

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

In the Matter of)	
)	
Globalstar Licensee LLC)	File No. SAT-MOD-20080516-00106
)	Call Sign: S2115
Application for Modification of License for Operation of Ancillary Terrestrial Component Facilities)	

ORDER AND AUTHORIZATION

Adopted: October 31, 2008

Released: October 31, 2008

By the Commission: Commissioners Copps, Adelstein, and Tate issuing separate statements; Chairman Martin and Commissioner McDowell dissenting and issuing separate statements.

I. INTRODUCTION

1. In this order, we grant in part a request by Globalstar Licensee LLC (“Globalstar”) to modify its authority for an ancillary terrestrial component (“ATC”) to be operated in conjunction with the Globalstar™ Mobile Satellite Service (“MSS”) system. Specifically, we modify Globalstar’s license to permit use of the WiMAX air interface protocol. In doing so, we find that an interim waiver of certain of our ATC “gating criteria” and technical rules will serve the public interest by permitting Globalstar and its spectrum lessee, Open Range Communications, Inc. (“Open Range”), to commence deployment of a broadband service consistent with a \$267 million loan commitment from the Department of Agriculture’s Rural Development Utilities Program.

II. BACKGROUND

A. The Globalstar ATC Authorization

2. Globalstar holds a space station license for the Globalstar 1.6/2.4 GHz MSS system, which has been in continuous commercial operation for more than eight years providing voice and data services in the United States and abroad via non-geostationary-orbit satellites.¹ In March 2005, Globalstar’s predecessor-in-interest applied for authority to operate ATC base stations and dual-mode MSS/ATC mobile terminals with the cdma2000 air interface protocol. The International Bureau granted the application in January 2006, subject to conditions,² assigning the 1610-1615.5 MHz frequency band for Globalstar ATC mobile terminal transmission and the 2487.5-2493 MHz band for Globalstar ATC

¹ An affiliated company, GUSA Licensee LLC, holds licenses for the Globalstar MSS system’s gateway earth stations in the United States and holds a blanket license for operation of Globalstar MSS terminals in the United States.

² *Globalstar LLC Request for authority to implement an ancillary terrestrial component for the Globalstar Big LEO Mobile Satellite Service system, Order and Authorization*, DA 06-121, 21 FCC Rcd 398 (2006) (“*Globalstar ATC Order*”).

base station transmission. These ATC frequency assignments were consistent with a rule provision, Section 25.149(a)(2)(iii), which stated that ATC operations in the 1.6/2.4 MHz MSS bands would be limited to the 1610-1615.5 MHz, 1621.35-1626.5 MHz, and 2487.5-2493 MHz bands and to the frequencies assigned for the licensee's MSS operation. In a Notice of Proposed Rulemaking released in November 2007, the Commission proposed to amend Section 25.149(a)(2)(iii) to expand the available spectrum for ATC operation in the 1.6/2.4 MHz MSS bands.³ In a Report and Order released in April 2008, the Commission adopted the proposed rule change and accordingly proposed to modify Globalstar's ATC license to expand the spectrum assigned for ATC operation to extend from 1610 to 1617.775 MHz band and from 2483.5 to 2495 MHz, for a total ATC spectrum bandwidth of 19.275 MHz.⁴ Globalstar's ATC authorization was subsequently modified to allow operation in those wider frequency bands.⁵

B. Application for Modification of ATC Authority and Related Filings

3. In the above-captioned application, Globalstar requests that its license be modified to authorize ATC operation with air interface protocols other than the previously authorized cdma2000. Specifically, Globalstar requests authority to use four additional protocols: Wideband CDMA ("WCDMA"), Time Division CDMA ("TD-CDMA"), Long Term Evolution with Frequency Division Duplex ("LTE-FDD"), and WiMAX with Time Division Duplex ("WiMAX-TDD").

4. Globalstar states in the application that when it originally sought authority to deploy ATC services it planned to offer a variety of MSS/ATC services using cdma2000 or IS-95 protocols but that technology choices have evolved dramatically since then, driven by the rapid rate of innovation in the wireless marketplace. After considering various technical options and financial models, Globalstar concluded that there is a strong and currently unmet market demand for broadband wireless data technologies employing WiMAX-TDD, WCDMA, TD-CDMA, and/or LTE protocols.

5. Globalstar plans to collaborate with one or more "terrestrial partners" to offer MSS bundled together with ATC broadband service. To that end, Globalstar has entered into a spectrum lease agreement with Open Range. Under the terms of the agreement, Open Range would construct and operate an ATC network using S-band spectrum leased from Globalstar. The two companies would provide MSS/ATC service to customers equipped with dual-mode handheld terminals, Open Range providing the ATC service and Globalstar providing the MSS component.

6. The first-generation mobile device for the Globalstar/Open Range rural broadband service offering would be a MSS/ATC handheld unit based on the same architecture as Globalstar's SPOT Satellite Personal Tracker™. The SPOT device provides one-way, transmit-only communications

³ *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, Second Order on Reconsideration, Second Report and Order, and Notice of Proposed Rulemaking*, 22 FCC Rcd 19733 (2007).

⁴ *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands/Globalstar Licensee LLC, Authority to Implement an Ancillary Terrestrial Component, Report and Order and Order Proposing Modification*, FCC 08-98 (released Apr. 10, 2008).

⁵ *Globalstar Licensee LLC, Modification of Authority to Implement an Ancillary Terrestrial Component*, FCC 08-238 (released October 10, 2008).

via the Globalstar satellite constellation, providing GPS location-tracking and text-messaging to designated email addresses and mobile phones. The SPOT device can also provide one-way communication to emergency-response centers.⁶ For the initial rollout of the Globalstar/Open Range service offering, the existing SPOT device would be adapted to incorporate a WiMAX broadband modem for access to the Globalstar/Open Range ATC network through a standard USB connection to laptop computers or connection to Voice Over Internet Protocol telephones. The device would incorporate a switch that would enable users to select the network to be accessed, MSS or ATC. Thus, first-phase Globalstar/Open Range customers would have access to SPOT MSS and mobile broadband service via a single device. The SPOT service would be accessed directly by use of buttons on the device, while the ATC services would be accessed, after switching the device to ATC mode, through a computer or telephone handset.

7. Open Range plans to deploy these first-generation broadband ATC services beginning in the second quarter of 2009, first to approximately 2,500 customers in 5 markets in a “proof-of-concept deployment.”⁷ These customers will receive the first generation device with one-way only, low-data rate MSS capabilities, but will be offered an exchange upgrade when a newer device becomes available beginning in early 2010. The newer device will be upgradeable to include a chipset that is capable of supporting two-way high-speed MSS. This device would be deployed in approximately 189-217 markets. The chipset, to be manufactured by Hughes Network Systems, is scheduled to become available in production quantities in early 2011. Beginning with the availability of this chipset in early 2011, Globalstar and Open Range plan to incorporate it into “all new Open Range end-user devices shipped.” Globalstar indicates that, because the majority of the full-scale Open Range rollout will occur over four years, this device will be available well before service is deployed to the majority of Open Range subscribers.⁸ Globalstar indicates that this device is a dual-mode mobile device that will support MSS,

⁶ The functions of the SPOT device as described as follows in the application:

SPOT is the world’s first satellite messenger. The device provides a “Check In” function to let contacts know where the user is and that [he is] okay, a “Track Progress” function to send and save the user’s location using a mapping application, an “Ask For Help” function requesting non-emergency assistance at the user’s location from the user’s designated contact, and an “[Alert]” function to dispatch emergency responders to the user’s location. A complete description of the device and additional information can be found at www.findmespot.com. The [Alert] function is used ... to notify emergency services of the user’s location and that [he] need[s] assistance. The GEOS International Emergency Response Center alerts the appropriate agencies worldwide, e.g. contacting 911 responders ... in North America or 112 responders in Europe. The SPOT will acquire its coordinates from the GPS network and send that location along with a distress message every five minutes until cancelled. Based on the user’s location and personal information, the Emergency Response Center notifies the appropriate emergency responders, which may include local police, highway patrol, the Coast Guard, an embassy or consulate if outside the United States, or other emergency response or search and rescue teams, as well as notifying the user’s designated emergency contact(s) about the receipt of a distress signal. Even if SPOT cannot acquire its location from the GPS network, it will attempt to send a distress signal, without GPS location, to the Emergency Response Center, which will still notify the user’s contacts and continue to monitor the network for further messages.

Application for Minor Modification of Space Station License, SAT-MOD-20080516-00106 (“ATC Modification Application”), Technical Exhibit at 16.

⁷ Globalstar Ex Parte Notification, dated October 14, 2008.

⁸ Except as otherwise noted, this summary of planned deployment is based upon information provided in the

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including two-way voice and data services with speeds of approximately 1 megabit per second in the downlink and 256 kilobits per second in the uplink, along with mobile broadband ATC service.⁹ This second-generation service will be available when second-generation Globalstar satellites and ground facilities are operational in the summer of 2011. Globalstar indicates that, by the third quarter of 2011, Open Range will have built out facilities offering services to approximately four million rural residents, who will have available to them ATC devices capable of taking advantage of the new high-speed MSS offered by Globalstar's new satellites and ground facilities. They note that no more than approximately 2,500 of these people will have initially received the first generation device with limited MSS capability. Globalstar indicates that the initial 2,500 customers will be offered the opportunity to exchange their initial end-user device as soon as the second-generation Open Range device becomes available, and that such exchanges will be provided at no cost to the customer.¹⁰ It is anticipated that the ATC service will extend coverage to 546 communities in seventeen states over the ensuing five years.¹¹

8. Globalstar asserts that, once fully deployed, the planned Globalstar/Open Range MSS/ATC service offering will produce very significant public interest benefits by affording broadband access to millions of rural Americans who now have little or no access to such service. Rural broadband service lags far behind what is available in more populated areas of the country, according to Globalstar, and where it does exist, it is often prohibitively expensive and confined to areas in the immediate vicinity of customers' homes, offices or farms. Globalstar maintains that Globalstar/Open Range MSS/ATC can provide a cost-effective rural broadband service option comparable to those available to customers in urban and suburban areas with the added benefits of portability and mobility.¹²

9. The International Bureau placed the above-captioned application on public notice¹³ and subsequently designated the proceeding as "permit-but-disclose" for purposes of the Commission's *ex parte* rules.¹⁴ Iridium Satellite LLC ("Iridium") and Sprint Nextel Corporation ("Sprint") filed petitions to deny, CTIA-The Wireless Association filed comments, and the U.S. GPS Industry Council filed comments and a request for clarification.¹⁵ Globalstar, Open Range and Main Street Broadband LLC filed consolidated oppositions to the petitions to deny, and Iridium and Sprint filed reply

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Globalstar Ex Parte Notification dated October 14, 2008.

⁹ ATC Modification Application, Exhibit 1 at 18.

¹⁰ Globalstar Ex Parte Submissions dated October 16 and 17, 2008.

¹¹ Submission of Open Range Communications, Inc., dated October 10, 2008.

¹² ATC Modification Application, Exhibit 1 at 18.

¹³ *Public Notice, Satellite Space Station Applications Accepted for Filing*, Report No. SAT-00525 (May 23, 2008).

¹⁴ *Public Notice, International Bureau Announces Permit-But-Disclose Ex Parte Status for Globalstar Licensee LLC's Application to Modify Authority for an Ancillary Terrestrial Component*, DA 08-1217 (May 28, 2008).

¹⁵ Petition to Deny of Iridium Satellite LLC, filed June 23, 2008 ("Iridium Petition"); Petition to Deny of Sprint Nextel Corporation, filed June 23, 2008 ("Sprint Petition"); Comments and Request for Clarification of U.S. GPS Industry Council, filed June 23, 2008; letter to Marlene H. Dortch, FCC Secretary, from Christopher Guttman-McCabe for CTIA-The Wireless Association, filed June 25, 2008 (requesting that the Commission carefully review requests for waiver of ATC gating criteria in three pending applications, including Globalstar's). *See also* letter to Marlene H. Dortch, FCC Secretary, from Christopher Guttman-McCabe for CTIA-The Wireless Association, filed October 28, 2008 (stating that Globalstar seeks to dilute the ATC gating criteria and that the proposed waivers should be denied).

pleadings.¹⁶

C. ATC Policy and Authorization Procedure

10. In 2003, the Commission adopted rules for licensing and operation of ATC facilities. ATC consists of terrestrial base stations and mobile terminals licensed to the operator of an MSS system. These facilities are used to offer service together with MSS, re-using frequencies assigned for MSS operations.¹⁷ The Commission concluded that authorizing ATC operation would serve the public interest by facilitating increased network capacity, more efficient use of spectrum, extension of coverage for handset operation to places where MSS operators have previously been unable to offer reliable service, improved emergency communications, enhanced competition and economies of scale in handset manufacture that would be passed on to consumers.¹⁸ An MSS operator with a Commission space station license may request blanket authority for operation of ATC stations in the United States.¹⁹ Equipment authorization must also be obtained for ATC mobile terminals pursuant to the test-based certification procedure specified in Part 2, Subpart J of the Commission's rules.²⁰

11. The Commission also adopted rules establishing several "gating criteria" that MSS operators must meet in order to obtain ATC authority.²¹ To ensure that ATC will be ancillary to provision of MSS, the Commission adopted a general requirement that MSS operators must provide substantial satellite service.²² In order to meet the substantial service requirement, an MSS operator must provide continuous satellite service in specified geographic areas,²³ maintain spare satellites²⁴ and make

¹⁶ Opposition of Globalstar to Petitions to Deny, filed July 9, 2008 ("Globalstar Opposition"); Open Range Communications Inc. Opposition to Petitions to Deny, filed July 9, 2008 ("Open Range Opposition"); Ex Parte Comments of Main Street Broadband LLC in Opposition to Petition to Deny, filed July 9, 2008 ("Main Street Opposition"); Reply of Iridium Satellite LLC, filed July 16, 2008; Reply of Spring Nextel Corporation, filed July 16, 2008. In addition, on October 10, 2008, TerreStar Networks, Inc., submitted an ex parte comment, and on October 3 and 10, 2008, Open Range submitted information for the record. On October 14, 16 and 17, 2008, Globalstar submitted additional information for the record.

¹⁷ *Flexibility for Delivery of Communications by Mobile Satellite Service Providers in the 2 GHz Band, the L-Band, and the 1.6/2.4 GHz Bands; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, Report and Order and Notice of Proposed Rulemaking*, FCC 03-15, 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*, FCC 05-30, 20 FCC Rcd 4616 (2005) ("*ATC Second Reconsideration Order*"), further reconsideration pending.

¹⁸ *ATC Report and Order* at ¶¶ 2, 20-45, and 210-11.

¹⁹ *Id.* 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.

²⁰ 47 CFR § 25.149(c)(1) and (2). Also see 47 CFR §§ 2.803, 2.901 *et seq.*, and 2.1204.

²¹ These gating criteria are set forth in 47 CFR § 25.149.

²² *ATC Report and Order* at ¶72.

²³ 47 CFR § 25.149(b)(1).

²⁴ 47 CFR § 25.149(b)(2).

MSS commercially available throughout the required coverage area.²⁵ To remain consistent with the satellite allocation²⁶ and service rules, the Commission also required MSS-ATC licensees to offer a truly integrated service and clarified that this requirement forbids MSS/ATC operators from offering ATC-only subscriptions.²⁷ The Commission concluded that the integration of an ATC into MSS systems would have several benefits, including the filling of gaps in MSS coverage, increasing MSS network capacity, and the development of new and innovative service offerings that satellite-only MSS systems cannot offer, including, *e.g.*, ubiquitous digital telecommunications and broadband services and other services that take advantage of the unique coverage and capacity characteristics of ATC-enabled MSS.²⁸ Under a “safe harbor” method, an MSS/ATC provider can establish compliance with the integrated-service requirement by affirmatively demonstrating that it will use a dual-mode handset that can communicate with both the MSS network and the MSS ATC component to provide the proposed ATC service.²⁹ Alternatively, MSS/ATC operators can provide other evidence establishing that it will provide an integrated service offering to the public.³⁰

12. Finally, as indicated in the *ATC Second Reconsideration Order*, “any MSS operator wishing to incorporate an ATC component into its system must meet the gating criteria for each spectrum band in which it wishes to provide ATC.”³¹ The Commission thereby clarified that it was not authorizing the provision of ATC in one satellite spectrum band because the gating criteria had been satisfied in another band. This clarification followed from the Commission’s decision that “an ATC is [to be] ancillary to the MSS system it supports.”³²

III. DISCUSSION

A. Compliance with Gating Requirements

13. We address below Globalstar’s compliance with ATC gating requirements. We

²⁵ 47 CFR § 25.149(b)(3).

²⁶ 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* 18 FCC Rcd at 1979 ¶ 31.

²⁷ 20 FCC Rcd at 4628 ¶ 33 citing 47 C.F.R. § 25.149(b)(4).

²⁸ *See ATC Report and Order*, 18 FCC Rcd at 1975 ¶ 23. The Commission also noted that an integrated MSS ATC would permit operators to offer all services over a single telephone number. *Id.* at 1976 ¶ 25.

²⁹ 47 C.F.R. § 25.149(b)(4)(i). The Commission adopted the “safe harbor” method so operators would have the option to demonstrate compliance without specific, detailed showings of system integration. *See* 20 FCC Rcd at 4626 ¶ 28.

³⁰ 47 C.F.R. § 25.149(b)(4)(ii). MSS licensees that choose not to rely on the safe harbor must submit evidence demonstrating that the service they propose to offer will be integrated. This can be accomplished through technical, economic or any other substantive showing that the primary purpose of the MSS licensee’s system remains the provision of MSS. An economic showing could include, for example, information on the pricing structure of an integrated service offering. *See ATC Report and Order*, 18 FCC Rcd at 2009 ¶ 88.

³¹ 20 FCC Rcd at 4628 ¶ 34.

³² *Id.*

conclude that, because of limitations related to the degradation of Globalstar's S-Band satellite transmitters discussed below, Globalstar does not comply with gating criteria concerning coverage, spare satellites and integrated service. Based on the unique facts presented in this case, however, we also conclude that an interim waiver of these gating criteria is appropriate with respect to the proposed WiMAX service. The waiver is limited to permit deployment subject to termination of service if Globalstar's anticipated dates for coming into compliance with gating criteria are not met, or if the loan commitment from the Department of Agriculture's Rural Development Utilities Program is terminated.

1. MSS Coverage

14. Section 25.149(b)(1)(iii) of the Commission's rules³³ states that, in order to establish eligibility to receive license authority for ATC operation, the operator of a "Big LEO" MSS system (*i.e.*, a 1.6/2.4 GHz MSS system) must demonstrate the following:

that it can provide space-segment service to all locations as far north as 70° North latitude and as far south as 55° South latitude for at least seventy-five percent of every 24-hour period, *i.e.*, that at least one satellite will be visible above the horizon at an elevation angle of at least 5° for at least 18 hours each day, and on a continuous basis throughout the fifty states, Puerto Rico and the U.S. Virgin Islands, *i.e.*, that at least one satellite will be visible above the horizon at an elevation angle of at least 5° at all times [at any given location in the fifty states, Puerto Rico, and the U.S. Virgin Islands].

15. Two-way Globalstar MSS is not, at present, continuously available throughout the United States, due to deterioration of power amplifiers in satellite subsystems that transmit to Globalstar mobile terminals in the MSS S-band, 2483.5-2500 MHz.³⁴ Degraded performance of a satellite's S-band transmitter impairs or eliminates the availability of two-way communications via that satellite.³⁵ Consequently, there are periods of time each day, at any given location, during which two-way communication is unavailable via the Globalstar MSS system.³⁶ Although, at present, less than 40 of the 48 active Globalstar satellites can provide two-way communications, all 48 can be used to provide one-way, transmit-only data communications, *i.e.*, communications beginning with an L-band transmission from a mobile earth terminal, received at the satellite, and then relayed via feeder links to a gateway earth station, from which it may be relayed to terrestrial networks.³⁷ Globalstar asserts that it can still provide two-way voice and data services at least 95 percent of the time in the United States, except in the area of Alaska above 64° North latitude,³⁸ and can provide one-way, transmit-only data service all of the time

³³ 47 CFR § 25.149(b)(1)(iii).

³⁴ 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. Globalstar surmises that the satellite malfunctions are caused by solar irradiation. Globalstar, Inc. Quarterly Report (SEC Form 10-Q) filed May 12, 2008 ("Globalstar May 2008 10-Q Report") at 17.

³⁵ Globalstar May 2008 10-Q Report at 19.

³⁶ *Id.*

³⁷ For such L-band-only services, there is no return path to the mobile earth terminal, thus preventing an end user from receiving satellite communications on the mobile earth terminal. ATC Modification Application, Attachment 1 at 15.

³⁸ Letter dated January 4, 2008 to Helen Domenici, Chief, International Bureau, from William F. Adler, Vice

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throughout the fifty states, Puerto Rico and the U.S. Virgin Islands.³⁹

16. We agree with Iridium⁴⁰ that the continuous availability of one-way, L-band-only MSS is insufficient for compliance with the coverage gating criteria for Globalstar's proposed S-Band ATC operations. As we indicated in the *ATC Second Reconsideration Order*, "any MSS operator wishing to incorporate an ATC component into its system must meet the gating criteria for each spectrum band in which it wishes to provide ATC."⁴¹ Thus, because Globalstar is requesting authority for ATC operation in the S-band MSS downlink band (2483.5-2495 MHz), continuous service must be available in that band. Presently, however, continuous service is available only in the L-band. In addition, we conclude that continuous coverage of a transmit-only, low-speed mobile tracking/messaging/emergency assistance service is not sufficient to support an ancillary terrestrial component that would provide a two-way, high-speed, wideband mobile data service. Once Globalstar's second generation satellites are launched and operational, the MSS system is anticipated to provide continuous coverage in both the L-band and the S-band, and will be providing a two-way, high-speed, wideband MSS data service reasonably comparable to the service provided through the ATC.

2. Integration

17. The Commission's rules require that ATC service must be offered as "integrated" with MSS.⁴² The rule states that applicants for ATC authority can demonstrate compliance with this requirement by showing that customers will use "dual-mode handset[s]" that can communicate via both the MSS network and ATC base stations. Alternatively, an applicant can submit other evidence that "an integrated MSS-ATC service offering" will be provided to the public.

18. While the proposed radio equipment for first generation ATC services will be inserted in the same physical container as a Globalstar SPOT terminal, we view this as insufficient by itself to satisfy the "integrated service offering" requirement. The proposed Globalstar-Open Range MSS-ATC terminal would not be a "dual-mode handset" contemplated by our ATC rules. We conclude this, first, because the ATC service that customers could obtain with the device would be provided in a different frequency band than the SPOT MSS. While we recognize that the WiMAX TDD architecture means that ATC will be provided only in one of the two Globalstar frequency bands, this fact does not foreclose a finding that the service offering is integrated.⁴³ Instead, the proposal does not meet integration criteria

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President for Legal and Regulatory Affairs, Globalstar Inc. in IBFS File No. SAT-STA-20070713-00098 ("January 2008 STA Letter"), at 4-5. Globalstar anticipates, however, that the deterioration of S-Band satellite transmitters will continue and that by some time in 2008 "substantially all" of the first-generation Globalstar satellites, aside from those launched in 2007, will be unable to support two-way communications. Globalstar May 2008 10-Q Report at 17. See also Waiver Request at 19; <http://www.globalstarusa.com/en/news/update.php> ("Constellation Update and Advisory . . . Concerning the Globalstar Satellite Constellation Two-Way Voice and Duplex Data Services - Temporary Limitations").

³⁹ *January 2008 STA Letter* at 4-5.

⁴⁰ Iridium Petition at 8.

⁴¹ 20 FCC Rcd at 4628 ¶ 34.

⁴² 47 CFR § 25.149(b)(4).

⁴³ See, *infra*, Section C, WiMAX Air Interface Protocol.

because one-way SPOT MSS (uplink only) will be provided only in the L-band, while the two-way ATC will be provided only in the S-band before Globalstar's second generation, two-way MSS is operational.⁴⁴ This would be true for both the initial five-market "proof-of-concept" deployment, and the subsequent deployments in 189-217 markets of upgradeable terminals. In addition, we conclude that adapting an existing SPOT device (which provides a transmit-only, low-speed mobile tracking/messaging/emergency assistance satellite service) by incorporating a WiMAX broadband modem that will allow access via laptop computer or Voice Over Internet Protocol telephone to a two-way, high-speed, wideband mobile data service does not provide the integrated MSS/ATC required by our rules.⁴⁵ As indicated in the *ATC Second Reconsideration Order*, an ATC is ancillary to the MSS system it supports, and, therefore, MSS operators must fulfill the gating criteria in each band in which they seek to provide ATC.⁴⁶ Furthermore, there is no additional evidence on the record that would indicate this first-generation service is the type of integration contemplated by the rule.

3. In-Orbit Spare

19. Section 25.149(b)(2)(i) of the Commission's rules⁴⁷ states that non-geostationary satellite orbit "MSS ATC systems shall maintain an in-orbit spare satellite." Globalstar contends that it meets this requirement by virtue of the fact that there is a currently-inactive L-band-only Globalstar satellite in orbit that can be used a replacement in the event that one of the active L-band-only satellites fails.⁴⁸ Because any MSS operator wishing to incorporate an ATC component into its system must meet the gating criteria for each spectrum band in which it wishes to provide ATC,⁴⁹ we conclude that Globalstar operations do not meet the spare-satellite gating requirement with respect to S-band at the present time.

4. Waivers

20. Globalstar requests interim waiver of the coverage, integration and spare-satellite rules in the event we conclude, as we do, that its current MSS operation and modified ATC proposal do not fully comport with those gating requirements. Section 1.3 of the Commission's rules states that the Commission may waive its rules for "good cause shown."⁵⁰ Good cause for interim waiver exists "where particular facts would make strict compliance inconsistent with the public interest."⁵¹ To make this

⁴⁴ Iridium Petition at 9; *cf.* Sprint Petition at 5.

⁴⁵ As noted by the Petitioners, the ATC and MSS would differ substantially: a two-way, high-speed, wideband mobile data service versus a transmit-only, low-speed mobile tracking/messaging/emergency assistance service. Iridium Petition at 9, 11; Sprint Petition at 3-4.

⁴⁶ *See, e.g.*, 20 FCC Rcd at 4628 ¶ 33.

⁴⁷ 47 CFR § 25.149(b)(2).

⁴⁸ ATC Modification Application, Attachment 1 at 16. Globalstar asserts in its Opposition that it now has two in-orbit spares, due to the launch of eight ground spares, although we assume that the additional spare is capable of L-Band operations only, as it presumably would have been deployed for regular operations if it were capable of S-Band operations. Globalstar Opposition at 10.

⁴⁹ *ATC Second Reconsideration Order* at 4628 ¶ 34.

⁵⁰ 47 CFR § 1.3.

⁵¹ *Northeast Cellular*, 89 F.2d at 1166; *ICO Global Communications*, 428 F.3d at 269 (quoting *Northeast Cellular*); *see also WAIT Radio*, 418 F.2d at 1157-59.

public interest finding, the waiver cannot undermine the purposes of the rule, and there must be a stronger public interest benefit in granting the waiver than in applying the rule.⁵²

21. We find that granting an interim waiver would serve the public interest because it would facilitate broadband deployment consistent with a \$267 million loan commitment from the Department of Agriculture's Rural Development Utilities Program.⁵³ Open Range plans to deploy broadband ATC services beginning in 2009 and extend coverage to 546 communities in seventeen states over the ensuing five years.⁵⁴ Open Range's schedule would bring service to 5 cities in 2009, and additional 187-217 markets by early 2011, and remaining communities of a scheduled 546 communities by 2013.⁵⁵ We believe that this program to extend wireless broadband coverage to these communities could facilitate the provision of broadband service to rural areas of the country.⁵⁶ In addition, we note that it is a stated policy objective of the Commission to "harmonize its rules, regulations, and processes whenever possible" to maximize the benefits of USDA loans granted to promote development of telecommunications infrastructure in rural America.⁵⁷

22. The scope of this authorization will permit deployment pursuant to the RUS loan, subject to termination if Globalstar's anticipated dates for coming into compliance with gating criteria are not met. Globalstar and Open Range have presented a plan for transitioning these non-integrated terminals, at no cost to customers, to a newer device that will incorporate a high-speed MSS chipset when that chipset becomes available. Under these circumstances, operating authority will be limited to WiMAX operations, and conditioned upon transition to the newer device. We will defer action on Globalstar's request to modify its authorization to permit use of additional protocols for which, at this time, it does not have planned deployments.

23. In light of these circumstances, we conclude that granting in part Globalstar's requests for interim waiver of the coverage, integration and spare-satellite gating requirements, subject to the conditions specified herein, will better serve the public interest than insisting on strict compliance with those requirements. Sprint and Iridium warn that if deployment of the second-generation Globalstar

⁵² See, e.g., *WAIT Radio*, 418 F.2d at 1157 (stating that even though the overall objectives of a general rule have been adjudged to be in the public interest, it is possible that application of the rule to a specific case may not serve the public interest if an applicant's proposal does not undermine the public interest policy served by the rule); *Northeast Cellular*, 89 F.2d at 1166 (stating that in granting a waiver, an agency must explain why deviation from the general rule better serves the public interest than would strict adherence to the rule).

⁵³ See ATC Modification Application, Attachment 1 at 5 and "USDA Announces \$267 Million Rural Broadband Loan" (March 25, 2008), available at <http://www.usda.gov/rus/>.

⁵⁴ ATC Modification Application, Exhibit 1 at 18.

⁵⁵ See Submission of Open Range Communications, Inc., dated October 10, 2008.

⁵⁶ Our action is not based upon a finding that any specific market identified in the Submission of Open Range Communications, Inc., dated October 10, 2008, is "rural" for purposes of the Department of Agriculture's Rural Development Utilities Program.

⁵⁷ *Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies to Provide Spectrum-Based Services; 2000 Biennial Regulatory Review Spectrum Aggregation Limits for Commercial Mobile Radio Services; Increasing Flexibility to Promote Access to and the Efficient and Intensive Use of Spectrum and the Widespread Deployment of Wireless Services, and to Facilitate Capital Formation - Report and Order and Further Notice of Proposed Rulemaking*, 19 FCC Rcd 19078 (2004) at ¶44.

MSS system is significantly delayed, the gating interim waivers might evolve into a long-term exemption with repeated extensions to prevent service disruption to Globalstar/Open Range ATC subscribers.⁵⁸ Iridium also notes that Globalstar has provided only conditional statements about when it will bring its second generation satellites and user terminals into use, and describes Globalstar's timeline as "ambitious".⁵⁹ CTIA-The Wireless Association comments that gating criteria are designed to ensure that MSS ATC remains truly ancillary to the provision of substantial satellite service, and that the Commission should carefully consider the MSS operators' factual showings with regard to satisfying the gating criteria before authorizing ATC service. The waivers that we grant here, however, are limited in scope and are subject to conditions that set firm dates by which Globalstar must comply with the gating requirements⁶⁰ and require Globalstar/Open Range to notify their customers that ATC services are subject to mandatory suspension in the event that the gating conditions are not met.

B. Spectrum Lease

24. On November 14, 2007, Globalstar and Open Range filed a letter of notification with the Commission indicating that in October 2007 they had entered into a "spectrum manager lease agreement" concerning S-band operations.⁶¹ In that notification, Globalstar and Open Range stated that Globalstar will retain both *de jure* and *de facto* control over its licensed spectrum at all times during the term of the lease.⁶² The text of the lease agreement is available as an attachment to an SEC filing.⁶³ Iridium and Sprint argue that the spectrum lease agreement is contrary to Commission policy and may constitute an unauthorized transfer of control to Open Range. We have reviewed the spectrum lease notification and the publicly-available terms of the agreement between Globalstar and Open Range, and find that it is consistent with Commission policy. We condition our action here on Globalstar's compliance with its obligations as spectrum manager to exercise effective working control of the leased spectrum and maintain ongoing responsibility for ensuring compliance with applicable Commission policies during the term of the lease.⁶⁴ We discuss the details of the lease more fully below.

⁵⁸ Sprint Petition at 9. *Also see* Iridium Petition at 18.

⁵⁹ *Id.* at 19. Iridium also questioned the reliability of Globalstar's timeline, noting that, despite planning to launch satellites in 2009, Globalstar had yet to file an application for authority to launch. *Id.* On September 4, 2008, Globalstar filed an application requesting such authority.

⁶⁰ The dates specified are based upon Globalstar's waiver requests and information provided by Globalstar as to its anticipated compliance with gating requirements. With respect to the requested date of June 2010 for compliance with the spare satellite requirement, Global states, "According to Globalstar's current actuarial predictions, by June 2010, the first 24 satellites that currently are under construction will have become operational and, when combined with the eight replacement satellites launched in 2007, there will be 32 fully operational satellites providing robust voice and two-way data services, and at least one satellite remaining from the first constellation that provides for L- and S-band service as an in-orbit spare." ATC Modification Application, Attachment 1 at 16.

⁶¹ See letter dated Nov. 14, 2007 to Helen Domenici, Chief, International Bureau, from William T. Lake, Counsel to Globalstar Licensee LLC, and Joe D. Edge, Counsel to Open Range Communications, Inc. ("Spectrum Lease Notification").

⁶² Globalstar Opposition at 20; Spectrum Lease Notification.

⁶³ *Id.* at 20, citing Globalstar May 2008 10-Q Report, Exhibit 10.3, Spectrum Manager Lease Agreement at § 4.

⁶⁴ Globalstar, as licensee, and Open Range, as spectrum lessee, have indicated that they would satisfy all of the

(Continued ...)

25. While it is true, as Iridium indicates, that the Commission declined to make the specific spectrum leasing rules adopted for wireless terrestrial services in the *Secondary Markets* rulemaking⁶⁵ applicable to satellite services,⁶⁶ we do not agree with Iridium that that rulemaking forecloses Globalstar and Open Range from entering into a spectrum leasing arrangement. In the *Secondary Markets Report and Order*, the Commission simply left the established satellite-capacity leasing policy intact,⁶⁷ while adopting new substantive and procedural rules to govern spectrum leasing by licensees in specified Wireless Radio Services.⁶⁸ Furthermore, as Globalstar has aptly noted, the Commission has specifically contemplated an MSS licensee leasing access to MSS spectrum to a third-party ATC provider, provided that the gating requirements are met.⁶⁹ Of course, a lessee of MSS spectrum, including the spectrum associated with ancillary terrestrial component, has neither greater

(... Continued from previous page.)

requirements that may be imposed upon it by the Commission with respect to the Communications Act and the Commission's rules. Globalstar May 2008 10-Q Report, Exhibit 10.3, Spectrum Manager Lease Agreement at §§ 2, 6, 9.

⁶⁵ See generally *Promoting Efficient Use of Spectrum through Elimination of Barriers to the Development of Secondary Markets, Notice of Proposed Rulemaking, Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 20604 (2003) ("*Secondary Markets Report and Order*").

⁶⁶ The Commission has long allowed satellite licensees to lease or sell space-segment capacity to end users or resellers. *Establishment of Domestic Communication-Satellite Facilities by Nongovernmental Entities, Report and Order*, 22 FCC 2d 86 (1970) ("Domsat I") at ¶19 ("[a]pplicants may propose the rendition of ... services directly to the public on a common carrier basis or by the lease of facilities to other common carriers, or any combination of such arrangements"). In 1982, the Commission held that the sale or long-term lease of satellite transponder capacity does not entail a transfer of control for which prior approval must be sought under Section 310(d) of the Communications Act, provided that the satellite licensee retains operational control of the satellite. *Domestic Fixed-Satellite Transponder Sales*, 90 FCC 2d 1238 (1982), aff'd sub nom. *Wold Communications, Inc. v. FCC*, 735 F.2d 1465 (D.C. Cir. 1984), at ¶¶46-49. For some time thereafter, the Commission required satellite licensees to seek prior approval for selling or leasing transponder capacity on a non-common-carrier basis (i.e., on negotiated terms rather than under tariffed rates), but it abolished the prior-approval requirement for negotiated transponder sales and leases in 1996. *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, Report and Order*, 11 FCC Rcd 2429 (1996) at ¶50. See also *Promoting Efficient Use of Spectrum through Elimination of Barriers to the Development of Secondary Markets, Notice of Proposed Rulemaking*, 15 FCC Rcd 24203 (2000) ("*Secondary Markets NPRM*") at ¶66.

⁶⁷ See *Promoting Efficient Use of Spectrum through Elimination of Barriers to the Development of Secondary Markets, Notice of Proposed Rulemaking, Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 20604 (2003) ("*Secondary Markets Report and Order*") at ¶209 and n.397 ("the spectrum leasing policies for the Wireless Radio Services ... are not intended to alter existing industry practices, approved by the Commission, regarding transponder leasing arrangements or to suggest that such leases would be subject to the procedures we adopt regarding Wireless Radio Services").

⁶⁸ These *Secondary Markets* rules involve filing certain procedures for disclosure, and, in appropriate circumstances, approval of spectrum leasing arrangements. See 47 CFR §§ 1.9001, *et. seq.* These specific rules do not apply to ATC, as it is authorized under Part 25 of the Commission's rules. See 47 CFR § 1.9005.

⁶⁹ See *ATC Report and Order* at ¶3, n.5. Having found good cause for temporarily waiving the coverage, integration, and spare satellite gating requirements in this case, we do not think that Globalstar's current non-compliance with those requirements precludes leasing of spectrum for ATC consistent with the conditions imposed herein.

rights nor greater obligations than the satellite licensee in providing ATC service. We note that, although the specific spectrum leasing rules adopted for wireless terrestrial services in the *Secondary Markets* rulemaking do not apply to ATC authorized under Part 25 of the Commission's rules, the Commission does have a responsibility to ensure that an MSS operator complies with its responsibilities as the spectrum licensee when it leases spectrum to a third-party ATC provider, in this case, Open Range. As Globalstar and Open Range have already notified the Commission of the lease agreement, providing details on the identity and qualifications of the spectrum lessee, the spectrum leased, the term of the lease and additional certifications, we find that Globalstar provided satisfactory disclosure of its spectrum leasing agreement. We condition this grant on Globalstar notifying the Commission within 30 days of any substantive change in the identity or qualifications of the lessee, the spectrum leased or the terms of the lease, or any other information provided or incorporated by reference in the November 14, 2007 lease notification.

26. We also conclude that the spectrum leasing agreement between Globalstar and Open Range does not constitute a transfer of control requiring prior approval under the Communications Act.⁷⁰ We disagree with Iridium's contention that the Commission must apply the definition of *de facto* control articulated in *Intermountain Microwave*⁷¹ to the lease agreement. For purposes of analyzing whether spectrum leasing arrangements involve a *de facto* transfer of control, the Commission in the *Secondary Markets* rulemaking announced a modified interpretation of the factors relevant to determinations concerning *de facto* control.⁷² Under the modified interpretation, a licensee that leases spectrum to a third party under a spectrum manager leasing arrangement retains *de facto* control for purposes of Section 310(d) so long as the licensee maintains effective working control of the leased spectrum and ongoing responsibility for ensuring compliance with applicable Commission policies and rules during the term of the lease.⁷³ In particular, the Commission established the following criteria for interpreting whether a licensee retains *de facto* control for purposes of Section 310(d):

- (1) The licensee remains responsible for ensuring the lessee's compliance with the Communications Act and all applicable policies and rules directly related to the use of the spectrum. This responsibility includes maintaining reasonable operational oversight over the leased spectrum so as to ensure that the spectrum lessee complies with all applicable technical and service rules, including safety guidelines relating to radiofrequency radiation. In addition, the licensee must retain responsibility for meeting all frequency coordination obligations and resolving interference-related matters, and must retain the right to inspect the lessee's operations and to terminate the lease to ensure compliance.
- (2) The licensee is responsible for all interactions with the Commission, including notification about the spectrum leasing arrangement and all Commission filings required under the license

⁷⁰ See 47 U.S.C. § 310(d) (“[n]o station license, or any rights thereunder, shall be transferred ... in any manner ... to any person except upon application to the Commission and upon finding by the Commission that the public interest ... will be served thereby”).

⁷¹ 24 RR 31401 (1963). An analysis under *Intermountain Microwave* would focus on such considerations as whether the licensee has “unfettered use of all facilities and equipment”, controls daily operations, hires and supervises station personnel, pays station operating expenses, and receives revenues and profits from station operation.

⁷² *Secondary Markets Report and Order* at ¶¶ 10 and 51-81.

⁷³ *Secondary Markets Report and Order*, 18 FCC Rcd at ¶ 63.

authorization and applicable service rules that are directly related to the use of the leased spectrum.⁷⁴

Although the rules that the Commission adopted in *Secondary Markets* apply only to spectrum leasing by terrestrial wireless service licensees, we find it appropriate to apply this interpretation of Section 310(d) with respect to spectrum leasing arrangements involving ATC services. We therefore conclude that these criteria should be applied to determine whether the Globalstar/Open Range lease agreement entails a *de facto* transfer, and to determine, in the event the issue should arise in the future, whether Globalstar has maintained *de facto* control of ATC service.

27. Globalstar and Open Range have submitted information and certifications consistent with the relevant requirements applicable to wireless terrestrial services.⁷⁵ We also note that the October 2007 lease agreement also includes numerous provisions addressing these issues.⁷⁶ In view of the foregoing, we find that the Globalstar-Open Range spectrum lease reserves *de jure* and *de facto* control to Globalstar and therefore does not constitute a transfer of rights for which approval must be obtained under Section 310(d).

⁷⁴ *Id.* at ¶65; *see also* 47 C.F.R. §§ 1.9010; 1.9020.

⁷⁵ Spectrum Lease Notification; *See generally Secondary Markets Report and Order*, 18 FCC Rcd at ¶124; Commission Form 608 (“FCC Application or Notification Form for Spectrum Leasing Arrangement”) (information and certifications submitted by the licensee and spectrum lessee when notifying the Commission that the licensee and spectrum lessee seek to enter into a spectrum manager leasing arrangement).

⁷⁶ The agreement includes the following terms: “Lessor [*i.e.*, Globalstar] shall retain *de jure* and *de facto* control of the Leased Spectrum”; “Lessor shall retain the primary responsibility for ensuring that the FCC Licenses and the Leased Spectrum are utilized in full compliance with the Communications Laws ... [and] Lessee will remain ... responsible to Lessor ... for complying with the foregoing”; “Lessor will have the unconditional right to take all actions necessary or desirable to ensure that Lessee’s exercise of its Spectrum Usage Rights in the Leased Spectrum and its operation of the System comply with the Communications Laws, this Lease Agreement, and the terms and conditions of the FCC Licenses”; “Lessor retains the unconditional right to do any of the following: monitor and oversee Lessee’s use of the Spectrum Usage Rights, as necessary, to ensure that Lessee operates the System in conformance with technical and use rules applicable to the FCC ... take whatever actions are reasonably necessary to resolve any interference-related matters arising from operation of the System ... make determinations as to whether particular circumstances give rise to the requirement of filing an application or notification with the FCC or any other governmental authority, and if such, with Lessee’s cooperation, make such filing or notification”; “Lessor will be the sole interface with the FCC on all matters directly relating to ... the Spectrum Usage Rights granted under this Lease Agreement”; “Lessee and Lessor will meet periodically, at such times as Lessor reasonably requests ... to enable Lessor to ensure that Lessee’s activities using the Leased Spectrum and the operation of the System comply with the Communications Laws”; “Lessee will keep ... complete books and records with respect to construction and operation of the System ... [and] will provide Lessor with reasonable access to such books and records”; and “Lessor may, upon at least twenty-four (24) hours advance notice, inspect any facility comprising the System during normal business hours and take any action it deems reasonably necessary to fulfill its obligations under this Lease Agreement or the Communications Laws ... [and] may access any facility that is part of the System upon such shorter advance notice as is possible ... in the event of an emergency ... including but not limited to any instance of objectionable interference to any other user of the Leased Spectrum.” Globalstar May 2008 10-Q Report, Exhibit 10.3, Spectrum Manager Lease Agreement, Articles 2(c), 3(a), 3(c), 4, and 5(b).

C. WiMAX Air Interface Protocol

28. Globalstar is currently authorized to provide ATC with technical specifications compatible with the cdma2000 air interface protocol.⁷⁷ Globalstar seeks a modification that would permit it to operate using the Worldwide Interoperability for Microwave Access (WiMAX) protocol using Time Division Duplex (TDD) protocol in the 2483.5–2495 MHz band. The Commission based the current ATC rules for the 1610-1626.5 MHz and 2483.5 -2500 MHz bands on the cdma2000 and IS-95 air interface protocols. However, the Commission noted that other protocols existed and provided that an MSS licensee of these bands may apply to use a different ATC system architecture, if it is able to demonstrate that the proposed system architecture would not produce any greater potential interference than that resulting from operations consistent with the rules.⁷⁸

29. Section 25.149(a)(1) of the Commission's rules requires that ATC be deployed and operate in the "forward-band" mode, *i.e.*, that ATC mobile terminals transmit in the licensee's MSS uplink band (which, for Globalstar, is 1610-1617.775 MHz) and ATC base stations transmit in the licensee's MSS downlink band (2483.5–2495 MHz, in this case). Globalstar requests a waiver of this rule to allow ATC mobile terminals using a WiMAX protocol to transmit in the 2483.5--2495 MHz band, which would not be a forward-band mode of operation.⁷⁹ Sprint contends that Globalstar has represented that the WiMAX protocol is significantly more robust than it actually is, and that Globalstar is responsible for resolving interference to Broadband Radio Service and Education Broadband Services, should it occur.⁸⁰ Nevertheless, Sprint does not object to granting Globalstar's request to operate TDD-WiMAX in either the forward-band mode or non-forward band mode of operations in the band 2483.5-2495 MHz.

30. Although the current rules do not allow for operation in a non-forward-band mode in the Big LEO MSS bands, Section 25.149(a)(1) of the Commission's rules does allow for non-forward band operation in the L-band provided that the licensee demonstrates that the non-forward band operation would not produce any greater potential interference than would result from forward-band operation in compliance with the rules. This note was adopted based on rulemaking comments from L-Band MSS licensees who wanted to have flexibility to operate both in the forward and non-forward band mode of operations. We believe it is reasonable to use the same threshold test to evaluate Globalstar's request for authority for non-forward band mode of operation in the 2483.5-2495 MHz band.

31. Globalstar has adequately demonstrated that its proposed WiMAX operations in the 2483.5-2495 MHz band would not produce any greater potential interference than would result from operation in compliance with the rules. Globalstar provided a detailed overview of the WiMAX protocol, emission plots for its proposed base station and mobile terminals showing the actual signal roll-off, including the out-of-channel emission levels, and an in depth technical interference analysis on how its proposed WiMAX protocol would not produce any greater potential interference than that resulting from operations of air interfaces currently permitted by the rules.⁸¹ Specifically, the out-of-channel

⁷⁷ Globalstar ATC authorization, DA 06-121, at 3-4.

⁷⁸ 47 CFR §25.254, NOTE.

⁷⁹ ATC Modification Application, Attachment 1 at 6.

⁸⁰ Sprint Petition to Deny at 13.

⁸¹ ATC Modification Application, Technical Exhibit at 2-5, 21-33.

emission is approximately -55.23 dBW/30kHz for the base station and -65.23 dBW/30kHz for the mobile terminals for the 10 MHz carrier proposed by Globalstar.⁸² These levels are well below the limits set forth in Section 25.254 of the Commission's rules for the Big LEO bands. In addition, Globalstar has provided a compatibility analysis to demonstrate that it would be able to share with adjacent band services. Therefore, we grant Globalstar's request to operate TDD WiMAX in the band 2483.5 – 2495 MHz. We also waive Section 25.149(a)(1) of the Commission's rules to allow Globalstar to operate WiMAX in the non-forward band mode of operation as requested. We find that granting Globalstar's waiver request will serve the public's interest by allowing provision of ubiquitous broadband and other services to rural communities in the United States without undue risk of interference.⁸³

32. For ATC mobile terminals transmitting with TDD WiMAX protocols in the band 2483.5-2495 MHz (non-forward band mode of operations), we require these terminals to meet the peak effective isotropic radiated power ("EIRP") and out-of-channel emission limits set forth in Section 25.254(b) of the Commission's rules for ATC mobile terminals transmitting in the band 1610-1626.5 MHz. We find that these limits would provide the necessary protection to adjacent band services.

33. Section 24.254(a)(3) of the Commission's rules requires a recipient of authority for ATC operation in the 1.6/2.4 GHz MSS bands to coordinate ATC base station operation with stations in other services that use the 2450-2500 MHz band. This coordination rule does not apply by its terms to mobile terminal operation, however. The reason for that limitation in the applicability of Section 25.254(a)(3) is readily apparent: the Commission did not anticipate that ATC mobile terminals would transmit in the 2483.5-2495 MHz band when it adopted Section 25.254 because another rule provision adopted at the same time, Section 25.149(a)(1), states that ATC shall be deployed in the forward-band mode in the 1.6/2.4 MHz MSS bands. Because we are waiving Section 25.149(a)(1) to allow Globalstar ATC mobile terminals to transmit with a TDD WiMAX protocol in the 2483.5-2495 MHz band, we will impose a condition to require such mobile terminals to be coordinated with other stations operating in that band in the same way that Section 25.254(a)(3) requires base stations to be coordinated.

D. Out-of-Band Emissions in the 1559-1610 MHz Band

34. In granting Globalstar's initial ATC authorization, the International Bureau conditioned the authorization on compliance with limits on mobile-terminal emissions in the 1559-1610 MHz Satellite Radionavigation band. Globalstar LLC agreed to those limitations, after discussions with the National Telecommunications and Information Administration ("NTIA").⁸⁴ The U.S. GPS Industry Council ("USGPS") notes that the Technical Exhibit to the above-captioned modification application indicates that Globalstar/Open Range MSS-ATC mobile terminals would meet the negotiated limits prescribed as a condition to Globalstar's ATC authorization.⁸⁵ USGPS also notes, however, that in the narrative section of the application Globalstar states that the modification it is now proposing "will not result in any changes to the certifications and demonstrations of compliance with the Commission's rules

⁸² *Id.*, Technical Exhibit at 2-5.

⁸³ *Id.* at 5.

⁸⁴ *Globalstar ATC Order* at ¶¶ 23, 24, and 44.

⁸⁵ Comments and Request for Clarification of U.S. GPS Industry Council at 2, citing Application for Minor Modification of Space Station License, SAT-MOD-20080516-00106, Technical Exhibit at 18-19.

governing ATC services set forth in Globalstar's *original* ATC application" (emphasis added).⁸⁶ USGPS observes that this statement can be construed as requesting authority to operate in compliance with the less restrictive emission limits that Globalstar LLC originally proposed rather than the stricter limits that were negotiated with the NTIA and incorporated in a license condition. USGPS urges the Commission to resolve the ambiguity by granting the instant application conditioned on compliance with the previously-prescribed mobile-terminal emission limits set forth in the application's Technical Exhibit.⁸⁷ Further, USGPS contends that ATC base-station transmitters operating in Globalstar's assigned MSS spectrum should be required to be fitted with filters to restrict out-of-band emissions in the 1559-1610 MHz band. In response, Globalstar confirms that, if the instant application is granted, it will ensure that the strict mobile-terminal emissions limits prescribed by the terms of the original Globalstar ATC authorization will be met.⁸⁸

35. Regarding the emissions from ATC end-user stations, in a letter filed on October 30, 2008, Globalstar reported that it agreed in discussions with the NTIA to meet stricter emission limits in the 1559-1610 MHz band.⁸⁹ Specifically, Globalstar said that 2483.5-2495 MHz ATC end-user stations placed into service before 2012 will comply with an EIRP density limit for wideband emissions of -90 dBW/MHz and an EIRP density limit of -100 dBW/kHz for narrowband emissions in the 1559-1610 MHz band. The 2483.5-2495 MHz ATC end-user stations placed into service after 2012 will comply with an EIRP density limit for wideband emissions of -95 dBW/MHz and an EIRP density limit of -105 dBW/kHz for narrowband emissions in the 1559-1610 MHz band.

36. Regarding the emissions from ATC base stations, in a letter filed on October 30, 2008, Globalstar reported that it agreed in discussions with the NTIA to meet stricter emission limits in the 1559-1610 MHz band.⁹⁰ Specifically, Globalstar said that 2483.5-2495 MHz ATC base stations will comply with a EIRP density limit for wideband emissions of -100 dBW/MHz and a EIRP density limit of -110 dBW/kHz for narrowband emissions in the 1559-1610 MHz band.

37. In opposition to USGPS's contention that Globalstar should be required to install filters to control base station emissions, Globalstar maintains that it and its equipment suppliers should be free to rely on whatever technical means they deem to be the most cost-effective for complying with applicable base-station emission limits.⁹¹ We agree that there is no need to constrain Globalstar's discretion in this regard.

E. Other Technical Requirements

38. Globalstar's predecessor-in-interest certified in the original Globalstar ATC application that the proposed ATC operations would meet the requirements of Section 25.254(b)(1) of

⁸⁶ USGPS Comments at 2, citing Application Modification of Space Station License, SAT-MOD-20080516-00106, Attachment 1 at 7.

⁸⁷ USGPS Comments at 2.

⁸⁸ Globalstar Opposition at 24.

⁸⁹ See Letter from William Adler, Vice President—Legal and Regulatory Affairs, Globalstar, to Marlene H. Dortch, Secretary, FCC, dated October 30, 2008.

⁹⁰ See Letter from William Adler, Vice President—Legal and Regulatory Affairs, Globalstar, to Marlene H. Dortch, Secretary, FCC, dated October 30, 2008.

⁹¹ Globalstar Opposition at 24.

the Commission's rules for protection of radio astronomy observations, the Commission's requirements regarding human exposure to radiofrequency radiation, and the requirement in Section 25.254(a)(3) to take all necessary steps to avoid causing interference to other services using the 2450-2500 MHz band. Globalstar states in the current application that it proposes no change in these respects.⁹²

39. Globalstar indicates that its MSS/ATC control center will control the allocation of frequencies between the MSS and ATC systems in order to minimize self-interference.⁹³ Globalstar must manage self-interference in order to ensure that a viable MSS continues to exist, as required by Section 25.149(b)(3) of the rules.

IV. CONCLUSION

40. We conclude that an interim grant of Globalstar's application and associated waiver requests, subject to conditions, will serve the public interest, convenience, and necessity.

V. ORDERING CLAUSES

41. Accordingly, pursuant to Section 309 of the Communications Act, 47 U.S.C. § 309, IT IS ORDERED that Application File No. SAT-MOD-20080516-00106 IS GRANTED IN PART to permit operations, using the WiMAX air interface protocols and that Globalstar's authority for operation of ATC (Call Sign S2115) IS MODIFIED as provided herein, subject to the following conditions:

- a.) This Order is conditioned upon continuation of Open Range's loan arrangement with the Department of Agriculture's Rural Development Utilities Program. In the event that the arrangement is terminated, this authorization shall also terminate, without further action by the Commission.
- b.) ATC end-user stations transmitting in the 2483.5-2495 MHz band shall meet the coordination requirement in 47 CFR § 25.254(a)(3) prior to operation, the peak EIRP and out-of-channel emission limits set forth in 47 C.F.R. § 25.254(b), and the out-of-band emission limits specified in Paragraph 35, above.
- c.) ATC base stations transmitting in the 2483.5-2495 MHz band shall meet the out-of-band emission limits specified in Paragraph 36, above.
- d.) Operation of ATC stations in the S-band shall be suspended as of July 1, 2010 unless, at that time, two-way Globalstar MSS operation fully meets the coverage requirements of 47 C.F.R. § 25.149(b)(1)(iii) and there is at least one spare Globalstar satellite in orbit capable of operating in the Globalstar system's assigned MSS downlink band. The suspended operation may resume at such time as Globalstar complies with the foregoing requirements.
- e.) Operation of ATC stations in the S-band shall be suspended as of July 1, 2011 unless, at that time, Globalstar provides two-way MSS to customers equipped with dual-mode MSS-ATC terminals. The suspended operation may resume at such time as Globalstar commences providing two-way MSS to customers equipped with such terminals.

⁹² ATC Modification Application, Attachment 1 at 8-9.

⁹³ Globalstar ATC Modification Application, Technical Exhibit at 14.

f.) Globalstar shall promptly notify the Commission, in writing, of any suspension of service effected in compliance with the foregoing conditions.

g.) Globalstar and any affiliated ATC provider shall deploy MSS-ATC first generation terminals (i.e., those without a high-speed MSS chip set) only to communities served pursuant to the RUS loan. Globalstar and any affiliated ATC provider(s) shall not market or distribute MSS-ATC terminals that cannot be upgraded to high-speed MSS after early 2010. Beginning in early 2010, any MSS-ATC terminals marketed or distributed by Globalstar and any affiliated ATC provider(s) shall be upgradeable to include high-speed MSS. After early 2011, Globalstar and any affiliated ATC provider shall have a chipset available that provides high-speed MSS, and upon availability in production quantities of such chipset at that time, Globalstar and any affiliated ATC provider(s) shall market and distribute only MSS-ATC terminals that can provide such services. Globalstar shall require such affiliate(s) to contractually agree to comply with this requirement and shall take any other steps necessary to ensure that this requirement is met.

h) Subscribers to S-band ATC services provided pursuant to this authorization shall be suitably notified of the foregoing contingencies prior to agreeing to subscribe to such services. Globalstar shall file a report within 45 days of the effective date of this order explaining how it intends to ensure that this requirement is met.

i.) Globalstar shall notify the Commission within 30 days of any substantial or significant change in the information provided or incorporated by reference in the letter dated November 14, 2007, from Globalstar and Open Range, to the Chief, International Bureau.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS

Re: *Globalstar Licensee LLC Application for Modification of License for Operation of Ancillary Terrestrial Component Facilities, Order and Authorization*

Today's item provides a satellite licensee with a temporary waiver of the Commission's gating criteria and technical rules related to ancillary terrestrial component (ATC) authority. The net effect of our ruling is to ensure that the licensee and its business partner can take advantage of a \$267 million loan commitment by the Department of Agriculture's Rural Development Utilities Program. This funding will support WiMAX-based wireless broadband coverage in 546 rural communities by 2013. Of particular importance, our waiver is strictly time-limited—the licensee must update its satellite system by mid-2010 and provide consumers with updated handsets by mid-2011. In fact, if the companies are unable to meet the benchmarks imposed by today's waiver, or the terms of the Department of Agriculture's loan, the waiver and loan will both automatically terminate.

I do want to emphasize that my decision in this matter does not change my long-held belief that ancillary terrestrial component service by satellite providers ***must remain ancillary***—in other words, when it comes to ATC, the tail cannot be allowed to wag the dog. But the practical reality is that if the Commission were to strictly enforce its ATC regulations in this matter—rather than grant a temporary waiver—the rural communities at issue here would not be able to benefit from the Department of Agriculture's \$267 million rural broadband loan. In my view, the problems of broadband unavailability in America's rural areas are just too pressing and too grave to accept delay.

**STATEMENT OF
COMMISSIONER JONATHAN S. ADELSTEIN**

Re: *Globalstar Licensee LLC Application for Modification of License for Operation of Ancillary Terrestrial Component Facilities, Order and Authorization*

In this Order and Authorization, we determine that a limited waiver of certain of our gating criteria and technical rules will greatly serve the public's interest by allowing for the deployment of a broadband service to millions of rural Americans who now have little or no access to broadband. Indeed, once fully deployed, it is expected that the Ancillary Terrestrial Component (ATC) coverage contemplated by this authorization will extend to 546 communities in seventeen states. This limited waiver furthers the Commission's goals of facilitating the provision of broadband service to rural areas of the country consistent with the \$267 million loan commitment from Department of Agriculture's Rural Development Utilities Program.

I write separately to reaffirm my commitment to the integrity of our rules that require Mobile Satellite Services (MSS) licensees to comply with gating requirements, which I have always strongly supported. As I've previously stated, we should not allow an MSS system with an ancillary terrestrial component to evolve into a terrestrial system with an ancillary mobile satellite component. In this unique instance, unanticipated and unforeseeable technical problems resulted in degraded performance of satellites on the S Band that impaired their ability to do continuous and reliable two-way communications. The determination we make here is a narrow one, one that is limited to a date certain, and one that is terminable if the compliance deadlines are not met. Indeed by July 2010, Globalstar must fully meet coverage requirements and by July 2011, must provide two-way MSS to customers equipped with dual-mode MSS-ATC terminals.

For these reasons, I believe our decision today carefully weighs the public interest benefits of much needed broadband deployment to the rural parts of our nation with our important ATC gating requirements. The provision of broadband to rural Americans is of the utmost importance and warrants a limited waiver in this case, but it is also important that the limited waiver remains exactly that—limited.

**STATEMENT OF
COMMISSIONER DEBORAH TAYLOR TATE**

Re: *Globalstar Licensee LLC Applications for Modification of License for Operation of Ancillary Terrestrial Component Facilities, Order and Authorization*

This item provides a Mobile Satellite Service (MSS) licensee a temporary waiver of certain Commission rules related to ancillary terrestrial component (ATC) operations. In so doing, we allow the licensee, Globalstar, in partnership with its lessee, Open Range Communications, to proceed with a \$267 million loan commitment by the Department of Agriculture's Rural Development Utilities Program. This loan commitment will support the deployment of broadband service in rural areas. Specifically, Globalstar and Open Range plan to provide broadband service to several small towns in rural America starting next year, rapidly expanding their coverage to include 546 communities by 2013.

I recognize that ancillary terrestrial component service is designed to be – and I believe that it should be – ancillary to the core business of satellite providers, which is the provision of service *via satellites*. I support this waiver because, first, it is temporary in nature and imposes a strict set of conditions for noncompliance, and second, because it offers the potential to promote much-needed broadband service in rural America. With regard to the conditions, the order requires updated handsets and satellites within strict time frames – in effect, requiring the provision of satellite service as intended by Commission rules. It also is important to note that the Rural Development Utilities Program has provided a loan commitment, not a subsidy, which means Globalstar and Open Range must repay their debts. Most importantly, this conditioned and time-limited waiver helps the Commission advance one of our most crucial and also most challenging public policy goals: the deployment of broadband, especially for rural Americans.

**JOINT STATEMENT OF
CHAIRMAN KEVIN J. MARTIN
AND
COMMISSIONER ROBERT M. McDOWELL**

Re: Globalstar Licensee LLC Application for Modification of License for Operation of Ancillary Terrestrial Component Facilities, Order and Authorization

We have consistently supported efforts to increase broadband access for consumers living in America's rural areas. It should go without saying 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, our rules have outlined the necessary preliminary requirements for operating a terrestrial service ancillary to a satellite system. This application does not meet these criteria and therefore sets an inappropriate precedent. For these reasons, we respectfully dissent.