356, *Further Notice of Proposed Rulemaking*, 23 FCC Rcd 9859 (2008). In the instant proceeding, we do not seek comment on the issues pending in WT Dockets 03-353 and 04-356.

⁸³ See generally *National Broadband Plan*, Recommendation 5.3, pp. 81-83 ("Expanding Incentives and Mechanisms to Reallocate or Repurpose Spectrum") (discussing various incentives, including incentive auctions, spectrum fees, and secondary market incentives).

32. As part of this inquiry, we also consider deployment of satellite and terrestrial services in the MSS bands, both within the U.S. and internationally. Do parties anticipate or plan to offer satellite and terrestrial services independent of each other or as part of combined, integrated network offerings? What is happening in other countries with respect to investment in the 2 GHz, Big LEO and L-bands?

33. We note the importance of maintaining MSS to provide services, for example, to public safety and Federal government agencies, to rural areas, and during natural disasters. How should the Commission assess the current and future spectrum needs for MSS so that it can assure those needs continue to be met? How many users depend on such services today? Where are they located? Are there, for example, certain remote or rural areas that appear to be more suitable than other areas for the use of such services? What are the characteristics of those areas (*e.g.*, population size, income of residents, topography) that make them more suitable? Which particular services do they rely upon most? Are these services specific to a particular provider or band or can they be substituted by other MSS or FSS providers? To what extent can such services coexist with terrestrial uses in areas that do not rely as heavily upon MSS?

34. How can we ensure that the United States continues to have market-wide MSS capabilities, even as we take targeted actions to create opportunities for terrestrial use in specific MSS bands? Is it necessary to continue to support the capability of providing MSS in all three bands, or can we meet future needs with less allocated spectrum in some or all of the bands? If so, which band(s) are best suited for MSS?

V. PROCEDURAL MATTERS

A. Filing Requirements

35. *Ex Parte Rules.* The *Notice of Proposed Rulemaking* in this proceeding will be treated as a “permit-but-disclose” subject to the “permit-but-disclose” requirements under Section 1.1206(b) of the Rules.⁸⁴ *Ex parte* presentations are permissible if disclosed in accordance with Commission rules, except during the Sunshine Agenda period when presentations, *ex parte* or otherwise, are generally prohibited. Persons making oral *ex parte* presentations are reminded that a memorandum summarizing a presentation must contain a summary of the substance of the presentation and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented is generally required.⁸⁵ Additional rules pertaining to oral and written presentations are set forth in Section 1.1206(b).

36. *Comments and Reply Comments.* Pursuant to sections 1.415 and 1.419 of the Rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using: (1) the Commission’s Electronic Comment Filing System (ECFS), (2) the Federal Government’s eRulemaking Portal, or (3) by filing paper copies.⁸⁶ See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/> or the Federal eRulemaking Portal: <http://www.regulations.gov>.

⁸⁴ See 47 C.F.R. § 1.1206(b).

⁸⁵ See *id.* § 1.1206(b)(2).

⁸⁶ See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th St., SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

37. People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

38. Further Information: For further information, contact Nicholas Oros, Office of Engineering and Technology, at (202) 418-0636, or via the Internet at Nicholas.Oros@fcc.gov.

B. Initial Regulatory Flexibility Analysis

39. As required by Section 603 of the Regulatory Flexibility Act, 5 U.S.C. § 603, the Commission has prepared an Initial Regulatory Flexibility Analysis (IFRA) of the possible significant economic impact on small entities of the policies and rules proposed in the Notice. An Initial Regulatory Flexibility Analysis is included in Appendix B.

40. This document contains proposed modified information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (OMB) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4), we seek specific comment on how we might further reduce the information collection burden for small business concerns with fewer than 25 employees.

VI. ORDERING CLAUSES

41. Accordingly, IT IS ORDERED, that, pursuant to Sections 4(i), 301, 303(c), 303(f), 303(r), 303(y), and 310 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 303(c), 303(f), 303(r), 303(y), and 310, this Notice of Proposed Rulemaking and Notice of Inquiry IS ADOPTED.

42. IT IS FURTHER ORDERED, that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rule Making, and Notice of Inquiry, including the Initial Regulatory Flexibility Analysis to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Proposed Rules

For the reasons discussed in the preamble, the Federal Communications Commission proposes to amend 47 CFR parts 1, 2 and 25 to read as follows:

PART 1 – PRACTICE AND PROCEDURE

1. The authority citation for Part 1 continues to read as follows:

Authority: 15 U.S.C. 79 *et seq.*; 47 U.S.C. 151, 154(i), 154(j), 155, 157, 225, 303(r), and 309.

2. Section 1.9001 is amended by revising paragraph (a) to read as follows:

§ 1.9001 Purpose and scope.

(a) The purpose of part 1, subpart X is to implement policies and rules pertaining to spectrum leasing arrangements between licensees in the services identified in this subpart and spectrum lessees. This subpart also implements policies for private commons arrangements. These policies and rules also implicate other Commission rule parts, including parts 1, 2, 20, 22, 24, 25, 26, 27, 80, 90, 95, and 101 of title 47, chapter I of the Code of Federal Regulations.

3. Section 1.9005 is amended revising the first sentence of the introductory text and by adding paragraph (jj) to read as follows:

§ 1.9005 Included services.

The spectrum leasing policies and rules of this subpart apply to the following services:

* * * * *

(jj) The Ancillary Terrestrial Component of a Mobile Satellite Service (part 25 of this chapter).

4. Section 1.9020 is amended by revising paragraph (e)(2)(i)(A) to read as follows:

§ 1.9020 Spectrum manager leasing arrangements.

* * * * *

(e) * * * * *

* * * * *

(2) * * * * *

(i) * * * * *

(A) The license does not involve spectrum that may be used to provide interconnected mobile voice and/or data services under the applicable service rules and that would, if the spectrum leasing arrangement were consummated, create a geographic overlap with spectrum in any licensed Wireless Radio Service (including the same service) or the Ancillary Terrestrial

Component of a Mobile Satellite Service in which the proposed spectrum lessee already holds a direct or indirect interest of 10% or more (*see* §1.2112), either as a licensee or a spectrum lessee, and that could be used by the spectrum lessee to provide interconnected mobile voice and/or data services;

5. Section 1.9030 is amended by revising paragraph (e)(2)(i)(A) to read as follows:

§ 1.9030 Long term *de facto* transfer leasing arrangements.

* * * * *

(e) * * * * *

* * * * *

(2) * * * * *

(i) * * * * *

(A) The license does not involve spectrum that may be used to provide interconnected mobile voice and/or data services under the applicable service rules and that would, if the spectrum leasing arrangement were consummated, create a geographic overlap with spectrum in any licensed Wireless Radio Service (including the same service) or the Ancillary Terrestrial Component of a Mobile Satellite Service in which the proposed spectrum lessee already holds a direct or indirect interest of 10% or more (*see* §1.2112), either as a licensee or a spectrum lessee, and that could be used by the spectrum lessee to provide interconnected mobile voice and/or data services;

6. New subsection **§ 1.9049** is added to read as follows...

§ 1.9049 Special Provisions relating to spectrum leasing arrangements involving Mobile Satellite Services.

(a) A license issued under Part 25 of the Commission's rules that provides authority for an Ancillary Terrestrial Component will be considered to provide "exclusive use rights" for purpose of this Subpart of the rules.

(b) For purposes of sections 1.9020(d)(8), 1.9030(d)(8), and 1.9035(d)(4), the licensee's obligation, if any, concerning the E911 requirements in Section 20.18 of this chapter, will, with respect to an Ancillary Terrestrial Component, be specified in the licensing document for the Ancillary Terrestrial Component.

(c) The following provision shall apply, in lieu of sections 1.9020(m) and 1.9030(m), with respect to spectrum leasing of an Ancillary Terrestrial Component:

(1) Although the term of a spectrum leasing arrangement may not be longer than the term of the Ancillary Terrestrial Component license, a licensee and spectrum lessee that have entered into an arrangement, the term of which continues to the end of the current term of the license may, contingent on the Commission's grant of a modification or renewal of the license to extend the license term, extend the spectrum leasing arrangement into the new license term. The Commission must be notified of the extension of the spectrum leasing arrangement at the same time that the licensee submits the application seeking an extended licensed term. In the event the parties to the arrangement agree to extend it into the new license term, the spectrum lessee may continue to operate consistent with the terms and conditions of the expired license, without further action by the Commission, until such time as the Commission makes a final determination with respect to the extension or renewal of the license.

**PART 2 -- FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL
RULES AND REGULATIONS**

7. The authority citation for Part 2 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

8. Section 2.106, the Table of Frequency Allocations, is amended as follows:

- a. Page 36 is revised.
- b. In the list of United States (US) Footnotes, footnote US380 is revised.
- c. In the list of non-Federal Government (NG) Footnotes, footnotes NG156 and NG168 are revised.

§ 2.106 Table of Frequency Allocations.

The revisions read as follows:

* * * * *

Federal Communications Commission

FCC 10-126

1980-2010 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) 5.351A 5.388 5.389A 5.389B 5.389F		1980-2025	NG177 2000-2020 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) US380 NG156
2010-2025 FIXED MOBILE 5.388A 5.388B	2010-2025 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space)	2010-2025 FIXED MOBILE 5.388A 5.388B	2020-2025 FIXED MOBILE
5.388	5.388 5.389C 5.389E	5.388	NG177
2025-2110 SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) FIXED MOBILE 5.391 SPACE RESEARCH (Earth-to-space) (space-to-space)		2025-2110 SPACE OPERATION (Earth-to-space) (space-to-space) EARTH EXPLORATION-SATELLITE (Earth-to-space) (space-to-space) SPACE RESEARCH (Earth-to-space) (space-to-space)	2025-2110 FIXED NG118 MOBILE 5.391
5.392		5.391 5.392 US90 US222 US346 US347 US393	5.392 US90 US222 US346 US347 US393
2110-2120 FIXED MOBILE 5.388A 5.388B SPACE RESEARCH (deep space) (Earth-to-space)		2110-2120	2110-2120 FIXED MOBILE
5.388		US252	US252
2120-2170 FIXED MOBILE 5.388A 5.388B	2120-2160 FIXED MOBILE 5.388A 5.388B Mobile-satellite (space-to-Earth)	2120-2170 FIXED MOBILE 5.388A 5.388B	2120-2180 FIXED MOBILE
	5.388		
	2160-2170 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth)		
5.388	5.388 5.389C 5.389E	5.388	
2170-2200 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) 5.351A			NG153 NG178
5.388 5.389A 5.389F			2180-2200 FIXED MOBILE MOBILE-SATELLITE (space-to-Earth) US380
			NG168

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UNITED STATES (US) FOOTNOTES

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US380 In the bands 1525-1544 MHz, 1545-1559 MHz, 1610-1645.5 MHz, 1646.5-1660.5 MHz, and 2483.5-2500 MHz, a non-Federal licensee in the mobile-satellite service (MSS) may also operate an ancillary terrestrial component in conjunction with its MSS network, subject to the Commission's rules for ancillary terrestrial components and subject to all applicable conditions and provisions of its MSS authorization.

* * * * *

NON-FEDERAL GOVERNMENT (NG) FOOTNOTES

* * * * *

NG156 Except as permitted below, the use of the 2000-2020 MHz band is limited to the MSS and ancillary terrestrial component offered in conjunction with an MSS network, subject to the Commission's rules for ancillary terrestrial components and subject to all applicable conditions and provisions of an MSS authorization. In the 2000-2020 MHz band, where the receipt date of the initial application for facilities in the fixed and mobile services was prior to June 27, 2000, said facilities shall operate on a primary basis and all later-applied-for facilities shall operate on a secondary basis to the mobile-satellite service (MSS); and not later than December 9, 2013, all such facilities shall operate on a secondary basis.

* * * * *

NG168 Except as permitted below, the use of the 2180-2200 MHz band is limited to the MSS and ancillary terrestrial component offered in conjunction with an MSS network, subject to the Commission's rules for ancillary terrestrial components and subject to all applicable conditions and provisions of an MSS authorization. In the 2180-2200 MHz band, where the receipt date of the initial application for facilities in the fixed and mobile services was prior to January 16, 1992, said facilities shall operate on a primary basis and all later-applied-for facilities shall operate on a secondary basis to the mobile-satellite service (MSS); and not later than December 9, 2013, all such facilities shall operate on a secondary basis.

* * * * *

PART 25 – SATELLITE COMMUNICATIONS

9. Section 25.149 is amended by adding paragraph (g) to read as follows:

- A. **§ 25.149 Application requirements for ancillary terrestrial components in the mobile-satellite service networks operating in the 1.5/1.6 GHz, 1.6/2.4 GHz and 2 GHz mobile-satellite service.**
- B. * * * * *
- C. (g) *Spectrum leasing.* Lease of spectrum rights by MSS licensees or system operators for ATC use is subject to the rules spectrum leasing arrangements as set forth in Part 1, subpart X of the rules (*see* §§1.9001 *et seq.*).

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act (RFA),⁸⁷ the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this Notice of Proposed Rule Making (NPRM). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments provided on the first page of this NPRM. The Commission will send a copy of this NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).⁸⁸ In addition, the NPRM and IRFA (or summaries thereof) will be published in the Federal Register.⁸⁹

A. Need for, and Objectives of, the Proposed Rules.

2. Mobile broadband is emerging as one of America's most dynamic innovation and economic platforms. Yet tremendous demand growth will soon test the limits of spectrum availability. As observed in the National Broadband Plan, 90 megahertz of spectrum allocated to the Mobile Satellite Service (MSS) – in the 2 GHz band, Big LEO band, and L-band – are potentially available for terrestrial mobile broadband use.⁹⁰ In this Notice of Proposed Rulemaking (NPRM) we seek to remove regulatory barriers to terrestrial use, and to promote additional investments in the MSS bands while retaining sufficient market-wide MSS capability.

3. The NPRM makes two proposals. First, we propose to add co-primary Fixed and Mobile allocations to the Table of Frequency Allocations for the 2 GHz band,⁹¹ consistent with the International Table of Allocations. Under this proposed allocation, Fixed and Mobile services would have equal status to Mobile Satellite Services. This allocation modification is a precondition for more flexible licensing of terrestrial services within the band and lays the groundwork for providing additional flexibility in use of the 2 GHz spectrum in the future. The NPRM would not change the status of the existing MSS licensees nor grant authority for terrestrial operations in the band beyond what are currently permitted under the Ancillary Terrestrial Component (ATC) rules.⁹²

4. In keeping with this proposed flexible allocation for the 2 GHz MSS band, if an MSS license is cancelled for any reason, we also propose not to assign any additional spectrum for MSS use in this band to either of the existing MSS licensees or to a new MSS entrant. Previously, the Commission has not expressed any preference on how it would treat returned 2 GHz MSS spectrum. Assigning the returned spectrum under the existing MSS licensing rules would potentially limit options for flexible use and promotion of future fixed and mobile deployment. The Notice of Inquiry (NOI) that accompanies

⁸⁷ See 5 U.S.C. § 603. The RFA, see 5 U.S.C. § 601 – 612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

⁸⁸ See 5 U.S.C. § 603(a).

⁸⁹ See *id.*

⁹⁰ Connecting America: The National Broadband Plan, Recommendation 5.8.4, p.87 (2010) (*National Broadband Plan*).

⁹¹ 47 C.F.R. § 2.106.

⁹² Any terrestrial use of the 2 GHz MSS bands must comply with the Commission's service and licensing rules for the band. The NPRM does not propose to alter these rules.

this NPRM explores ways to promote the development of terrestrial mobile services in the 2 GHz MSS band. It is in the public interest to retain flexibility on how best to assign the spectrum, should it become available, until we make final decisions in this proceeding.

5. Second, we propose to apply the Commission's secondary markets policies and rules applicable to terrestrial services to all transactions involving the use of MSS bands for terrestrial services in order to create greater predictability and regulatory parity with bands licensed for terrestrial mobile broadband service. The secondary markets policies and rules provide a means by which terrestrially-based Wireless Radio Service licensees holding "exclusive use" spectrum rights can lease some or all of the spectrum usage rights associated with their licenses to third parties.⁹³ The rules include immediate approval procedures for categories of terrestrial spectrum leasing arrangements that do not raise public interest concerns (such as concerns relating to foreign ownership or competition). Currently, the secondary markets policies and rules do not apply to satellite spectrum such as the MSS bands. Extending these rules to terrestrial use of the MSS band will foster regulatory parity by allowing leases involving use of the MSS bands for terrestrial services to use the same leasing rules as are used in other bands, including the immediate approval procedures for certain categories of leasing arrangements. It will create greater predictability by allowing licensees to take advantage of the established secondary markets leasing procedures. No protest or grievances have been received from small entities alleging that their interest have been compromised under the secondary markets rules as they have been applied in the past to Wireless Radio Services licensees.

B. Legal Basis.

6. The proposed action is authorized under Sections 4(i), 301, 303(c), 303(f), 303(r), 303(y), and 310 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 303(c), 303(f), 303(r), 303(y), and 310.

C. Description and Estimate of the Number of Small Entities To Which the Proposed Rules Will Apply.

7. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.⁹⁴ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."⁹⁵ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁹⁶ A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.⁹⁷

8. **Mobile Satellite Service Carriers.** Neither the Commission nor the U.S. Small Business Administration has developed a small business size standard specifically for mobile satellite service

⁹³ Rules and procedures for spectrum leasing arrangements are set forth in Part 1, Subpart X. 47 C.F.R. §§ 1.9001 *et seq.*

⁹⁴ 5 U.S.C. § 603(b)(3).

⁹⁵ 5 U.S.C. § 601(6).

⁹⁶ 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register." 5 U.S.C. § 601(3).

⁹⁷ Small Business Act, 15 U.S.C. § 632 (1996).

licensees. The appropriate size standard is therefore the SBA standard for Satellite Telecommunications, which provides that such entities are small if they have \$15 million or less in annual revenues.⁹⁸ Currently, the Commission's records show that there are 31 entities authorized to provide voice and data MSS in the United States. The Commission does not have sufficient information to determine which, if any, of these parties are small entities. The Commission notes that small businesses are not likely to have the financial ability to become MSS system operators because of high implementation costs, including construction of satellite space stations and rocket launch, associated with satellite systems and services. Nonetheless, it might be possible that some are small entities affected by this NPRM and therefore we include them in this section of the IFRA.

9. **Satellite Telecommunications and All Other Telecommunications.** The category of Satellite Telecommunications "comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications."⁹⁹ For this category, Census Bureau data for 2002 show that there were a total of 371 firms that operated for the entire year.¹⁰⁰ Of this total, 307 firms had annual receipts of under \$10 million, and 26 firms had receipts of \$10 million to \$24,999,999.¹⁰¹ Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

10. The second category of All Other Telecommunications has a size standard of \$25 million or less in annual receipts.¹⁰² The most current Census Bureau data in this context, however, are from the (last) economic census of 2002, and we will use those figures to gauge the prevalence of small businesses in these categories.¹⁰³ This category comprises, *inter alia*, "establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems."¹⁰⁴ For this category, Census Bureau data for 2002 show that there were a total of 332 firms that operated for the entire year.¹⁰⁵ Of this total, 303 firms had annual receipts of under \$10 million and 15 firms had annual receipts of \$10 million to \$24,999,999.¹⁰⁶ Consequently, we estimate that the majority of All Other Telecommunications firms are small entities that might be affected by our action.

11. **Wireless Telecommunications Carriers (except satellite).** The NPRM proposes that the Commission's secondary market policies and rules be applied to terrestrial service in the MSS bands. We can not predict who may in the future lease spectrum for terrestrial use in these bands. In general, any

⁹⁸ 13 C.F.R. § 121.201, North American Industry Classification System ("NAICS") code 517410.

⁹⁹ U.S. Census Bureau, 2007 NAICS Definitions, "517410 Satellite Telecommunications," <http://www.census.gov/naics/2007/def/ND517410.HTM> (last visited Oct. 21, 2009).

¹⁰⁰ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," tbl. 4, NAICS code 517410 (rel. Nov. 2005).

¹⁰¹ *Id.* An additional 38 firms had annual receipts of \$25 million or more.

¹⁰² 13 C.F.R. § 121.201, NAICS code 517919.

¹⁰³ 13 C.F.R. § 121.201, NAICS codes 517410 and 517910 (2002).

¹⁰⁴ U.S. Census Bureau, 2007 NAICS Definitions, "517919 All Other Telecommunications," <http://www.census.gov/naics/2007/def/ND517919.HTM#N517919> (last visited Oct. 21, 2009).

¹⁰⁵ U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, "Establishment and Firm Size (Including Legal Form of Organization)," tbl. 4, NAICS code 517910 (issued Nov. 2005).

¹⁰⁶ *Id.* An additional 14 firms had annual receipts of \$25 million or more.

wireless telecommunications provider would be eligible to lease spectrum from the MSS licensees. Since 2007, the Census Bureau has placed wireless firms within the new, broad, economic census category of Wireless Telecommunications Carriers (except satellite). Prior to that time, such firms were within the now-superseded categories of “Paging” and “Cellular and Other Wireless Telecommunications.” Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees. Because Census Bureau data are not yet available for the new category, we will estimate small business prevalence using the prior categories and associated data. For the category of Paging, data for 2002 show that there were 807 firms that operated for the entire year. Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more. For the category of Cellular and Other Wireless Telecommunications, data for 2002 show that there were 1,397 firms that operated for the entire year. Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more. Thus, we estimate that the majority of wireless firms are small.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

12. The NPRM proposes to apply the Commission’s secondary market policies and rules applicable to terrestrial services to all transactions involving the use of MSS bands for terrestrial services. Leasing parties will be required to submit specified information and certifications (including information about the parties, the amount and geographic location of the spectrum involved, and other overlapping terrestrial-use spectrum holdings of the parties) to the Commission in advance of any operations that would be permitted pursuant to the proposed transaction.

E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

13. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.¹⁰⁷

14. The proposal to add Fixed and Mobile allocations to the 2 GHz MSS band is the first step toward providing additional flexibility to the band.¹⁰⁸ The addition of Fixed and Mobile allocations in itself does not change the status of the existing MSS licensees or the Commission’s service rules for MSS and ATC networks. Furthermore, this addition does not grant authority for terrestrial operations in the band beyond what is currently permitted under the ATC rules. The existing 2 GHz MSS operators, both of which have launched satellites, will continue to be able to operate under the terms of their licenses and must continue to comply with all of the Commission’s existing ATC rules as was the case before the Fixed and Mobile allocations were added to the band. Consequently, this proposal will not have a significant economic impact on the 2 GHz MSS operators or any other entity, small or otherwise.

15. The NPRM also proposes that if one or both of the 2 GHz MSS licenses were to be returned or cancelled for any reason, the returned spectrum could be used for terrestrial mobile broadband deployment. This proposal would not encourage or require the MSS operators to return their licenses and therefore will not result in a negative economic impact on any entity, small or otherwise. Furthermore, if

¹⁰⁷ See 5 U.S.C. § 603(c).

¹⁰⁸ This item does not propose to alter the primary MSS allocation or propose to relocate the incumbent MSS licensees under the Emerging Technologies relocation policies.

an MSS license is returned or cancelled and the returned spectrum were to be used for terrestrial mobile broadband services, this could provide future opportunities for small entities to provide mobile broadband services – *e.g.* by obtaining licenses by standard FCC auction procedures or by obtaining leases for the returned spectrum not subject to any restraints or preconditions.

16. The proposal to apply the Commission’s secondary market policies and rules to all transactions involving the use of MSS bands for terrestrial services will provide greater predictability and regulatory parity with bands licensed for terrestrial mobile broadband service. This proposal should make it easier for MSS providers in any of the MSS bands to enter into leasing agreements involving terrestrial use of their spectrum. The proposal should provide an economic benefit for the MSS providers and those entities entering into leasing agreements with them. The secondary market leasing rules apply equally to all entities, whether small or large. As a result, we believe that this proposal will provide an economic benefit to small entities by making it easier for small entities to enter into spectrum leasing agreements for terrestrial use of the MSS spectrum.

17. As noted above, the proposed secondary market policies will require the collection of certain information about the proposed leases. This information is necessary for the Commission to make informed decisions regarding the proposed leases and should not be overly burdensome. Consequently, we do not expect this requirement to have a negative economic impact on any small entities.

F. Federal Rules that May Duplicate, Overlap, or Conflict With the Proposed Rule

18. None.

**STATEMENT OF
CHAIRMAN JULIUS GENACHOWSKI**

Re: *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, ET Docket No. 10-142.*

Today we launch a new spectrum flexibility initiative as part of our major effort to promote world-leading broadband infrastructure here in the United States, and to unleash the opportunities of wireless broadband.

Having world-leading wireless networks in the 21st Century will be essential to our global competitiveness. Achieving this goal of world leadership won't happen without action. In today's global economy, with the focus other countries are giving to the opportunities of broadband, to stand still is to fall behind. To achieve our goals, we must increase spectrum for wireless broadband and reduce needless regulatory obstacles to broadband deployment.

The item we vote on today is designed to accomplish both. Moving forward on a key initiative of the National Broadband Plan, today we begin the process of removing regulatory barriers to use of spectrum for terrestrial mobile wireless service in the mobile satellite service (MSS) bands. We need both ground-based and satellite-based mobile broadband. And we intend to modify our rules in a way that both expands terrestrial mobile broadband and ensures that America has a robust mobile satellite capability for rural areas and when disaster strikes.

Our action today flows from the National Broadband Plan, and is consistent with the recent Executive Memorandum, both of which recognize the importance of spectrum for our economy and call for an additional 500 MHz of spectrum for broadband. This proceeding will help make 90 megahertz of prime spectrum available for mobile broadband, while promoting efficient use of this spectrum, including the use of secondary market leasing arrangements. Our action today also builds upon our recent approval of the transaction between Harbinger Capital Partners and SkyTerra Communications, which facilitated a multi-billion dollar commitment to invest in a new 4G wireless network. These are examples of our focus on FCC actions that will unleash private sector investment and innovation. This proceeding will open the door to exciting new opportunities in mobile—new networks, new devices, new competition and new technologies.

The mobile broadband revolution is upon us, with smartphones, netbooks, and other connected devices generating unprecedented capacity demands on our terrestrial wireless networks. We are seeing an exciting innovation-driven reinvention of wireless communications. This is how we've had significant job creation in the U.S. in the past – innovation and reinvention of industries, with small companies becoming big, and big companies becoming bigger, competing and creating jobs in a rapidly changing landscape. Today we take an important action to make our spectrum rules more flexible and increase the amount of spectrum available for mobile broadband. This will catalyze investment and spark innovation, create jobs, help increase broadband speeds and capacity, and take an important step to make sure that America has the spectrum it needs to lead the world in mobile.

**STATEMENT OF
COMMISSIONER MICHAEL J. COPPS**

Re: *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, ET Docket No. 10-142.*

As we work to expand broadband opportunities for the American people, maximizing the public interest benefits of our finite spectrum resource presents us with a huge challenge. As demands for speed and mobility increase, so does the demand for spectrum upon which mobile wireless broadband rides. Unfortunately, we can't make any more spectrum, so we *need* to find ways to optimize our supply by expanding flexibility of use for licensees and improving efficiency through new and innovative technologies. To that end, I have long supported efforts—as exemplified by FCC's creation of the Spectrum Dashboard—to examine what spectrum is being used, how it is being used, and whether it can be put to better use to serve the public interest. Similarly, I support examinations, like the one we launch today, that explore ways to maximize the use of the spectrum resource—in this case, several mobile satellite service bands.

This proceeding does more than emphasize the need to intensify the use of spectrum to provide wireless broadband opportunities; it also serves as a reminder of the critical role that the mobile satellite industry plays in our nation's communications infrastructure. I am a true believer in the importance of satellites—a sentiment that I have carried with me since before I came to the Commission. In fact, I can recall very vividly the shock waves that went through the nation in 1957 when the then-Soviet Union launched Sputnik. And, I remember feeling at least a little bit better the following year, standing on the roof-top of a hotel in Florida, watching the launch from Cape Canaveral of one of our first U.S. satellites.

Perhaps the excitement of those early days of satellites won't ever be recaptured, but the sustainability and redundancy that satellites provide to U.S. national security and public safety cannot be underestimated. I have seen it first-hand. When I traveled to the Gulf Coast in the immediate aftermath of Hurricane Katrina, it was MSS terminals that were the first up-and-running, providing essential connectivity. And earlier this year, we saw the same unparalleled responsiveness and reliability when the FCC deployed a team to Haiti in the wake of the tragic earthquake. These two recent events serve as powerful illustrations of the need to preserve satellite capability—especially in those bands where systems are operating on a globally or regionally harmonized basis. Once the benefits of harmonization are lost, they are probably lost forever.

Luckily, our hard-working FCC staff is also mindful of these important considerations, and I am confident that what we are discussing in today's proceeding will result in a healthy and productive dialogue. And we must remember that we are not looking at an either/or proposition. Instead, I believe that—while we consider all options—we should focus on the interplay between the mobile satellite service and terrestrial wireless broadband. The potential for rural America, and for public safety, remains enormous. Within the past year, we have seen—for one of the bands highlighted in today's item—an announcement from TerreStar, a 2 GHz licensee, and AT&T about a plan to offer an integrated smartphone providing wireless connectivity with back-up satellite coverage. We can only guess where technology can take us through synergizing the different, yet complimentary, strengths of mobile satellite and wireless broadband.

Lastly, I appreciate the willingness of my colleagues to raise questions regarding the need for any mechanisms—such as spectrum fees—to compensate the American people for the terrestrial use of the public spectrum resource. For international policy reasons, as well as the current U.S. legal framework, a satellite licensee does not bid for its spectrum license through an auction. However, charging fees for the ancillary terrestrial use in the MSS bands could provide incentives to ensure that the spectrum resource is used more efficiently and intensively.

I would like to thank the staff in the Wireless Telecommunications Bureau, the Office of Engineering and Technology and the International Bureau for their hard work on today's Notices of Proposed Rulemaking and Notice of Inquiry. I look forward to working with the Chairman and my colleagues as we continue to work to maximize the public interest benefits of the spectrum resource.

**STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL**

Re: *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, ET Docket No. 10-142.*

During my time at the Commission, I have consistently supported efforts to remove regulatory barriers, create flexibility for licensees and prospective licensees, and therefore promote additional investment in communications services. We can all agree that all Americans, no matter where they live or work, should have affordable access to robust and reliable broadband products and services. At the same time, constructive public policy should aim to bring more spectrum to market while also promoting spectral efficiency. Accordingly, I am pleased to support today's effort to seek public comment on ideas to promote greater flexibility for mobile satellite service (MSS) licensees. I also support our separate inquiry into proposals for making additional spectrum available for mobile broadband networks.

I am particularly interested in learning more about application of the Commission's secondary market rules in the MSS context, as discussed in our Notice of Proposed Rulemaking. Consumers benefit most when spectrum licensees have multiple and equal opportunities to increase their spectral efficiency, no matter their technology. Due to the time necessary to develop a full record on the ideas raised in our Notice of Inquiry, I urge that we move forward as quickly as possible on the rulemaking aspect of this proceeding. Given the condition of America's economy, it is more important than ever to do all we can to bolster investment and opportunities for innovation and job growth. America's wireless consumers, and the companies that serve them, should not be forced to bear the costly burden of unnecessary delay.

I thank the teams from the Office of Engineering and Technology, the Wireless Telecommunications Bureau and the International Bureau for your important work.

STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN

Re: *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, ET Docket No. 10-142.*

On June 28th, President Obama released a memorandum entitled “Unleashing the Wireless Broadband Revolution.” That Memorandum asserts that our Nation’s exponential increase in the demand for wireless services will likely outpace the supply of spectrum currently allocated. It concludes that to address this looming spectrum shortage, we should promote an environment where innovation thrives, and we should take steps to unlock the value of otherwise underutilized spectrum.

I agree with the President, and that is why I enthusiastically support the Commission’s decision to initiate this proceeding. As the item explains, if we make prudent changes to some of the Commission’s policies with regard to Mobile Satellite Services, we can create incentives for the wireless industry to find innovative ways to make greater use of the spectrum that we had initially allocated for MSS services. By promoting this innovation, we will help wireless carriers meet the unyielding consumer demand for wireless spectrum.

I am pleased that the item takes a careful approach. In its proposal to subject MSS licensees to the Commission’s secondary market spectrum leasing policies, the item wisely recognizes that not all spectrum leasing policies may be suitable for all MSS licensees, particularly those MSS licensees that have also deployed Ancillary Terrestrial Component services. The item also acknowledges that making MSS spectrum available through spectrum lease arrangements could raise some competition concerns. Accordingly, the item properly solicits input on the competitive factors the Commission should consider when evaluating a spectrum leasing arrangement between a MSS licensee and a wireless carrier.

I am also pleased that the Notice of Inquiry underscores the importance of maintaining MSS to provide services for the needs of public safety and federal government agencies, for rural areas, and for those areas that have suffered severe damage during natural disasters. The Commission must ensure that these communications needs continue to be met.

I thank the staffs of the International Bureau, Office of Engineering and Technology, and Wireless Telecommunications Bureau for presenting us with this thoughtful item. Indeed, over the past few months, the Commission staff has done a commendable job in meeting the timelines for the key broadband action items for this year. I believe it is prudent that the Commission continue to consider the recommendations in the Plan in a timely manner. This is especially important in the wireless arena due to the increasing demand for wireless services. In particular, the Commission should timely conclude its consultation with NTIA on the prospect of pairing the AWS-3 spectrum. Should that inquiry result in the conclusion that pairing is not a strong possibility, we should proceed in our adoption of final rules by year end so that we can auction that spectrum next year.

**STATEMENT OF
COMMISSIONER MEREDITH A. BAKER**

Re: *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, ET Docket No. 10-142.*

I am pleased to support today's *Notice of Proposed Rulemaking* and *Notice of Inquiry*, which seek to implement the National Broadband Plan's (NBP) recommendation to accelerate terrestrial deployment in 90 MHz of the Mobile Satellite Services (MSS) bands. Today further paves the way for mobile broadband deployment in that spectrum while also serving as an important step in securing broadband access for all Americans.

We must make more efficient use of spectrum and we must take a long-term view when crafting spectrum policy. Our action today accomplishes both. The NPRM's proposed changes to the Table of Frequency allocation will add flexibility within the bands and consistency internationally. Further, the NPRM proposes to apply the Commission's secondary market policies to MSS/ATC leasing arrangements. This step draws upon the existing regulatory framework set by the Commission with respect to Wireless Radio Services and will provide clear rules and procedures for spectrum leases with third party entities—a significant improvement to our current *ad hoc* approach.

Additionally, today's *Notice of Inquiry* asks important questions about how to best promote the introduction of new mobile broadband services in the 2GHz band and how to increase value, promote utilization, investment and innovation in terrestrial mobile broadband. I am pleased the *NOI* also inquires about the best approaches for creating opportunities for stand-alone terrestrial uses in the 2GHz band.

I want to thank the staffs of the Wireless Telecommunications Bureau, the International Bureau, and the Office of Engineering and Technology for their work on this item. I look forward to working with my Commission colleagues on other ways to efficiently promote mobile broadband deployment, innovation and investment.