

Before the **DOCKET FILE COPY ORIGINAL**  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

In the Matter of )  
 )  
Request by Globalstar, Inc. To Expand ) RM - 11339  
Its Ancillary Terrestrial Component ("ATC") )  
Authority To Encompass Its Full Assigned )  
Spectrum )

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Federal Communications Commission  
Office of Secretary

**REPLY OF GLOBALSTAR, INC.**

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## SUMMARY

None of the commenters who oppose Globalstar's Petition provides any legitimate reason why the Commission should not begin the rulemaking proceeding that Globalstar has requested. In light of the vital need for the advanced services that Globalstar's MSS/ATC network will make available to public safety and other customers, the Commission should go forward to decide whether the public interest would be served by expanding Globalstar's ATC authorization to include additional portions of its assigned MSS spectrum.

No commenter has refuted the compelling need that Globalstar has shown for additional flexibility in its use of its MSS spectrum to provide ATC services. Since the hurricanes that struck the Gulf Coast states last summer, Congress, the Commission, the press, and the public have come to recognize the immense value that satellite services can play in meeting the daily and emergency needs of first responders and other public safety officials. As a result, in order to respond to the increased demands for satellite services, Globalstar must do all that it can to use its assigned spectrum efficiently and intensively. As Globalstar moves to implement ATC services, it needs to know the frequencies on which it may offer ATC. And there is no reason why its efficient use of its spectrum should be hamstrung by an artificial and obsolete restriction on the use of all of its spectrum for ATC.

Since the Commission first adopted rules to authorize MSS providers to integrate ATC into their MSS systems, circumstances have changed that require the Commission to reexamine its decision to allow Globalstar to offer ATC services on only certain portions of its MSS allocation. In particular, the proceedings that were then pending and that the Commission sought not to prejudice have now been substantially concluded – making the time ripe to reexamine the scope of Globalstar's ATC authority. Also, a number of other MSS providers now have the

opportunity to use all of their spectrum for ATC – 20 MHz of spectrum for each of the 2 GHz licensees, and what appears to be 28-30 MHz for the L-band licensees, Inmarsat and MSV. In this competitive MSS marketplace, there is no justification for limiting Globalstar’s ATC authorization to only 11 MHz – less than half of its spectrum.

The BRS interests that seek to deny Globalstar the flexible use of all of its assigned spectrum ignore that the ATC rules and the conditions in Globalstar’s ATC authorization give them full protection against any harmful interference. They belabor the technical challenges associated with offering ATC and BRS in the same spectrum at the same time and place – which Globalstar does not dispute – and ignore Globalstar’s express statement in its Petition that ***“Globalstar will exercise its ATC authority, as it has operated its MSS services, in full compliance with any and all noninterference obligations that the Commission may impose on it.”*** The BRS interests put forward no reason why Globalstar should be forbidden to provide ATC services in the spectrum Globalstar shares with them in areas of the country in which they do not yet operate, or, once they have deployed service, with adequate geographic separation. Their plea that the spectrum be warehoused where they are not using it is flatly contrary to the Commission’s policies favoring efficient spectrum use and would deny vital services to the public safety community and other customers.

Iridium fails to justify its request that the Commission delay action on Globalstar’s Petition. Like the BRS interests, Iridium glosses over the critical point: Globalstar must and will prevent harmful interference from its ATC operations just as it does from its MSS services. Globalstar has identified the potential interference scenarios that could arise between Globalstar’s and Iridium’s operations and provided a technical analysis demonstrating how Iridium will be protected. In light of Globalstar’s acknowledgement that the Commission’s ATC

rules prohibit it from causing interference to other licensed operations in its spectrum, Globalstar's unblemished record of meeting that obligation in its MSS operations, and Iridium's failure to demonstrate that it is even using the spectrum it shares with Globalstar, the Commission should look skeptically on Iridium's filing as nothing more than an effort by one competitor to hobble the services of another.

In short, no commenter opposing Globalstar's Petition puts forth any justification for denying Globalstar's request that the Commission reexamine the scope of its ATC authority. As Qualcomm correctly recognizes, commencing such a proceeding would not prejudice any interested party and would serve the public interest because it would allow the Commission to develop a more extensive record on Globalstar's request. Accordingly, Globalstar submits that the Commission should promptly initiate a proceeding to authorize Globalstar to deploy ATC services in all of its spectrum.

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**REPLY OF GLOBALSTAR, INC.**

Pursuant to section 1.405(b) of the Commission’s rules, 47 C.F.R. § 1.405(b), Globalstar, Inc. (“Globalstar”) submits this reply to the comments filed in response to its Petition for Expedited Rulemaking<sup>1/</sup> asking that the Commission authorize Globalstar to use all of its Mobile Satellite Service (“MSS”) spectrum in its provision of ancillary terrestrial component (“ATC”) services.<sup>2/</sup> None of the commenters who oppose Globalstar’s petition provides any substantial

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<sup>1/</sup> See Globalstar Petition for Expedited Rulemaking for Authorization to Provide Ancillary Terrestrial Component Services in its Entire Spectrum Allocation (filed June 20, 2006) (“Globalstar Petition”). See also Consumer and Governmental Affairs Bureau Reference Information Center Petition for Rulemakings Filed, Public Notice, Report No. 2784 (rel. Jul. 27, 2006).

<sup>2/</sup> Ten parties filed comments on Globalstar’s Petition. See Comments of the Society of Broadcast Engineers, Inc. (filed August 28, 2006) (“SBE Comments”); The Wireless Communications Association International, Inc. – Opposition to Petition for Rulemaking (filed August 28, 2006) (“WCA Comments”); Comments of Qualcomm Incorporated in Support of Globalstar’s Petition for Expedited Rulemaking for Authorization to Provide Ancillary Terrestrial Component Services in its Entire Spectrum Allocation (filed August 28, 2006) (“Qualcomm Comments”); CTIA-The Wireless Association® – Opposition to Globalstar, Inc. Petition for Expedited Rulemaking (filed August 28, 2006) (“CTIA Comments”); Comments of Motorola (filed August 28, 2006) (“Motorola Comments”); Opposition of Sprint Nextel Corporation (filed August 28, 2006) (“Sprint Nextel Comments”); Comments of WiMAX Forum (filed August 28, 2006) (“WiMAX Forum Comments”); Letter from Jennifer A. Manner, Mobile

reason why the Commission should not proceed to issue a notice of proposed rulemaking to consider whether, given the vital need for the types of advanced services that Globalstar's MSS/ATC network will make available to public safety and other customers, the public interest would be served by expanding Globalstar's ATC authorization to include its full assigned MSS spectrum.

**I. GLOBALSTAR HAS SHOWN A NEED FOR ADDITIONAL FLEXIBILITY IN USING ITS MSS SPECTRUM TO PROVIDE ATC SERVICES.**

No one could have predicted the explosive demand for MSS services that has ensued since the Commission first authorized MSS operators to use their spectrum for ATC in January 2003. Since the hurricanes that struck the Gulf Coast states last summer, Congress, the Commission, the press, and the public have awakened to the immense value of satellite services in meeting the daily and emergency needs of first responders and other public safety officials.<sup>3/</sup> As the Commission's Independent Panel Reviewing the Impact of Hurricane Katrina concluded in its Report:

Satellite networks appeared to be the communications service least disrupted by Hurricane Katrina. As these networks do not heavily depend upon terrestrial-based infrastructure, they are typically not affected by wind, rain, flooding or power outages. As a result, both fixed and mobile satellite systems provided a functional, alternative communications path for those in the storm-ravaged region. Mobile satellite operators

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Satellite Ventures L.P., to Marlene H. Dortch, Secretary, FCC (filed August 28, 2006) ("MSV Comments"); Comments of Iridium Satellite LLC (filed August 28, 2006) ("Iridium Comments"); Letter from U.S. Representative Michael M. Honda to Marlene H. Dortch, Secretary, FCC (filed August 8, 2006) ("Honda Comments"). Because the Honda Comments have not yet appeared in the Commission's ECFS database, Globalstar is attaching a copy of them to its Reply.

<sup>3/</sup> See, e.g., Honda Comments at 1 ("Were it not for the ability of Globalstar and other satellite providers to provide uninterrupted service following those storms – when land-based communications networks were rendered largely inoperable – many first responders would have been left with no means of communicating among themselves and with the rest of the country.").

reported large increases in satellite traffic without any particular network/infrastructure issues.<sup>4/</sup>

Federal, state, and local public safety entities now look more than ever before to satellite providers, such as Globalstar, to provide them with state-of-the-art communications services in advance of the next emergency.

To respond to these increased demands for satellite services, Globalstar must do all that it can to use its assigned spectrum efficiently and intensively. From June 2005 to June 2006, Globalstar's total subscribers grew from 158,000 to 236,500 — an increase of 50 percent.<sup>5/</sup> Globalstar today serves a long and growing list of Federal, state, and local government agencies that have chosen to rely on its services to meet their emergency communications needs. As the Department of Defense recently acknowledged in amending its procurement policies to facilitate the purchase of Globalstar phones, "recent developments related to disaster relief in the United States indicate a need to broaden the available base of MSS for unclassified operations."<sup>6/</sup> No commenter has questioned this explosive demand for Globalstar's services or the undeniable fact

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<sup>4/</sup> Report and Recommendations to the Federal Communications Commission of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks, Issued June 12, 2006, at 10-11, *available at* <http://www.fcc.gov/eb/hkip/karrp.pdf> (citations omitted).

<sup>5/</sup> Globalstar, Inc., Registration Statement (Securities and Exchange Commission Form S-1 ("Globalstar S-1")) at 39.

<sup>6/</sup> See Amendment to the Department of Defense (DoD) Policy on Procurement of Mobile Satellite Services (MSS), Assistant Secretary of Defense-Networks and Information Integration (May 9, 2006). See also Globalstar Press Release, *Globalstar Applauds Updated DoD Policy Regarding the Procurement of Satellite Handsets*, May 18, 2006, *available at* [http://www.globalstar.com/en/news/pressreleases/press\\_display.php?pressId=407](http://www.globalstar.com/en/news/pressreleases/press_display.php?pressId=407).

that MSS offers reliability and redundancy during times of emergency that terrestrial wireless and wireline networks cannot.<sup>7/</sup>

ATC will help Globalstar to meet this need by making its services more widely available, more versatile, and less subject to blocking indoors or in urban settings. Since the Commission granted Globalstar's application to integrate ATC into its MSS system in January 2006,<sup>8/</sup> Globalstar has taken concrete steps toward deploying ATC services. Besides conducting engineering tests and customer surveys on potential ATC technologies and services, Globalstar is architecting its next-generation satellites to best manage mutual interference between the MSS and ATC components. In parallel with these engineering analyses, Globalstar is in active discussions with potential business partners looking toward ATC deployment and the introduction of new services that will fully use the ATC capability to benefit as many users as possible. Globalstar is in discussions with its principal handset developer to determine cost and schedule for an MSS/ATC phone. These initiatives will position Globalstar to be the first to bring to the marketplace all of the benefits that the Commission envisioned when it first authorized ATC services, to the benefit of its public safety and other customers.

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<sup>7/</sup> WCA wrongly posits an inconsistency between Globalstar's request for broader ATC authority and its statement in an SEC filing that its "network and spectrum are sufficient to meet the demanding requirements of the current and next generation of wireless services." See WCA Comments at 3 (citing Globalstar, S-1). As Globalstar has said in that filing and in this proceeding, its network is unique among existing MSS networks in being able to incorporate an ATC capability. And the issue in this proceeding is not the adequacy of Globalstar's spectrum assignment but only whether the Commission should abolish the current artificial restriction on Globalstar's flexible use of all of that spectrum for ATC. Indeed, in the same S-1, Globalstar stated that it has "filed for ATC authorization for the balance of [its] spectrum." See Globalstar S-1, at 76.

<sup>8/</sup> See Order and Authorization, *Globalstar LLC, Request for Authority to Implement an Ancillary Terrestrial Component for the Globalstar Big LEO Mobile Satellite Service (MSS) System*, 21 FCC Red 398 (2006) ("*Globalstar ATC Authorization*").

These initiatives are clouded by uncertainty about the specific frequencies on which Globalstar may offer ATC as well as how much contiguous bandwidth will be available. It has become clear that fully exploiting ATC's potential requires that Globalstar be able to make the most efficient and effective use its spectrum – including being able to manage the use of its spectrum flexibly between the MSS and ATC components of its services – without being hamstrung by an artificial regulatory restriction that no longer serves any purpose.

WCA notes that Globalstar provided its valuable services during last summer's hurricanes “without the assistance of ATC,” and infers that this shows ATC is unnecessary.<sup>9/</sup> Of course, Globalstar did without ATC last year, because it hadn't yet obtained ATC authority. The Commission has found in its extensive ATC rulemaking that ATC can make MSS services even more valuable.<sup>10/</sup> Among ATC's many benefits is its ability to overcome the difficulty a satellite handset has in communicating with a satellite that is not within the line of sight. As the Senate Committee on Homeland Security and Government Affairs found, this difficulty was an

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<sup>9/</sup> See WCA Comments at 5-6 (emphasis deleted).

<sup>10/</sup> As the Commission stated:

ATC-enabled MSS systems may provide additional communications options and, therefore, offer our nation greater protection in times of crisis or disaster than traditional MSS systems alone. By offering ubiquitous coverage with instant, nationwide interoperability, ATC-enhanced MSS may make the public, law enforcement and public-safety organizations easier to reach in the field, regardless of location. Accordingly, MSS ATC may enhance the nation's overall ability to maintain critical telecommunications infrastructure in times of crisis or disaster.”)

See Report and Order and Notice of Proposed Rulemaking, *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*, 18 FCC Red 1962, 1978 ¶ 29 (2003) (“ATC Report and Order”).

impediment to the full utilization of satellite phones by first responders in the hurricane zone.<sup>11/</sup>

WCA's suggestion that, because Globalstar's services have already been useful in natural disasters, Globalstar should not be permitted to make them even more useful, offers little comfort to those on the front lines who need the best services they can get.

## **II. CIRCUMSTANCES HAVE CHANGED SINCE THE COMMISSION'S INITIAL DECISION TO LIMIT THE AMOUNT OF SPECTRUM GLOBALSTAR MAY USE TO PROVIDE ATC SERVICES.**

The explosion of demand for MSS services is not the only major change since the Commission first adopted its ATC rules. As Globalstar discussed in its Petition, regulatory developments since that time have destroyed the rationale for initially limiting to 11 MHz the amount of spectrum on which Globalstar may provide ATC. In authorizing Big LEO MSS licensees to provide ATC, the Commission took the conservative approach that it did solely "[t]o avoid any possible prejudice to the outcome of allocation and assignment decisions under consideration in the Notice of Proposed Rulemaking adopted [in conjunction with the ATC Order]."<sup>12/</sup> Those proceedings have now been substantially concluded, the allocation decisions

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<sup>11/</sup> See "Hurricane Katrina: A Nation Still Unprepared," Report of the Committee on Homeland Security and Governmental Affairs, United States Senate, Washington, DC, at Chap. 18-9 (May 2006) available at [http://hsgac.senate.gov/\\_files/Katrina/FullReport.pdf](http://hsgac.senate.gov/_files/Katrina/FullReport.pdf). ("The problems with satellite phones [used in the aftermath of the storm] do not appear to have been caused by the phones themselves or the satellite networks; rather, a combination of user error and buildings or other objects obstructing satellite signals are the more likely culprits.") (emphasis added). See also Honda Comments at 1 ("[O]nce fully deployed, Globalstar's MSS/ATC network will make Globalstar's services even more valuable in future natural disasters and other emergencies, by providing a variety of enhanced services to customers in rural and remote areas, as well as truly ubiquitous service to customers in urban areas and inside buildings, where satellite signals often are blocked.").

<sup>12/</sup> See *ATC Report and Order* at 2011-12 ¶ 93.

have been made, and the time is ripe to reexamine the scope of Globalstar's ATC authority against the backdrop of those decisions.<sup>13/</sup>

WCA and others thus are wrong in portraying the Commission's decision to limit Globalstar's ATC deployment to 11 MHz as a permanent decision based on technical considerations.<sup>14/</sup> To the contrary, the *ATC Report and Order* expressly contemplated reevaluation in light of "the outcome of allocation and assignment decisions under consideration."<sup>15/</sup> For this very reason, as Qualcomm notes,<sup>16/</sup> in initially authorizing ATC operations in the S-band, the Commission expressly made the frequency designation provisional "in order not to prejudice possible future action by the Commission," and *required* that MSS base stations deployed in the S-band be tunable across the entire 2483.5-2500 MHz band.<sup>17/</sup> Indeed, when the Commission subsequently changed the frequencies on which ATC could be provided, the Commission bluntly *rejected* WCA's assertions about the technical limitations of ATC operations in the band, declaring that "the Commission did not base its conclusion on any technical limitations, but, rather, deferred a decision on ATC operations below 2492.5 MHz as

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<sup>13/</sup> Globalstar Petition at 15-16. *See also* Qualcomm Comments at 3 ("The Commission's justification for imposing this unique limitation on Globalstar was to avoid any possible prejudice to the outcome of allocation and assignment decisions under consideration in a Notice of Proposed Rulemaking adopted the same day as the Commission's Report and Order establishing ATC.").

<sup>14/</sup> WCA Comments at 9-10; Sprint Nextel Comments at 2-3; CTIA Comments at 5.

<sup>15/</sup> *ATC Report and Order* at 2011 ¶ 93. WCA also mischaracterizes the past when it suggests that Globalstar previously only wanted authority to provide ATC on 11 MHz of spectrum. *See* WCA Comments at 6. Because the existing rule (47 C.F.R. § 25.149) authorizes Big LEO MSS licensees to provide ATC services only in 11 MHz, Globalstar had no choice but to limit its initial ATC application to that spectrum.

<sup>16/</sup> *See* Qualcomm Comments at 3.

<sup>17/</sup> *See ATC Report and Order* at 2057 ¶ 193.

part of a notice and comment proceeding.”<sup>18/</sup> The Commission went on specifically to recognize that “moving ATC operations below 2490 MHz will not impact other in-band and [out-of-band] users . . . much differently than in its original 2492.5-2498 MHz band frequency assignment, since in either situation, ATC operators must protect incumbent operations that would be subject to harmful interference.”<sup>19/</sup>

In short, the Commission made clear that its initial designation of spectrum for ATC was provisional and subject to change in light of subsequent events. And it rejected arguments that a technical possibility of interference, without more, justified preclusion of ATC in a portion of the S-band, in light of the obligation of “ATC operators [to] protect incumbent operations that would be subject to harmful interference.”

Finally, as Globalstar discussed in its Petition, the structure of the MSS marketplace has changed significantly since the Commission first limited Globalstar’s ATC spectrum. In today’s marketplace, that limitation unjustifiably imposes disparate treatment on Globalstar as compared to its competitors. As contrasted to the 11 MHz that Globalstar is currently allowed to use for ATC, each of the L-band and 2 GHz MSS providers is permitted to use all of its spectrum allocation for ATC services – 20 MHz of spectrum for each of the 2 GHz licensees, and what appears to be 28-30 MHz for the L-band licensees, Inmarsat and MSV.<sup>20/</sup> The Commission recently has departed from its earlier policy of regarding different satellite bands as distinct

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<sup>18/</sup> See Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking, *Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Systems in the 1.6/2.4 GHz Bands*, 19 FCC Rcd 13356, 13390 ¶ 76 (2004) (“*Big LEO Spectrum Sharing Order*”).

<sup>19/</sup> *Id.*

<sup>20/</sup> See Globalstar Petition at 15.

markets for competitive purposes, instead declaring its intent to treat all MSS bands as a single market in measuring competition for MSS services.<sup>21/</sup> The Commission simultaneously recognized the importance of ensuring that MSS licensees have comparable spectrum assignments in order to compete effectively with each other.<sup>22/</sup> Limiting Globalstar to roughly half the ATC authority of other MSS providers simply cannot be squared with those policies.<sup>23/</sup> Accordingly, as Qualcomm observes, there is no longer any “basis for imposing a restriction of this kind on Globalstar, while the other MSS providers have no such restriction.”<sup>24/</sup>

**III. THE NONINTERFERENCE REQUIREMENT IN THE ATC RULES AND THE CONDITIONS IN GLOBALSTAR’S ATC AUTHORIZATION MAKE CLEAR THAT GLOBALSTAR’S EXPANDED ATC OPERATIONS WILL NOT HARM BRS INTERESTS.**

Globalstar stated in its Petition that, if granted the expanded ATC authority that it seeks, *“Globalstar will exercise its ATC authority, as it has operated its MSS services, in full compliance with any and all noninterference obligations that the Commission may impose on*

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<sup>21/</sup> See Order, *Use of Returned Spectrum in the 2 GHz Mobile Satellite Service Frequency Bands*, 20 FCC Rcd 19696, 19711-12, ¶¶ 32-33 (2005) (“2 GHz MSS offerings will compete in the same product market as the offerings of licensees in other MSS bands.”).

<sup>22/</sup> *Id.* at 19712 ¶¶ 37-38.

<sup>23/</sup> Even less can it be squared with the Commission’s reservation of between 40 and 50 MHz of ATC spectrum in total for MSV and TMI, entities that the Commission has found should be regarded as one for competitive purposes. See Globalstar Petition at 19-20. MSV takes issue with consideration of its and TMI’s ATC authorizations together for this purpose. See MSV Comments at 1. The Commission has found that MSV and TMI are a single competitive entity for these purposes. See, e.g., Order and Authorization, *Motient Services, Inc. and TMI Communications and Company, LP, Assignors, and Mobile Satellite Ventures Subsidiary LLC, Assignee*, 16 FCC Rcd 20469, 20471 ¶¶ 5-6 (2001).

<sup>24/</sup> See Qualcomm Comments at 4. WCA suggests that Globalstar has other competitive advantages that warrant denying it the same ATC flexibility that other MSS providers have. See WCA Comments at 4 n. 8. It would be an odd policy to impose regulatory handicaps on a company because it has made technological and business decisions that make it an efficient service provider.

*it.*<sup>25/</sup> Nevertheless, despite Globalstar's express acknowledgement of its obligation not to interfere with other licensed users in the spectrum in which it seeks to provide ATC services, CTIA, Sprint Nextel, Motorola, the WiMAX Forum, and WCA (together "BRS interests") all seek to deny Globalstar the flexibility to use its assigned spectrum in the 2496-2500 MHz band segment to provide ATC at any time or in any location.<sup>26/</sup> Their request for such an overbroad proscription should be heavily discounted, because they have flatly ignored Globalstar's full and candid acknowledgement of the technical challenges associated with offering ATC and BRS in the same spectrum at the same time and place, and its willingness to abide by all of the Commission's rules requiring that MSS ATC providers not interfere with other licensed services in this band segment.

Contrary to the impression created by the BRS interests, Globalstar has not asked the Commission to change any of the rules governing the sharing of Globalstar's assigned MSS spectrum. In particular, Globalstar has not sought permission to use this spectrum in any way that would interfere with BRS or other co-frequency or adjacent frequency operators. To the contrary: Globalstar has repeatedly committed to adhere to the existing requirements that it avoid all interference to, and fully coordinate its operations with, BRS and other co-channel

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<sup>25/</sup> Globalstar Petition at 17.

<sup>26/</sup> In addition to the BRS interests, SBE filed comments in which it again repeats its request that the Commission reform the grandfathered BAS channel A10 licensees to other spectrum before ATC operations may be deployed in the 2483.5-2500 MHz band. *See* SBE Comments at 3. The Commission has already denied the relief that SBE requests, and SBE's reconsideration petition is pending in a separate proceeding. *See* Order on Reconsideration and Fifth Memorandum Opinion and Order, *Review of the Spectrum Sharing Plan Among the Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands; Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems*, 21 FCC Rcd 5606 (2006) ("April 2006 Sharing Order"); Opposition of Globalstar to Petitions for Reconsideration, filed in WT Docket 03-66, RM-10586, IB Docket No. 02-364 (filed Aug. 18, 2006).

licensed operations, such as BAS, as well as adjacent-channel users, such as radionavigation systems.<sup>27/</sup> Indeed, even SBE acknowledges that it would not oppose Globalstar's provision of ATC services in the 2483.5-2500 MHz band if "practical, realistic" coordination measures could be established to ensure that Globalstar's ATC base stations not interfere with grandfathered channel A10 BAS operations.<sup>28/</sup> In light of Globalstar's commitments in its Petition and the protections afforded by the Commission's rules to other licensed providers operating in Globalstar's assigned spectrum, Globalstar's ATC operations in the 2496-2500 MHz band will not harm the BRS interests, just as its MSS operations will not.<sup>29/</sup>

Despite the clarity of the relief that Globalstar requests, CTIA states that it "opposes the Globalstar Petition to underscore that two licensed services should not be allowed to provide mobile terrestrial services using the same spectrum."<sup>30/</sup> Similarly, Sprint Nextel contends that "two separately duplexed, co-channel terrestrial mobile systems cannot coexist in the space at the same time."<sup>31/</sup> However, CTIA's and Sprint Nextel's overly broad technical paradigm runs counter to the Commission's basic licensing regime for mobile terrestrial services, which relies

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<sup>27/</sup> The Commission's rules require ATC applicants to "avoid causing interference to other services sharing the use of the 2450-2500 MHz band through frequency coordination." 47 C.F.R. § 25.254(a)(3). They require MSS licensees to resolve any harmful interference caused by their ATC operations and establish a process for any party suffering from unresolved interference to seek relief from the Commission. *See* 47 C.F.R. § 25.255. Furthermore, footnote US391 to the Table of Allocations provides that MSS licensees in the 2495-2500 MHz band "shall not receive protection from non-Federal stations in the fixed and mobile except aeronautical services in that band." Globalstar has not proposed to change any of these requirements.

<sup>28/</sup> *See* SBE Comments at 6.

<sup>29/</sup> BRS channel 1 is licensed in the 2496-2500 MHz band, with 2495-2496 MHz acting as a guard band. Globalstar's MSS license encompasses the 2483.5-2500 MHz band.

<sup>30/</sup> CTIA Comments at 2.

<sup>31/</sup> Sprint Nextel Comments at 5.

on geographic separation to ensure that different licensees operating on the same frequencies do not interfere with each other. Presumably CTIA and Sprint Nextel mean that two terrestrial services cannot use the same spectrum *in the same geographic area* – a proposition that Globalstar does not contest.<sup>32/</sup> But that proposition does not justify denying Globalstar the flexibility to use this part of its spectrum for ATC at all, anywhere in the country. As Qualcomm points out, “that truism is no reason to deny Globalstar authority to use 2496-2500 MHz for ATC base station transmissions on a non-interfering basis, as Globalstar has proposed.”<sup>33/</sup>

While the BRS interests comment at length about the basic physical limitations of radio frequencies, in the end their arguments have little to do with the relief sought in Globalstar’s Petition. In fact, Sprint Nextel and Motorola ultimately both acknowledge that the “problems” they identify with Globalstar’s Petition are solvable: As Sprint Nextel states, “the only solution to co-channel interference is to increase the physical separation of the two systems so the co-channel operation no longer occurs.”<sup>34/</sup> Motorola provides a technical analysis to demonstrate that geographic separation between base stations would suffice to eliminate interference.<sup>35/</sup> It is elementary that there is no threat of interference if BRS and MSS/ATC operations do not occur in the same geographic area, just as there is none if they are in adjacent bands and do not exceed

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<sup>32/</sup> Tellingly, no commenter has pointed to any statement in Globalstar’s Petition that suggests that Globalstar will operate its ATC base stations in the same spectrum at the same time and in the same geographic location as a BRS operation.

<sup>33/</sup> Qualcomm Comments at 6.

<sup>34/</sup> Sprint Nextel Comments at 6.

<sup>35/</sup> Motorola Comments at Attachment A, page 3. As the attached Technical Appendix demonstrates, however, Motorola overestimates the necessary separation distance between Globalstar’s ATC operations and BRS licensees’ operations because as it fails to take into account appropriate terrestrial propagation loss models. See Technical Appendix – Reply of Globalstar, Inc. to Comments to Petition for Rulemaking (“Technical Appendix”) at 2.

reasonable out-of-band emission limits.<sup>36/</sup> Using these principles, Globalstar can avoid interference from its ATC operations just as it always has from its MSS operations.

Thus, no reason exists to deny Globalstar the flexibility to use its spectrum at 2496-2500 MHz for ATC where it can do so without causing interference. As Qualcomm notes, the Commission has recognized that it “may be as long as five years before BRS operations are relocated to [the 2496-2500 MHz] band.”<sup>37/</sup> As a result, “[b]efore the BRS operations move to 2496-2500 MHz, Globalstar should be able to deploy ATC services on the spectrum since there would not be any interference from doing so. Thereafter, as Globalstar recognizes, Globalstar cannot cause interference to the relocated BRS operations and, thus, Globalstar will have to give way in any geographic area in which BRS operations begin on 2496-2500 MHz.”<sup>38/</sup> This would enable Globalstar to operate mobile ATC base stations, for example, in the shared band to assist emergency response workers during future disasters.<sup>39/</sup> Even after BRS services begin to be deployed, Globalstar could continue to provide ATC services in parts of the country in which BRS licensees have yet to build out.

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<sup>36/</sup> The WiMAX Forum and SBE refer to a *draft* ITU proposal that would impose tighter PFD limits on MSS operations in the S-band. See WiMAX Comments at 3-4; SBE Comments at 4. Those proposed limits are not at issue in this proceeding, and they face vigorous opposition by Globalstar and others. Opposition of Globalstar to Petitions for Reconsideration at 10-14, filed in WT Docket 03-66, RM-10586, IB Docket No. 02-364 (filed Aug. 18, 2006). Moreover, as discussed in the attached Technical Appendix, the ITU-imposed PFD limits apply only to potential radiation emissions from MSS operations covering large geographic areas and are inappropriate in this context, where two very localized, terrestrial systems are at issue. See Technical Appendix at 2-3.

<sup>37/</sup> See *April 2006 Sharing Order* at 5623 ¶ 30; Qualcomm Comments at 4.

<sup>38/</sup> Qualcomm Comments at 6.

<sup>39/</sup> It is precisely this type of service which forms the basis of Representative Honda’s support for Globalstar’s petition. See Honda Comments.

The BRS interests' proposal that ATC operations be forbidden in the shared band even where interference will not occur is flatly contrary to the Commission's policy in favor of efficient spectrum use.<sup>40/</sup> The public interest would not be served by requiring this spectrum to lie fallow over the next several years, in light of the vital role that ATC services can play in meeting the needs of the public safety community in areas of the country in which BRS licensees have yet to deploy service. Sprint Nextel's suggestion that full-scale deployment of BRS services is right around the corner is belied by the very milestones to which Sprint Nextel points.<sup>41/</sup> Sprint and Nextel agreed as a condition of their merger to deploy service to 15 million people -- or roughly *five percent* of the US population -- by August 2009. They must serve by that date a third of the population in each of ten Basic Trading Areas (BTAs), or *two percent* of the 493 BTAs in the country.<sup>42/</sup> These "aggressive" milestones make clear how much room there will be for Globalstar to provide ATC services without causing interference to BRS for years in many, if not most parts of the country.

Allowing Globalstar to provide ATC in the shared band will not, as WCA and CTIA suggest, cast uncertainty on the BRS market.<sup>43/</sup> The rights of BRS licensees will be just as certain as they are today. Globalstar has made crystal clear that it seeks no change in the existing rules that require Globalstar to refrain from interfering with BRS. The Commission can and

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<sup>40/</sup> See *Globalstar ATC Authorization* at 398-99 ¶ 2; *ATC Report and Order* at 1965, 1973-90, 2064, ¶¶ 2, 20-45, and 210-11.

<sup>41/</sup> Sprint Nextel Comments at 2.

<sup>42/</sup> See Letter from Lawrence R. Krevor and Vonya B. McCann, Nextel Communications, Inc. and Sprint Corp., to Marlene H. Dortch, Secretary, FCC, filed Aug. 2, 2005 in WT Docket No. 05-63.

<sup>43/</sup> See WCA Comments at 11-13; CTIA Comments at 7.

should reaffirm that those rules remain in place, when it grants Globalstar the ATC flexibility it has requested.

#### **IV. IRIDIUM DOES NOT JUSTIFY ITS REQUEST TO DELAY ACTION ON GLOBALSTAR'S PETITION.**

Globalstar's Petition seeks ATC authority also in the 1615.5-1621.35 MHz portion of its assigned spectrum, some of which Globalstar now shares with Iridium. Iridium points to that sharing obligation and urges that the Commission delay instituting the rulemaking proceeding that Globalstar requests. But nothing in Iridium's sparse submission justifies such a delay.

As an initial matter, like those of the BRS interests, Iridium's filing misses the point: Globalstar stated in its Petition that, "[s]hould the Commission authorize Globalstar to provide ATC services on its remaining spectrum, Globalstar acknowledges that it must protect other licensed users in that spectrum to the same extent as it is required to with respect to its MSS services."<sup>44/</sup> Accordingly, Iridium can have no legitimate interference concern about Globalstar's providing ATC services in the spectrum that they share. The Commission should look skeptically on a request by one competitor to hobble the services of another.<sup>45/</sup>

Iridium asks the Commission to dismiss Globalstar's Petition because Globalstar has failed to prove how any potential interference to Iridium's operations "will be prevented."<sup>46/</sup> But Iridium ignores what the Petition made plain. As noted, Globalstar reaffirmed in the Petition that

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<sup>44/</sup> See Globalstar Petition at 22.

<sup>45/</sup> See *ATC Report and Order* at 1998-99 ¶ 63 ("Iridium appears far less concerned with monopolization of the MSS bands than with advancing its position that, unless the Commission can find a way of allowing *Iridium* to exploit the operational efficiencies, enhancements and other advantages that MSS ATC may offer, the Commission must prevent all other MSS licensees from trying to improve the efficiency of their respective MSS systems through deploying ATC.").

<sup>46/</sup> See Iridium Comments at 1-2.

it will abide by its obligation not to interfere with Iridium's operations where they are coprimary.

Globalstar has an unblemished record of meeting that obligation in its MSS operations:

Globalstar has never interfered with any cofrequency or adjacent licensee. And the Petition

discusses the three specific *types* of interference that are possible and demonstrates how

Globalstar will avoid the only type that would harm Iridium.<sup>47/</sup> That demonstration is explained

in greater detail in the attached Technical Appendix.<sup>48/</sup> As Qualcomm notes, "[t]he sharing and

coordination [between Globalstar and Iridium] can and will occur to the same extent, *whether*

*Globalstar uses the spectrum for ATC or MSS.*"<sup>49/</sup> Globalstar has plainly met any burden it may

bear to justify initiation of a rulemaking.

It is ironic that Iridium seeks to require Globalstar to provide a more detailed technical showing in this context, since Iridium provided virtually no technical support for its request for access to portions of Globalstar's spectrum in 2004. As ICO noted at the time:

Iridium's woefully inadequate evidence utterly fails to demonstrate a need for additional spectrum.... Despite the Commission's explicit request in the *Big LEO Spectrum NPRM* for detailed comments and technical information, Iridium failed to offer any specific data regarding 1) the number of its current and future subscribers; 2) its total system capacity, used and unused; or 3) its customers' demand for spectrum in the United States versus other parts of the world. In lieu of offering critical data regarding its total number of subscribers and estimates of its projected subscriber levels, Iridium baldly stated that the number of its Department of Defense subscribers is "rapidly approaching ... 20,000" and provided limited data reflecting percentage increases in its subscriber levels. It also failed, as requested, to specify concrete measurements of traffic and unused capacity. Instead, Iridium presents the Commission with irrelevant data reflecting percentage increases in call minutes, peak utilization rates, and traffic usage confined to its Middle East operations during a brief two-month period.<sup>50/</sup>

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<sup>47/</sup> See Globalstar Petition at 17.

<sup>48/</sup> See Technical Appendix at 1-2.

<sup>49/</sup> See Qualcomm Comments at 5 (emphasis added).

<sup>50/</sup> Reply Comments of ICO Global Communications (Holdings) Limited in IB Docket No. 02-364 (filed July 25, 2003) at 10 (citations omitted).

To date and despite Globalstar's repeated requests, Iridium has failed to provide *any* data to substantiate (1) its use of the spectrum it was granted in 2004, or (2) its asserted need for the additional sharing rights it continues to seek in Globalstar's assigned spectrum.<sup>51/</sup>

Iridium still has never shown that it is using in the United States the shared spectrum about which it asserts hypothetical interference concerns. Despite Iridium's assertions in the *Big LEO Spectrum Sharing Proceeding* that it needed permanent access to Globalstar's spectrum, the Commission found in 2004 that Iridium's need for additional spectrum is "sporadic" and "geographically-based."<sup>52/</sup> True to form, Iridium this time submits only a conclusory sentence: "Despite Globalstar's assertions to the contrary, Iridium is actively using the 3.1 MHz of spectrum that it shares with Globalstar."<sup>53/</sup> That sentence does not even say that Iridium is using the spectrum in the United States — the only place relevant to Globalstar's Petition — let alone provide any substantiation for Iridium's claim.

In short, Iridium presents no reason why the Commission should not begin a rulemaking to consider broadening Globalstar's ATC authority to cover its full assigned spectrum, including the portion that Iridium shares. Unlike Iridium, Globalstar uses the shared band intensively and

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<sup>51/</sup> See, e.g., Letter from William T. Lake, Counsel to Globalstar, to Marlene H. Dortch, filed April 7, 2006 in IB Docket No. 02-364 at 1 ("Iridium's latest filing, like its previous ones, is empty of any technical showing that Iridium is using the spectrum the Commission required Globalstar to share with it in 2004 — let alone that it requires access to the additional spectrum it now seeks.").

<sup>52/</sup> See *Big LEO Spectrum Sharing Order* at 13377-78 ¶ 47.

<sup>53/</sup> Iridium Comments at 3 n.10. Globalstar has not merely "asserted" to the contrary; it has submitted technical showings that Iridium is not using the spectrum. See Letter from William T. Lake, Counsel to Globalstar, to Marlene H. Dortch, Secretary, FCC, filed Apr. 7, 2006, in IB Docket No. 02-364, discussed in Globalstar Petition at 22. Those showings remain unanswered by Iridium.

needs ATC authority there in order to fully achieve the benefits that ATC is intended to bring. As Globalstar noted in its Petition, if Iridium ever provides evidence that (1) it is using the shared band in the United States, and (2) Globalstar is causing interference to Iridium's uplink, then the Commission can take any warranted corrective action. Globalstar continues to believe that such an event is unlikely.

**V. THERE IS NO REASON TO DELAY INITIATION OF A RULEMAKING PROCEEDING.**

None of the commenters opposing Globalstar's Petition has provided any persuasive justification for denying this reexamination of Globalstar's ATC authority. Indeed, no commenters oppose expansion of Globalstar's ATC authority in at least 8.75 of Globalstar's assigned spectrum (the spectrum between 1615.5-1618.25 MHz, 2483.5-2487.5 MHz and 2493-2495 MHz). As Qualcomm correctly states, "[f]rom a procedural standpoint, commencing such a proceeding would not prejudice any interested party and would serve the public interest because it would allow the Commission to develop a more extensive record on this matter."<sup>54</sup> Accordingly, Globalstar submits that the Commission should promptly initiate a proceeding to authorize Globalstar to deploy ATC services in the remaining portions of its MSS spectrum assignment.

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<sup>54</sup> See Qualcomm Comments at 4.

## CONCLUSION

For these reasons and those in Globalstar's Petition, the Commission should expeditiously issue a notice of proposed rulemaking to examine whether to amend its rules to allow Globalstar, like all other MSS providers, to use its entire spectrum assignment flexibly in integrating ATC into its MSS services.

Respectfully Submitted,

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**Technical Appendix**  
**Reply of Globalstar, Inc. to Comments**  
**to Petition for Rulemaking**

L-Band Interference Issues

1. In its Petition for Rulemaking, Globalstar acknowledged the following three types of possible interference between Globalstar's proposed MSS/ATC operations and any hypothetical Iridium operations in the United States in the shared portion of the L-band: (1) Iridium's uplink into Globalstar's ATC base stations; (2) Iridium's downlink into Globalstar's ATC base stations; and (3) Globalstar ATC operations into Iridium's mobile satellite services (including both Iridium's uplink and downlink). Of these three scenarios, the first two involve possible interference by Iridium into Globalstar, which is not a concern to Iridium. Only the third one -- Globalstar ATC operations into Iridium satellites -- could be considered relevant as potentially causing interference into Iridium. Only Iridium's uplink needs to be considered, as Iridium's downlink has secondary status and must tolerate interference from cofrequency primary services in the United States.
  
2. An analysis of possible ATC interference into the Iridium uplink was provided in Globalstar's Petition, *see* Globalstar Petition at 22-24, but is expanded upon below. When Globalstar provides ATC services in any 1.23 MHz channel, those ATC services by necessity will proportionately reduce the number of MSS terminals that Globalstar uses in that channel, so that the net interference from Globalstar ATC terminals into a satellite is the same as in the absence of the ATC terminals. Therefore, the reason that Globalstar's ATC user terminals will not cause increased interference to Iridium's uplink is the same as the reason that Globalstar's ATC terminals can co-exist with Globalstar's MSS service in the same frequency band -- namely, that the number of ATC terminals assigned in any frequency band (taken to be a multiple of 1.23 MHz for convenience in this analysis) will be limited to that number which causes no more interference than would be caused by the number of MSS terminals effectively replaced by ATC terminals in that frequency band.
  
3. As discussed in Globalstar's 2002 filings in the Commission's ATC rulemaking proceeding (IB Docket No. 01-185), each MSS terminal causes the same interference to the satellite as approximately 490 ATC terminals. The number 490 was obtained by recognizing the reduced power of ATC terminals, their reduced directivity towards satellites, and their polarization isolation. Thus the question of coexistence of Globalstar's ATC terminals with Iridium's MSS uplink becomes the same as the question of coexistence of a smaller number (by a factor of 490) of Globalstar MSS terminals with Iridium's MSS uplink, which Iridium has repeatedly argued is feasible in its requests for shared access to Globalstar's spectrum. Thus, the same interference must be tolerated by the Iridium satellite uplink whether it is caused by Globalstar's MSS or ATC terminals.