

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

In the Matter of	)	
	)	
Globalstar Licensee LLC	)	Call Sign S2115
GUSA Licensee LLC	)	Call Sign E970381
	)	
and	)	
	)	
Iridium Constellation LLC	)	Call Sign S2110
Iridium Satellite LLC	)	Call Sign E960132
Iridium Carrier Services LLC	)	Call Sign E960622
	)	
Modification of Authority to Operate a	)	
Mobile Satellite System in the	)	
1.6 GHz Frequency Band	)	

ORDER OF MODIFICATIONS

Adopted: October 15, 2008

Released: October 15, 2008

By the Commission:

I. INTRODUCTION

1. With this Order, we modify the authorizations of the two Big LEO¹ mobile-satellite service (MSS) licensees, pursuant to the Commission's decisions in the *2007 Big LEO Spectrum Sharing Second Reconsideration Order*² and the May 2008 *Order Proposing Modifications*.³ Specifically, we modify the authorizations of Globalstar Licensee LLC and GUSA Licensee LLC (collectively "Globalstar") to remove authority for operations in the 1618.725-1621.35 MHz band, and to require shared operations in the 1617.775-1618.725 MHz band with the Iridium Big LEO system. Consequently, Globalstar is now authorized to operate its space stations in the 1610-1617.775 MHz frequency band on an exclusive basis, and in the 1617.775-1618.725 MHz band on a shared basis with Iridium. This modification to Globalstar's space station authorization applies to its global space station operations. Further, Globalstar is authorized to operate its U.S. earth stations in these bands as well. Globalstar's authority to operate its space and earth stations in the 2483.5-2500 MHz frequency band remains unchanged.

¹ Big LEO systems provide voice and data communication to users with handheld mobile terminals via non-geostationary satellites in Low Earth Orbit (LEO).

² 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*, IB Docket Nos. 07-253 and 02-364, 22 FCC Rcd 19733 (2007) (*2007 Big LEO Spectrum Sharing Second Reconsideration Order*).

³ Globalstar Licensee LLC, GUSA Licensee LLC, Iridium Constellation LLC, Iridium Satellite LLC, Iridium Carrier Services, Modification of Authority to Operate a Mobile Satellite System in the 1.6 GHz Frequency Band, *Order Proposing Modifications*, 23 FCC Rcd 7984 (2008) (*Order Proposing Modifications*).

2. We also modify the authorizations of Iridium Constellation LLC, Iridium Satellite LLC, and Iridium Carrier Services LLC (collectively, "Iridium") to allow it to use 0.95 megahertz of spectrum in the 1617.775-1618.725 MHz band on a shared basis with the Globalstar Big LEO system, and to use an additional 2.625 megahertz of spectrum in the 1618.725-1621.35 MHz band on an exclusive basis. Consequently, Iridium is now authorized to operate its space stations in the 1617.-775-1618.725 MHz frequency band on a shared basis with Globalstar, and on the 1618.725-1626.5 MHz band on an exclusive basis. This modification to Iridium's space station authorization applies to its global space station operations. Further, Iridium is authorized to operate its U.S. earth stations in these bands as well.

II. BACKGROUND

3. The Commission adopted licensing and service rules in 1994 for satellite operators providing MSS in the 1610-1626.5 MHz (L-band) and the 2483.5-2500 MHz (S-band) frequency bands.⁴ The Big LEO processing round included four applicants proposing systems incorporating a code division multiple access (CDMA) protocol and one applicant proposing a system incorporating a time division multiple access (TDMA) protocol.⁵ The Commission initiated a negotiated rulemaking proceeding with the applicants in an effort to avoid or resolve mutual exclusivity among the applicants' proposed satellite systems.⁶ The applicants, however, could not develop a set of technical parameters and sharing criteria that could accommodate all proposed systems. As a result of the negotiated rulemaking, the Commission concluded that the proposed CDMA Big LEO protocol allowed multiple Big LEO CDMA systems to operate on the same shared spectrum, while the proposed TDMA protocol allowed only a single Big LEO system to operate on any given spectrum.⁷ The Commission further concluded that CDMA and TDMA systems are incompatible with each other, and must operate on discrete portions of spectrum.⁸

4. Consequently, the Commission adopted a band plan for Big LEO systems that designated 11.35 megahertz of spectrum in the 1610-1621.35 MHz portion of the L-band for shared CDMA uplink operations and in the 2483.5-2500 MHz S-band for shared CDMA downlink operations.⁹ The Commission also designated 5.15 megahertz of spectrum in the 1621.35-1626.5 MHz band for TDMA MSS uplink and downlink operations. At that time, the Commission considered the possibility that not all of the proposed CDMA systems would ultimately be built and launched. In the event that only one CDMA system was launched and operated, the Commission proposed to automatically reduce the bandwidth assigned to that system from 11.35 megahertz to 8.25 megahertz.¹⁰ The Commission deferred any decision on reassigning the 3.1 megahertz of spectrum at 1618.25-1621.35 MHz to a future rulemaking.¹¹

⁴ See Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626.5/2483.5-2500 MHz Frequency Bands, *Report and Order*, 9 FCC Rcd 5936 (1994) (*1994 Big LEO Order*), *recon.*, *Memorandum Opinion and Order*, 11 FCC Rcd 12861 (1996).

⁵ *1994 Big LEO Order*, 9 FCC Rcd at 5954 (para. 43).

⁶ *Id.*

⁷ *Id.*

⁸ *Id.* Because the TDMA system would operate bi-directionally in the 1.6 GHz band and would not operate in the S-band, the Commission did not adopt a band plan for the S-band.

⁹ *1994 Big LEO Order*, 9 FCC Rcd at 5955 (para. 44).

¹⁰ See *1994 Big LEO Order*, 9 FCC Rcd at 5959-60 (para. 54), *citing* Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610.0-1626.5/2483.5-2500 MHz Frequency Bands, *Notice of Proposed Rulemaking*, 9 FCC Rcd 1094, 1112 (paras. 33-34) (1994).

¹¹ *1994 Big LEO Order*, 9 FCC Rcd at 5960 (para. 55). See also Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands, IB Docket No. 02-364, (continued....)

5. Given the uncertainty surrounding future spectrum assignments and the operations of potentially conflicting systems operating on the same spectrum, such as Russia's GLONASS global navigation system, the Commission authorized all Big LEO licensees to construct systems capable of operating across the entire band allocated for that system protocol. Thus, the Commission authorized the four CDMA space station licensees to construct systems incorporating the 1610-1626.5 MHz frequency band and authorized the TDMA licensee to construct a system incorporating the 1616-1626.5 MHz band.¹² The Commission limited, however, the licensees' operating authority to subsets of this band. Specifically, the Commission authorized the four CDMA space station constellations to operate in the shared 1610-1621.35 MHz and 2483.5-2500 MHz bands.¹³ It authorized the TDMA licensee to operate in the 1621.35-1626.5 MHz band.¹⁴ Three of the CDMA space station licenses were later surrendered. Only two Big LEO licensees remain: Globalstar, which operates a CDMA system, and Iridium, which operates a TDMA system.

6. In 2003, the Commission initiated a rulemaking proceeding in response to a petition for rulemaking filed by Iridium, requesting that 5.85 megahertz of additional spectrum in the CDMA portion of the Big LEO L-band be reassigned for use by Iridium.¹⁵ The Commission noted that it had "left open the possibility of providing an opportunity for additional MSS entry in the Big LEO spectrum" in the *Big LEO Order*.¹⁶ In seeking comment on the issue of spectrum reallocation or reassignment, the Commission stated that "it is appropriate to seek comment on both the possible reassignment and possible reallocation of any returned spectrum for possible use by other services."¹⁷

7. Based on the record developed in response to the *2003 Big LEO Spectrum Sharing Notice*, the Commission decided in 2004 to reassign the 1618.25-1621.35 MHz segment of the L-band from exclusive use by Globalstar to shared use by Globalstar and Iridium.¹⁸ The Commission also requested comment on whether additional spectrum sharing between the two Big LEO systems might be possible. In November 2007, upon reconsideration requested by Globalstar, and after having received record evidence showing the impracticability of spectrum sharing between the two Big LEO systems, the Commission revised the Big LEO band plan to provide each of the two Big LEO technologies with exclusive use of 7.775 megahertz of L-band spectrum.¹⁹ The Commission redesignated the 1610-1617.775 MHz portion of the L-band spectrum to CDMA systems and the 1618.725-1626.5 MHz spectrum to TDMA systems. Further, to account for certain technical issues raised by the design characteristics of Globalstar's system, the

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Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 13356, 13371 (para. 33) (2004) (*2004 Big LEO Spectrum Sharing Order*).

¹² *1994 Big LEO Order*, 9 FCC Rcd at 5958 (para. 52).

¹³ See Loral/Qualcomm Partnership, L.P., *Order and Authorization*, 10 FCC Rcd 2333 (Int'l Bur. 1995) (Globalstar License); TRW, Inc., *Order and Authorization*, 10 FCC Rcd 2263 (Int'l Bur. 1995); Mobile Communications Holdings, Inc., *Order and Authorization*, 12 FCC Rcd 9663 (Int'l Bur./OET 1997); Constellation Communications, Inc., *Order and Authorization*, 12 FCC Rcd 9651 (Int'l Bur./OET 1997).

¹⁴ See Motorola Satellite Communications, Inc., *Order and Authorization*, 10 FCC Rcd 2268 (Int'l Bur. 1995).

¹⁵ See 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 (2003 Big LEO Spectrum Sharing Notice)*, IB Docket No. 02-364, 18 FCC Rcd 1962, 2089 (para. 265) (2003).

¹⁶ *2003 Big LEO Spectrum Sharing Notice*, 18 FCC Rcd at 2089 (para. 265), citing *1994 Big LEO Order*, 9 FCC Rcd at 5960 (para. 55).

¹⁷ *2003 Big LEO Spectrum Sharing Notice*, 18 FCC Rcd at 2089 (para. 265).

¹⁸ *2004 Big LEO Spectrum Sharing Order* 19 FCC Rcd at 13376 (para. 44).

¹⁹ *2007 Big LEO Spectrum Sharing Second Reconsideration Order*, 22 FCC Rcd at 19733 (para. 1).

Commission required CDMA and TDMA systems to share 0.95 megahertz of L-band spectrum at 1617.775-1618.725 MHz.

8. The Commission initiated this license modification proceeding under Section 316 of the Communications Act to implement revisions to the spectrum sharing plan adopted by the Commission in the *2007 Big LEO Spectrum Sharing Second Reconsideration Order*.²⁰ In an *Order Proposing Modifications* released in May 2008, the Commission proposed to modify Globalstar's and Iridium's licenses to reflect the revised band plan.²¹ The Commission also stated that the modification of the space station license would apply to Globalstar's and Iridium's global space station operations, citing the United States' role as the licensing administration for the space station system.²² Under the Commission's procedure for license modification, potentially affected licensees are provided 30 days in which to protest, showing with particularity why the licenses should not be modified as proposed.²³ No comments were filed with respect to the proposed modifications of the Iridium licenses. Globalstar filed a protest to the Commission's proposed modification of its licenses on June 6, 2008.²⁴ Iridium filed an opposition to Globalstar's protest on June 16.²⁵ Globalstar then filed a reply on June 23.²⁶ Iridium filed a request to strike an affidavit filed with the Globalstar reply on July 1.²⁷ Globalstar filed a reply to the Iridium Request to Strike on July 11.²⁸

9. In its protest, Globalstar argues that the Commission failed to give notice and an opportunity for comment before deciding, in the *Order Proposing Modifications*, to apply the revised Big LEO band plan to Globalstar's global operations.²⁹ Globalstar contends that the Commission has stated that it would allow all Big LEO licensees to provide service in other countries in portions of the L-band that differ from the L-band frequencies they use in the United States without further Commission approval.³⁰ Globalstar asserts that the decision to give global application to the operating bands authorized in its space station license is a departure from longstanding policy without justification.³¹ Globalstar also claims that modification of its global operations as proposed raises factual issues that can only be resolved in a hearing conducted pursuant to Section 316.³²

²⁰ *2007 Big LEO Spectrum Sharing Second Reconsideration Order*, 22 FCC Rcd at 19733.

²¹ *Order Proposing Modifications*, FCC 08-125. See 47 U.S.C. § 316. The *Order Proposing Modifications* also proposed modifications to Iridium's Big LEO license. In this Order, we address only Globalstar's Big LEO license. We address Iridium's modified Big LEO license in a separate order.

²² *Order Proposing Modifications*, FCC 08-125 at para. 3.

²³ 47 C.F.R. § 1.87.

²⁴ Protest of Globalstar Licensee LLC and GUSA Licensee LLC (filed June 6, 2008) (Globalstar Protest).

²⁵ Opposition of Iridium Satellite LLC to License Protest of Globalstar Inc. [sic] (filed June 16, 2008) (Iridium Opposition).

²⁶ Reply of Globalstar to Opposition of Iridium (filed June 23, 2008) (Globalstar Reply).

²⁷ Request to Strike Affidavit (filed July 1, 2008) (Iridium Request to Strike).

²⁸ Opposition of Globalstar to Iridium's Request to Strike Affidavit (filed July 11, 2008) (Globalstar Opposition to the Request to Strike).

²⁹ Globalstar Protest at 2-8.

³⁰ Globalstar Reply at 14-15.

³¹ Globalstar Protest at 8-19.

³² Globalstar Protest at 19-22.

10. Iridium opposes the Globalstar protest, stating that the Commission provided Globalstar with all of the process required in an adjudicatory proceeding.³³ Iridium also argues that Globalstar's claim that the Commission unlawfully departed from precedent in regulating Globalstar's global operations is meritless.³⁴ Iridium further asserts that Globalstar has not demonstrated any factual basis supporting the need for a hearing under Section 316.³⁵

III. DISCUSSION

A. The Globalstar Big LEO Licenses

1. Scope of Proceeding

11. In its protest to the *Order Proposing Modifications*, Globalstar claims that the Commission failed to provide it with adequate notice and opportunity for comment before restricting its space station operations outside the United States to frequencies below 1618.725 MHz. Further, Globalstar argues that such a restriction unlawfully departs from Commission precedent. We consider those issues here.³⁶

2. Adequacy of Notice and Commission Precedent

a. Introduction

12. Globalstar states that the Commission's decision in the *Order Proposing Modifications* to give global application to Globalstar's modified license amounts to the imposition of a global band plan.³⁷ Globalstar claims that it had no reason to suspect that the Commission might modify its space station authorization in this manner. In support of its claim, Globalstar cites to the Commission's statement in the *1994 Big LEO Order* that it "will not impose a global band sharing plan on U.S. licensees at this time."³⁸ Globalstar contends that the issue of global application of the Big LEO MSS band plan was not considered until Iridium introduced the issue in an *ex parte* letter to the Commission in March 2008.³⁹ Globalstar concludes that the Commission failed to provide the required notice and opportunity for comment before departing from its practice of allowing its Big LEO licensees to provide service in other countries in portions of the L-band that differ from the L-band frequencies they use in the United States.⁴⁰

13. We disagree with Globalstar's conclusion in two respects. First, the Commission has always required Big LEO space stations to operate outside the United States in conformance with the authorized

³³ Iridium Opposition at 7-9.

³⁴ Iridium Opposition at 10-24.

³⁵ Iridium Opposition at 29-34.

³⁶ We do not consider here, however, Globalstar's contention that the Commission's decision to transfer spectrum from Globalstar's exclusive use to Iridium's exclusive use was made without adequate notice and comment. Globalstar Protest at 3, citing *2007 Big LEO Spectrum Sharing Second Reconsideration Order*, 22 FCC Rcd 19733. Globalstar notes it has filed for judicial review of that decision with the U.S. Court of Appeals for the D.C. Circuit. Globalstar Protest at 3, citing *Globalstar, Inc. v. FCC*, DC Cir. Case No. 08-1046 (D.C. Cir., filed Feb. 5, 2008). Consequently, this Order addresses only those issues related to the Commission's statement in the *Order Proposing Modifications* that the proposed modifications to Globalstar's space station license apply to its global space station operations.

³⁷ Globalstar Protest at 8.

³⁸ *1994 Big LEO Order*, 9 FCC Rcd at 6019 (para. 213).

³⁹ See Globalstar Protest at 4.

⁴⁰ Globalstar Reply at 14-15.

operating bands in their licenses. Thus, we agree with Iridium that the *Order Proposing Modifications* simply applies well-settled precedent.⁴¹ In fact, Globalstar participated in several licensing proceedings in which the Commission's International Bureau applied this policy. In any case, this license modification proceeding under Section 316 of the Communications Act has itself provided Globalstar with notice and an opportunity to be heard in regard to the global application of the terms of its U.S. space station license. We discuss these points below.

b. Global Application of Space Station Licenses

14. While the Commission stated that it would not impose a global band sharing plan on its Big LEO licensees, this statement does not provide authority for Big LEO licensees to operate anywhere in the L-band spectrum without further Commission approval. In fact, since they began service in the 1990s, all Big LEO space station systems, including Globalstar, have operated outside the United States in a manner consistent with the operating bands specified in their U.S. space station licenses *except* upon grant of authority by the Commission to operate in another portion of the band.⁴² Whenever a U.S. Big LEO space station licensee seeks to operate its space station on frequencies in which it is not authorized to operate by the terms of its license, it has always been required to obtain Commission authorization in order to do so.⁴³

15. To the extent Globalstar claims that it was unaware of the need for Commission approval to operate outside the scope of its U.S. license, we observe that Globalstar actively participated in several proceedings in the past five years that should have made this obligation clear. In the *2003 Big LEO Spectrum Sharing Notice*, for example, the Commission specifically sought comment "on how the U.S. Big LEO spectrum sharing plan fits with international band plans for Big LEO operations and what impact changes to the U.S. plan would have on plans in other regions."⁴⁴ Thus, it was clear that the Commission believed that changing the band plan would have an effect on licensees' international operations.

16. Moreover, in 2003, Globalstar was involved in a series of license modification proceedings that temporarily authorized Iridium's TDMA system to operate in the Middle East and elsewhere around the world in portions of the L-band designated for CDMA systems. If the operating bands specified in Iridium's license did not have global application, and Iridium was authorized to operate anywhere in the Big LEO L-band where it had obtained landing rights -- as Globalstar's licensing theory would hold -- there would have been no need for Iridium to obtain Commission authorization to operate in those bands and no reason for the Commission to have considered the matter.⁴⁵

⁴¹ Iridium Opposition at 11. Indeed, the only reason the Commission included, in the *Order Proposing Modifications*, a statement that the modification of the Big LEO space station authorizations would apply to the systems' global operations was because the licensees had raised this issue in a series of *ex parte* communications. See, e.g., Letter from William T. Lake, Counsel to Globalstar, Inc., to Marlene H. Dortch, Secretary, FCC (Apr. 24, 2008); Letter from William T. Lake, Counsel to Globalstar, Inc., to Marlene H. Dortch, Secretary, FCC (Mar. 24, 2008); Letter from R. Michael Senkowski, Counsel to Iridium Satellite LLC, to Marlene H. Dortch, Secretary, FCC (Mar. 7, 2008).

⁴² See paras. 16-19, below, for a discussion of Iridium's requests to operate in portions of the CDMA spectrum.

⁴³ In fact, the Commission's statement in the *1994 Big LEO Order* that it would not impose a global band sharing plan was made in response to a proposal that the Commission adopt a band segmentation plan for non-U.S. operations that differed from what the proponents of the proposal characterized as the U.S. domestic plan. *1994 Big LEO Order*, 9 FCC Rcd at 6018 (para. 212). Thus, the Commission's statement at that time should be viewed as simply declining to adopt the specific proposal before it, given the circumstances then obtaining, rather than as a broader statement about the scope of FCC space station licensing authority.

⁴⁴ *2003 Big LEO Spectrum Sharing Notice*, 18 FCC Rcd at 2090 (para. 270).

⁴⁵ This is also the case with space station licensees in other satellite services. For example, in 2001, Hughes Communications Galaxy, Inc. (Hughes) requested Commission authority to operate outside the United States in
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17. More specifically, in May 2003 the International Bureau's Satellite Division issued the first of several *Orders to Show Cause* proposing to modify Iridium's space station license to permit operations in the 1618.85-1621.35 MHz on a temporary basis, to support the communications needs of U.S. forces in Iraq and the Middle East region.⁴⁶ The Division specifically afforded Globalstar an opportunity to protest the proposed grant. In its protest, Globalstar suggested that the Commission lacked the authority to modify Iridium's operations in non-U.S. territories and that, in any case, the Division should require Iridium to operate on a non-interference basis to the Globalstar system.⁴⁷

18. The International Bureau modified Iridium's authorization for a one month period.⁴⁸ In doing so, the Bureau rejected Globalstar's contention that the Communications Act does not permit the Commission to license operations outside the United States. The Bureau stated that "Iridium is authorized to operate satellites on frequencies specified in its authorization. The Commission has jurisdiction with respect to those satellites pursuant to, *inter alia*, 47 U.S.C. §§ 151, 152, 301, 303(r)."⁴⁹ The Bureau also stated that, given the importance of Iridium's proposed communications, it would allow Iridium to operate on a co-equal basis with Globalstar in the Middle East region.⁵⁰

19. Further, in July 2003, the Division proposed to grant Iridium an extension of its operating authority in the Middle East region.⁵¹ In areas of the world outside the Middle East region, the Division proposed to authorize Iridium to operate in the requested frequency band only on the condition that it did so on a non-harmful interference basis to the Globalstar system. This condition addressed the claims of a Globalstar affiliate, Globalstar Canada, that Iridium's operations in the frequency band had the potential to impair its operations in Canada. Globalstar protested the proposed grant on the same grounds on which it had protested the *May 2003 Order to Show Cause*.⁵² In October 2003, the Division again modified Iridium's space station license to operate on the additional frequencies on a temporary basis. The Division

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frequencies not part of the Commission's global 28 GHz Ka-band plan or included in its space station license. The International Bureau's Satellite Division modified Hughes's license to include authority to operate in these additional bands. *Hughes Communications Galaxy, Inc., Order and Authorization*, 16 FCC Rcd 12627 (Int'l Bur. Sat. Div. 2001). Globalstar argues that this case is distinguishable from those in the Big LEO service because Hughes did not have construction authority for the bands in question. Globalstar Reply at 12. This overlooks the fact that Iridium's Big LEO license space station license contained construction authority for the bands in which Iridium sought to operate outside the United States and that this did not relieve Iridium of its obligation to seek and receive Commission authority before beginning such operations.

⁴⁶ Modification of Licenses held by Iridium Constellation, LLC and Iridium, US LP for a Mobile Satellite System in the 1.6 GHz Frequency Band, *Order to Show Cause*, 18 FCC Rcd 10441 (Sat. Div., Int'l Bur. 2003) (*May 2003 Order to Show Cause*).

⁴⁷ Protest of Globalstar, L.P. and Globalstar USA L.L.C. (filed May 23, 2003) at 5.

⁴⁸ Modification of Licenses held by Iridium Constellation, LLC and Iridium, US LP for a Mobile Satellite System in the 1.6 GHz Frequency Band, *Order*, 18 FCC Rcd 11480 (Sat. Div., Int'l Bur. 2003) (*June 2003 Iridium Order*).

⁴⁹ *June 2003 Iridium Order*, 18 FCC Rcd at 11482 n.18.

⁵⁰ *June 2003 Iridium Order*, 18 FCC Rcd at 11482-83 (para. 8).

⁵¹ Modification of Licenses held by Iridium Constellation, LLC and Iridium, US LP for a Mobile Satellite System in the 1.6 GHz Frequency Band, *Order to Show Cause*, 18 FCC Rcd 14498 (Sat. Div., Int'l Bur. 2003) (*July 2003 Order to Show Cause*).

⁵² Protest of Globalstar, L.P. and Globalstar USA, LLC (filed July 28, 2003).

again fully considered, and rejected, Globalstar's argument that the Commission lacked authority to modify Iridium's space station licenses to permit global operations.⁵³

20. Finally, in December 2003, the Division extended Iridium's authority "to operate in the 1620.10-1621.35 MHz frequency band on a global basis and to operate on a non-harmful interference basis with respect to any other allocated radio service in that band outside of the Middle East region."⁵⁴ Globalstar had objected to Iridium's extension request, but once again the Commission granted Iridium the requested temporary authority.

21. All of these Iridium license modification proceedings provided Globalstar with notice that a U.S. Big LEO space station licensee's global operations were constrained by the terms of its U.S. license. Further, the proceedings provided Globalstar with notice that if a Big LEO space station licensee sought to operate on portions of the L-band not authorized in its license, it would be required to obtain Commission authorization to operate in those bands. In each proceeding, Globalstar had ample opportunity to comment on the application of this policy and took full advantage of this opportunity. Thus, Globalstar cannot credibly claim now that it had no reason to suspect that the Commission's modification of the Big LEO band plan, and the resulting modification of the Big LEO licenses, would have worldwide effect.

22. Nevertheless, Globalstar attempts to distinguish the Iridium modification proceedings on two grounds. First, it argues that "since the United States had toppled the Iraqi Government and was the occupying power in that country, it had *de facto* authority to determine the use of spectrum there."⁵⁵ Globalstar asserts that this affirms that the Big LEO band plan applies only in the United States and, "by extension, where the United States is the occupying power during wartime."⁵⁶ Even assuming for the sake of argument that the Commission had *de facto* control to determine spectrum use in Iraq,⁵⁷ which it did not, Globalstar's argument overlooks the fact that the International Bureau never limited Iridium's expanded operating authority to providing service in Iraq. The Bureau initially authorized Iridium to operate on the expanded frequencies throughout the Middle East, and later expanded this authority to cover global operations. In doing so, the Bureau acknowledged that Iridium's potential Canadian operations in the CDMA spectrum could impair potential Globalstar operations in Canada and imposed non-interference conditions on Iridium's operations outside the Middle East region. These grants of authority and the Bureau's imposition of conditions on those operations would not have been necessary if, as Globalstar asserts, Commission policy permitted Big LEO space station licensees to provide service in other countries in portions of the L-band that differ from the L-band frequencies they use in the United States.

23. In addition, Globalstar notes that in the *December 2003 Iridium Modification Order*, the International Bureau stated that it was not specifying a global band plan by granting Iridium's modification request.⁵⁸ Globalstar also notes that the Bureau further stated that "[o]ther countries continue to retain the discretion as to whether to allow service within their borders in accordance with the frequencies we are

⁵³ Modification of Licenses held by Iridium Constellation, LLC and Iridium, US LP for a Mobile Satellite System in the 1.6 GHz Frequency Band, *Order*, 18 FCC Rcd 20023 (Sat Div., Int'l Bur. 2003).

⁵⁴ Request for Special Temporary Authority, Iridium Constellation, LLC, for a Mobile Satellite System in the 1.6 GHz Frequency Band, *Order*, 18 FCC Rcd 25814 (Sat Div., Int'l Bur. 2003) (*December 2003 Iridium Modification Order*).

⁵⁵ Globalstar Reply at 13.

⁵⁶ Globalstar Reply at 14.

⁵⁷ We note, however, that the Commission did not authorize earth station operations on Iraqi territory, as there is no statutory basis for doing so.

⁵⁸ Globalstar Reply at 13-14, citing *December 2003 Iridium Modification Order*, 18 FCC Rcd at 25820 (para. 14).

authorizing Iridium to use on a temporary basis.”⁵⁹ Globalstar concludes that these statements show that the Commission has never attempted to make the Big LEO band plan effective in other countries and that, by extension, the Commission unlawfully gave global effect to the terms in Globalstar’s space station license in the *Order Proposing Modifications*. Globalstar’s conclusion overlooks the language in the last clause in the Bureau’s statement that Iridium must operate in other countries “in accordance with the frequencies we are authorizing Iridium to use on a temporary basis.” This language makes it clear that U.S. Big LEO licensees may provide service in other countries only on frequency bands in which the Commission has given them specific authority to operate. Whether a country chooses to allow such service on these terms is, as the Bureau noted, a matter for that country to decide.⁶⁰

c. Notice Under Section 316 License Modification Procedure

24. In any case, even assuming that none of these proceedings provided Globalstar with sufficient notice that its own U.S. Big LEO license had global application, this Section 316 proceeding provided that notice and opportunity for comment. The Commission initiated this informal adjudicatory proceeding with its *Order Proposing Modifications*. The *Order Proposing Modifications* was not a final order. In compliance with the procedure specified in Section 316 and in the Commission’s rules, the *Order Proposing Modifications* supplied Globalstar with written notice of the proposed modifications to its licenses, the reasons behind the proposed modifications, and afforded Globalstar an opportunity to file a protest showing with particularity why its licenses should not be modified as proposed.⁶¹ In addition, any other licensee or permittee who believed that its license or permit would be modified by the proposed action was also provided with the opportunity to protest the proposed action before the effective date.⁶² Globalstar took full advantage of this procedural opportunity. For these reasons, we reject Globalstar’s contention that Commission failed to provide Globalstar with notice and opportunity for comment with

⁵⁹ Globalstar Reply at 13-14.

⁶⁰ In this regard, we agree with Iridium and Globalstar that earth stations within the territory of another country fall under the jurisdiction of that country. Countries have full discretion to decide whether to use a U.S.-licensed satellite to provide Big LEO service in their country. A space station that has received such “landing rights” from another country may then transmit to, and receive transmissions from, earth stations located within and licensed by that country. Contrary to Globalstar’s assertion, however, the U.S.-licensed space station may operate with those earth stations only on those frequency bands authorized for operation in its U.S. license, or on a subset of those frequency bands.

⁶¹ In addition to noting the United States’ role as the licensing administration for Globalstar space stations, the Commission, in the *Order Proposing Modifications*, also cited Amendment to the Commission’s Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems, *Report and Order*, 11 FCC Rcd 2429, 2430 (para. 9) (1996) (*DISCO I*). Globalstar states that *DISCO I* does not apply because *DISCO I* was expressly limited to geostationary satellite orbit (GSO) systems, and the *Order Proposing Modifications* involves non-geostationary satellite orbit (NGSO) systems. See Globalstar Protest at 14-16. We agree with Iridium that this is a distinction without a difference. Iridium Opposition at 23. Contrary to Globalstar’s assertion, the Commission’s policies and practices relating to the provision of service outside the United States by U.S. space station licensees have never distinguished between GSO and NGSO system designs. The United States’ obligation to resolve any interference issues caused in other countries by U.S.-licensed space stations is the same, regardless of whether service is being provided in a limited number of countries by regional GSO space stations or on a more global basis by NGSO space stations. Indeed, in the Ka-band licensing proceeding, which involved both GSO and NGSO space station systems, the Commission required all space stations to operate in conformance with their licenses on a global basis. Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, *Third Report and Order*, 12 FCC Rcd 22310, 22237 (para. 67) (1997) (*Ka-band Report and Order*). Thus, whether or not *DISCO I* applied by its terms to the Big LEO service, Globalstar, like all other Commission space station licensees, must abide by the terms of its Commission license. See paras. 32-39, below, for a more detailed discussion of the United States’ treaty obligation to resolve interference caused by U.S.-licensed systems.

⁶² 47 U.S.C. § 316(a)(3).

respect to the global application of its modified space station license or that applying such a policy was a departure from Commission policy or precedent.

3. Section 316 Hearing

25. In its Protest, Globalstar requests a hearing under Section 316 of the Communications Act⁶³ and Section 1.87 of the Commission's Rules.⁶⁴ Globalstar notes that the Commission twice denied its earlier requests for a hearing under Section 316 on the ground that the spectrum sharing plan was adopted by a rulemaking proceeding affecting all MSS providers in the Big LEO bands.⁶⁵ Globalstar contends now that the Commission's decision to give global effect to the operating bands authorized in Globalstar's modified license requires an evidentiary hearing.⁶⁶

26. Globalstar asserts that a number of factual issues in this proceeding warrant an evidentiary hearing before the Commission can modify its license to add a requirement that assigned frequency usage be applied globally, including: the number of countries and customers Globalstar serves on the frequencies the Commission has reassigned to the exclusive use of Iridium; the number of those customers who are U.S. government military and public safety entities; how restrictions on Globalstar's operations in other countries would affect Globalstar's operations; how Globalstar's need to avoid self-interference would affect its ability to provide service without the use of the 1618.725-1621.35 MHz segment; and the services Globalstar may offer outside the United States.⁶⁷ Finally, Globalstar notes that the Commission stated in the *Order Proposing Modifications* that it will entertain waiver or license modification requests to permit Globalstar to operate on frequencies below 1618.725 MHz. Globalstar claims that this does not obviate the need for a hearing on factual issues before the proposed license modification takes effect.⁶⁸ Globalstar also states that such a waiver process would impose an unacceptable burden on Globalstar, and does not justify a failure to determine relevant facts before Globalstar's license is modified.⁶⁹

27. In response, Iridium states that a hearing is only required if substantial and material questions of fact are presented.⁷⁰ Iridium contends that the issues that Globalstar characterizes as issues of fact are actually legal arguments regarding whether or not the new Big LEO L-band band plan should have global effect, and that legal and economic conclusions do not raise substantial and material questions of fact sufficient to warrant a hearing.⁷¹ Further, Iridium asserts that Globalstar had both notice and opportunity to comment on whether the Commission should modify its space station license, and did not at the time raise the concerns it now claims are sufficiently important to warrant a hearing. Finally, Iridium points out that Globalstar has not shown why it cannot use the waiver process to remedy any harm it may suffer as a

⁶³ See 47 U.S.C. § 316(b).

⁶⁴ See 47 C.F.R. § 1.87(e).

⁶⁵ See Globalstar Protest at 19, citing *Spectrum Sharing Further Notice*, 19 FCC Rcd at 13393 (para. 85); *2007 Big LEO Spectrum Sharing Second Reconsideration Order*, 22 FCC Rcd at 19743-44 (paras. 23-24).

⁶⁶ See Globalstar Protest at 19-22.

⁶⁷ See Globalstar Protest at 21-22; Globalstar Reply at 17.

⁶⁸ See Globalstar Protest at 22, citing *Order Proposing Modification*, FCC 08-125 at para. 5.

⁶⁹ See Globalstar Protest at 22.

⁷⁰ See Iridium Opposition at 29-30, citing 47 U.S.C. § 309(e).

⁷¹ See Iridium Opposition at 31, citing *Bell Atlantic New Zealand Holdings, Inc., Transferor, and Pacific Telecom Inc., Transferee, Applications for Consent to Transfer Control of a Submarine Cable Landing License, International and Domestic Section 214 Authorizations, a Cellular Radiotelephone License, Common Carrier and Non-Common Carrier Satellite Earth Station Licenses, and a Petition for Declaratory Ruling Pursuant to Section 310(b)(4) of the Communications Act, Order and Authorization*, IB Docket No. 03-115, 18 FCC Rcd 23140, 23162 (para. 48) (2003).

result of the global application of its modified license. Iridium states that speculative harms Globalstar raise are insufficient to justify a hearing.⁷²

28. As Iridium points out, Section 316 states that protests to modifications of licenses must meet the requirements of Section 309(d) of the Communications Act for petitions to deny.⁷³ Section 309(d) provides that if a substantial and material question of fact is presented or if the Commission is not able to find that grant will serve the public interest, convenience, and necessity, it shall conduct a hearing pursuant to Section 309(e).⁷⁴ With respect to the first clause of this requirement, factual disputes will be considered substantial and material if, in taking the petitioner's or protester's factual assertions as true, the action at issue (grant of an application in the case of a petition to deny, or modification of license in the case of a Section 316 modification protest) would be *prima facie* inconsistent with the public interest.⁷⁵ Under this measure, we conclude that a hearing is not warranted, since, under Globalstar's worst-case factual scenario (*i.e.*, that Globalstar's operations outside the United States will have to be curtailed and that this could work a hardship on Globalstar), the modification of its license as proposed would still not be inconsistent with the public interest.⁷⁶ As discussed below, requiring a U.S. licensee to comply with the limits of the authorization that it has received from the Commission is essential to maintaining the integrity of the global system of spectrum usage. Thus, holding Globalstar to the limits of its modified licensed authorization has a substantial public interest benefit. Moreover, Globalstar is not without recourse under this regime; Globalstar may obtain relief as appropriate through the Commission's waiver processes in order to avoid the hardships that it fears will come to pass. Given these factors, it is clear that the modification of Globalstar's license to the extent proposed (*i.e.*, to limit operations outside the United States to the bands specified in the authorization) is not inconsistent with the public interest.

29. Even if we were to agree that, under Globalstar's characterization of the facts, the modification was not consistent with the public interest, a hearing would be unnecessary because there appears to be no real factual dispute of any relevance. Neither the Commission nor Iridium disagree that Globalstar's operations outside the United States will have to be curtailed under the modified terms of Globalstar's license, and that this could work a hardship on Globalstar. Given that no one disputes these assertions, a hearing to establish their truth would not appear to serve any useful purpose.⁷⁷

30. Finally, a hearing would be justified under the second clause of Section 309(d) if, for any other reason, the Commission cannot find that the action in question would be consistent with the public interest.⁷⁸ In this case, however, we have a sufficient record to conclude that the license modification would serve the public interest, convenience, and necessity. In sum, we conclude that Globalstar's protest contains neither substantial or material questions of fact that are in dispute, nor raises issues that make us unable to make the requisite public interest determination on the basis of the record before us. Therefore, a

⁷² See Iridium Opposition at 33-34.

⁷³ See Iridium Opposition at 29-30.

⁷⁴ 47 U.S.C. § 309(d)(2).

⁷⁵ See *Astroline Communications Co. v. FCC*, 857 F.2d 1556, 1561 (D.C. Cir. 1988) (citing threshold requirement for demonstrating right to Section 309(d) hearing).

⁷⁶ While Iridium has requested that we strike the affidavit filed in support of the Globalstar Reply detailing the impact on Globalstar if the band reassignment is applied globally, we will treat the affidavit, the Iridium Request to Strike, and the Globalstar Opposition to the Iridium Request to Strike as informal comments.

⁷⁷ See *Stone v. FCC*, 466 F.2d 316, 323 (D.C. Cir. 1972) (holding that, if the facts are not disputed, but disposition turns on inferences and legal conclusions to be drawn from facts already known, a hearing is unnecessary); *Astroline Communications*, 857 F.2d at 1561-62 (ruling that, even if petitioner has made a *prima facie* case of inconsistency with the public interest, a hearing would not be warranted if there were no questions of facts in dispute).

⁷⁸ See *Astroline Communications*, 857 F.2d at 1161; *Citizens for Jazz on WRVR, Inc. v. FCC*, 775 F.2d 392, 394-95 (D.C. Cir. 1985).

hearing would fail to accomplish anything that could not be done on the current record and is, accordingly, unnecessary.

31. We further conclude that Globalstar's notice arguments are misplaced in the context of our hearing designation analysis. We again emphasize that Globalstar has had ample notice and opportunity to present any legal or economic arguments it believes are relevant to the scope of its Big LEO space station license.⁷⁹ Finally, the issue of whether Globalstar has been provided with an alternate avenue of relief for any serious harm it may suffer as a result of the global application of the revised band plan has no bearing on its burden to show that there are substantial or material questions of fact or that the public interest would be frustrated absent a hearing.⁸⁰

4. Public Interest Analysis

a. Giving Global Effect to Globalstar's Space Station License

32. We concluded above there is no merit to Globalstar's procedural challenges to the Commission's ability to circumscribe its global operations. We now consider whether the *Order Proposing Modifications* furthers the public interest, convenience, and necessity. Globalstar has not provided us with any reason to deviate from the general Commission policy that requires U.S. space station licensees to operate their space stations in a manner consistent with their U.S. licenses, regardless of whether the end user of the communication service is using an earth station subject to the territorial jurisdiction of another country.⁸¹ Indeed, allowing both Globalstar and Iridium to operate in any portion of the allocated Big LEO frequency band in any country in which they receive authority to provide such service without further Commission action, as Globalstar proposes, would, as discussed below, constitute a dereliction of the United States' obligations as the licensing administration of the space stations involved,

⁷⁹ In addition to receiving notice of the Commission's inquiry into the global effect of the revision of the Big LEO L-band band plan, Globalstar commented on global aspects of the Commission's proposals and requests for comments. Iridium lists and cites several other filings in which Globalstar discussed international and global aspects of the Big LEO L-band band plan and the details of its global operations. See Iridium Request to Strike Affidavit at 6-10. Globalstar asserts that Iridium's Request to Strike does not demonstrate that Globalstar has been provided with sufficient notice and opportunity to present arguments relevant to the scope of its license. Globalstar Opposition to the Request to Strike at 2. We addressed the notice issue at paras. 12-23, above.

⁸⁰ Globalstar notes that applying for waivers "would impose an unwarranted and unacceptable burden" on Globalstar. Globalstar Protest at 22. The administrative burden on an applicant seeking waiver or modification or other regulatory relief is not a consideration in determining whether a hearing is warranted. Furthermore, Globalstar's assertion that a hearing is warranted because the Commission "never sought comment on or considered the impact that Iridium's operations in the spectrum between 1617.775-1621.35 MHz would have on licensed services in countries in which TDMA MSS services are not authorized below 1621.35 MHz" is incorrect. In the *2003 Big LEO Spectrum Sharing Notice*, the Commission expressly requested public comment on "whether changes to the Big LEO spectrum sharing plan would have any effect on GLONASS, the Russian Global Navigation Satellite System, and Radioastronomy service (RAS) in the band" and on "how the U.S. Big LEO spectrum sharing plan fits with international band plans for Big LEO operations and what impact changes to the U.S. plan would have on plans in other regions." *2003 Big LEO Spectrum Sharing Notice*, 18 FCC Rcd at 2090 (para. 270).

⁸¹ We agree with Iridium that "an MSS operator's licensing administration...has full and exclusive authority to regulate the provider's space station operations, regardless of whether those stations are communicating with an earth station located within that administration's territory or a foreign nation." Iridium Opposition at 16. Globalstar acknowledges this, stating that "Iridium's argument that the FCC has authority as a general matter to modify satellite authorizations answers a question that hasn't been asked." Globalstar Reply at 11, citing Iridium Opposition at 16-24. We note, however, that Globalstar has, on several previous occasions, argued that the Commission does not have jurisdiction to regulate a U.S. licensee's international operations. On each of these occasions, the Commission stated that it disagreed, citing the Commission's mandate under Sections 151, 152, 301, and 303(r) of the Communications Act. 47 U.S.C. §§ 151, 152(a), 301, 303(r). See discussion at paras. 17-20, above.

and also could easily lead to widespread interference between the two systems and service disruptions around the world.

33. The Big LEO applicants recognized over 15 years ago that the CDMA and TDMA protocols presented significant risks of harmful interference to each other.⁸² This means that a CDMA and a TDMA system cannot provide co-frequency, co-coverage service, particularly at maximum system loading, without causing each other mutually harmful interference. For this reason, the Commission adopted a band plan in 1994 that assigned CDMA and TDMA systems to discrete portions of the Big LEO spectrum.⁸³ In a reconsideration filed in response to the *2004 Big LEO Spectrum Sharing Order*, Globalstar reaffirmed that the two technologies remain incompatible and should operate on separate spectrum.⁸⁴

34. As noted in the *Order Proposing Modifications*, the United States is the licensing administration of the Globalstar space station constellation in fulfillment of its obligations under the International Telecommunication Union's Radio Regulations.⁸⁵ The United States is also the licensing administration of the Iridium space station constellation. As the licensing administration for these two space station systems, the United States has a unique and fundamental responsibility for "the detection and elimination of harmful interference" caused by either of these space station constellations.⁸⁶

35. Globalstar asserts that the Commission has made clear that each country has the right to determine its own band plan for the provision of Big LEO service within its borders and to operate its earth stations with U.S.-licensed Big LEO space stations in any portion of the L-band.⁸⁷ Under Globalstar's framework, two neighboring countries could adopt differing Big LEO band plans and properly authorize the two U.S. Big LEO licensees to operate in their respective countries with their nationally licensed earth stations on the same portion of the L-band. Because space station beams for current Big LEO systems cannot be shaped to track geographical boundaries, co-frequency operations by one Big LEO licensee in Country X will present a significant risk of interference to the other Big LEO licensee's co-frequency operations in Country Y, and vice versa. This scenario would play out in all neighboring countries that adopted conflicting band plans. As Iridium notes, this "would lead to untenable chaos."⁸⁸

36. As the licensing administration of the interfering space station networks, all countries experiencing interference to their Big LEO operations would look to the United States to resolve their respective interference issues. The only way for the United States to resolve an international interference issue between two incompatible U.S. space station systems using incompatible technologies is to impose a solution requiring the licensees to operate on different frequency bands internationally.⁸⁹ Thus, a general

⁸² See para. 3, above.

⁸³ *1994 Big LEO Order*, 9 FCC Rcd at 5955 (para. 44).

⁸⁴ See Globalstar Petition for Reconsideration of the *2004 Big LEO Spectrum Sharing Order*, at 5-6.

⁸⁵ *Order Proposing Modifications*, FCC 08-125 at n.5, citing Radio Regulation 18.1. The ITU is a specialized agency of the United Nations, whose primary function is to set technical standards for world telecommunications to prevent harmful interference and to develop the basic operating arrangements under which member nations communicate. The ITU Convention is the basic instrument creating and defining the role of the ITU. The United States is a member of the ITU. Further, the ITU Convention has the status of a treaty under United States law. See Radio Regulation 18-1.

⁸⁶ Radio Regulation 15.25. See also 47 U.S.C. § 303(f).

⁸⁷ Globalstar Protest at 9.

⁸⁸ Iridium Opposition at 23.

⁸⁹ Even assuming, for the sake of argument, that the Commission had allowed Globalstar and Iridium to operate anywhere in the L-band where they had obtained landing rights without further Commission approval, the ongoing
(continued....)

framework requiring U.S. licensees to operate globally on the operating frequencies authorized in their licenses allows Big LEO service to be provided in the most interference-free environment possible and allows the United States to best fulfill its international treaty obligations.⁹⁰

37. We do not agree with Globalstar that the Commission's licensing framework "replace[s] the established regime of international comity with a contest of extraterritorial fiats."⁹¹ Countries are free to adopt whatever band plan they choose and to license their own Big LEO national space station systems in accordance with that band plan. We recognize, however, that other countries may choose, for many reasons, to use capacity on U.S.-licensed space stations to provide Big LEO service within their borders. In this regard, the Commission has licensed two Big LEO space station systems over which it has jurisdiction. Once a country decides to give a particular U.S.-licensed Big LEO space station landing rights in that country, that space station may communicate with earth stations located within and licensed by that particular country. The U.S. space station may, however, transmit to and receive signals from the non-U.S. earth station only within the operating parameters set out in its U.S. space station license. This is a function of the ITU international coordination process and the proper exercise of U.S. jurisdiction over its licensed communications facilities. It is not a function of the United States imposing an "extraterritorial fiat" on other countries.

38. In presenting its case for allowing U.S. Big LEO licensees to operate in any portion of the Big LEO L-band in which they receive foreign landing rights, Globalstar nowhere addresses the intersystem interference issues between U.S.-licensed satellite systems. Globalstar simply does not acknowledge or address the inevitable interference disputes, or the United States' treaty obligation to resolve them. It is not sufficient to conclude in the face of these widespread interference scenarios, as Globalstar does, that national regulators may simply "tell Globalstar and Iridium what [L-band] frequencies they may use to provide service in its country" or that administrations can "police" Big LEO operations within their borders.⁹²

39. Last, we disagree with Globalstar's assertion that the United States would authorize a foreign-licensed space station to provide service in the United States in cases where the licensing administration of

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international interference issues would have required the Commission to impose a solution. The Commission has consistently stated that if the parties cannot resolve their coordination differences among themselves, the Commission will dictate a solution. See, e.g., *Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service*, *Memorandum Opinion and Order*, 13 FCC Rcd 13863, 13867 (para. 8) (Int'l Bur. 1998); *PanAmSat, L.P., Application for Modification of Conditional Authority to Construct, Launch, and Operate a Hybrid Separate International Communications Satellite System*, *Memorandum Opinion, Order and Authorization*, 8 FCC Rcd 3905, 3907 (para. 12) (1993); *Assignment of Orbital Locations to Space Stations in the Domestic Fixed-Satellite Service*, *Memorandum Opinion and Order*, 5 FCC Rcd 179, 183 (para. 32) (1990). While these cases relate to interference to U.S. operations, our treaty obligations would require us to follow the same policy with respect to interference caused by U.S.-licensed satellites operating globally.

⁹⁰ The Commission acknowledged in 1997 that Big LEO service was delayed due to international coordination conflicts among the licensees and was initiated only after the licensees decided the best way to resolve these conflicts was to operate globally in a manner consistent with the Big LEO band plan. See *Ka-band Report and Order*, 12 FCC Rcd at 22237 (para. 67). Indeed, the same interference concerns led the Commission to explicitly require technically incompatible NGSO and GSO Ka-band fixed-satellite service space station licensees to adhere to their authorized operating bands globally. The Commission stated that requiring the Ka-band licensees to operate compatibly with the band plan on a worldwide basis would be the best way to ensure that interference conflicts did not arise and that this new service was promptly initiated. *Ka-band Report and Order*, 12 FCC Rcd at 22337 (paras. 67-68).

⁹¹ Globalstar Protest at 18; Globalstar Reply at 15.

⁹² Globalstar Response at 15.

that satellite had not authorized the space station to operate in the proposed frequency bands.⁹³ In making this claim, Globalstar concludes that the Commission is “not likely” to allow another country’s band plan to “trump” the U.S. band plan.⁹⁴ This conclusion is simply wrong. The Commission has never authorized a U.S. earth station to transmit to or receive signals from a foreign-licensed satellite on frequency bands that are not authorized for operation on that space station by the licensing jurisdiction. Nor does Globalstar provide an example of an occasion where this has occurred.

40. For these reasons, we conclude that it is in the public interest to require Globalstar to continue to operate both in the United States and throughout the world pursuant to the grant of operating authority contained in its license, as modified in this Order.

b. Waiver or Modification Procedures for Limited Relief

41. In determining to apply the terms of Globalstar’s modified license globally, we recognize that Globalstar has built and marketed, and is operating its system, on frequency bands contained in its 1995 license. Thus, requiring Globalstar to terminate transmissions in certain parts of the world on frequencies in which it has existing operating agreements may impose undue costs on both Globalstar and the countries accessing the Globalstar space stations. Consequently, as noted in the *Order Proposing Modifications*, for these instances, we will entertain a waiver or modification of the limitation of space station frequencies below 1618.725 MHz.

B. Iridium Big LEO License

42. As noted, the *Order Proposing Modifications* proposed to modify Iridium’s space station license to effectuate the reassignment decisions made in the *2007 Big LEO Spectrum Sharing Second Order*.⁹⁵ No party protested the modification of Iridium’s license proposed by the Commission. Consequently, we hereby modify Iridium’s space station and earth station licenses as contemplated in the *Order Proposing Modifications*.

IV. CONCLUSION

43. We have considered the record in this proceeding, Commission precedents, our statutory authority, and our international treaty obligations. We conclude that it is in the public interest, convenience, and necessity to modify Globalstar’s and Iridium’s licenses in the manner proposed in the *Order Proposing Modifications*.

V. ORDERING CLAUSES

44. Accordingly, IT IS ORDERED, pursuant to Section 316 of the Communications Act, 47 U.S.C. § 316, that the space station license held by Globalstar Licensee LLC (Call Sign S2115), and the associated blanket mobile earth terminal license of GUSA Licensee LLC (Call Sign E970381), ARE MODIFIED. Globalstar’s Big LEO MSS satellites and mobile earth station terminals are AUTHORIZED to operate in the 1610-1617.775 MHz frequency band on an exclusive basis, to operate in the Earth-to-space direction in the 1617.775-1618.725 MHz band, on a shared basis with the Iridium Big LEO system, and to operate in the space-to-Earth direction in the 1617.775-1618.725 MHz band on a shared basis with the Iridium Big LEO system.

⁹³ Globalstar Protest at 18.

⁹⁴ *Id.*

⁹⁵ *Order Proposing Modifications*, 23 FCC Rcd 7984.

45. IT IS FURTHER ORDERED, that Globalstar's operations in the Earth-to-space direction in the 1617.775-1618.725 MHz band are on a co-primary basis with other radiofrequency communications services allocated for that band on a primary basis, and Globalstar's operations in the space-to-Earth direction in the 1617.775-1618.725 MHz band are on a secondary basis to other radiofrequency communications services allocated for that band on a primary basis.

46. IT IS FURTHER ORDERED, that the space station license held by Iridium Constellation LLC (Call Sign S2110), and the associated blanket mobile earth terminal licenses held by Iridium Carrier Services LLC (Call Sign E960622) and Iridium Satellite LLC (Call Sign E960132), ARE MODIFIED. Iridium Big LEO MSS satellites and mobile earth station terminals are AUTHORIZED to operate in the 1618.725-1626.5 MHz band on an exclusive basis, to operate in the Earth-to-space direction in the 1617.775-1618.725 MHz band, on a shared basis with the Globalstar Big LEO system, and to operate in the space-to-Earth direction in the 1617.775-1618.725 MHz band on shared basis with the Globalstar Big LEO system.

47. IT IS FURTHER ORDERED, that Iridium's operations in the Earth-to-space direction in the 1617.775-1618.725 MHz band are on a co-primary basis with other radiofrequency communications services allocated for that band on a primary basis, and Iridium's operations in the space-to-Earth direction in the 1617.775-1618.725 MHz band are secondary to other radiofrequency communications services allocated for that band on a primary basis.

48. IT IS FURTHER ORDERED that these modifications to the licenses of Globalstar Licensee LLC, GUSA Licensee LLC, Iridium Constellation LLC, Iridium Carrier Services LLC, and Iridium Satellite LLC are effective 60 days after the release of this *Order of Modifications*.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary