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March 19, 2004

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FILED ELECTRONICALLY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: **Ex Parte Presentation**; 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

Dear Ms. Dortch:

Attached please find further information to clarify two issues that were raised during the presentation of Iridium Satellite, LLC ("Iridium") to the International Bureau on March 16, 2004.¹ First, in response to the Bureau's question about how Iridium's January 2003 predictions for spectrum usage in 2003 compare to its actual usage last year, Iridium submits the attached slide.² It demonstrates that Iridium's actual spectrum usage in 2003 was higher than Iridium had estimated.³

Second, in response to the Bureau's question regarding Iridium's methodology for calculating spectrum usage data, attached is a filing made by Iridium in the proceeding for its request for special temporary authority to operate in the 1620.10-1621.35 MHz band.⁴ In particular, footnote 16 describes this process: "The peak

¹ Notice of Ex Parte Presentation of Iridium Satellite, LLC, IB Docket No. 02-364 (filed Mar. 17, 2004).

² Attached as Exhibit 1.

³ Letter from Richard E. Wiley, Counsel to Iridium Satellite LLC, to Hon. Michael K. Powell, Chairman, FCC, IB Docket No. 01-185, Attachment at 5 (filed Jan. 13, 2003) (attaching "Iridium Satellite LLC Spectrum Report").

⁴ *Request for Special Temporary Authority for License Held by Iridium Constellation, LLC For a Mobile Satellite System in the 1.6 GHz Frequency Band, Opposition to Petition to Deny*, File No. SAT-STA-20031010-00313 (filed Dec. 2, 2003), attached as Exhibit 2.

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Erlang/MHz figures represent the total call minutes over the month adjusted for the average daily peak loading factor. As a result, those loading numbers were not one singular peak for the month, but represent the peak average throughout the month.”⁵

If you have any questions about this filing, please contact me at the number above.

Sincerely,



Peter D. Shields
Counsel to Iridium Satellite, LLC

cc: Richard Engelman
Steven Spaeth
Tom Tycz
Howard Griboff
Breck Blalock
Kimberly Cook
Jennifer Gorny
Paul Locke
Richard Tseng
William Bell

⁵ *Id.* at 6 n.16.

EXHIBIT 1



IRIDIUM

ONE SYSTEM, GLOBALLY.

Iridium Growth and Spectrum Utilization

- **January 2003 Projection:** Iridium notified the Commission that it had a near-term need for additional spectrum
 - Iridium filed a Spectrum Report (dated January 13, 2003) highlighting tremendous system usage growth from 2001 to 2002 and estimating system usage for 2003
- **2003 Results:**
 - Results below are 2003 usage compared with Jan 2003 estimates

| % Utilization (5.15 MHz) | 2001 | 2002 | 2003 | 2003 |
|--|------|---------|------------|---------|
| | | Actuals | Projected* | Actuals |
| Days Experiencing => 80% | 9 | 200 | 330 | 340 |
| * Projected in Spectrum Report Jan. 2003 | | | | |

- **2003: More than 170 Days** experienced greater than 50% loading in the Western U.S.
- **2003: Iridium realized 274 days** that experienced overloading of the 5.15 MHz spectrum

2003 Realized Actual Usage was Higher than estimated!

EXHIBIT 2

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Received

DEC 04 2003

Policy Branch
International Bureau

In the Matter of)
)
Request for Special Temporary)
Authority for License held by)
)
Iridium Constellation, LLC)
)
For a Mobile Satellite System in the)
1.6 GHz Frequency band)

File No.

SAT-STA-20031010-00313

Directed to: Chief, International Bureau

OPPOSITION TO PETITION TO DENY

Iridium Constellation, LLC ("Iridium"), licensee of the Iridium Mobile Satellite System, by its attorneys, hereby respectfully opposes the Petition to Deny of Globalstar, L.P. and Globalstar USA, L.L.C. (collectively "Globalstar") directed against Iridium's above-captioned October 10, 2003 request for special temporary authority ("STA") to continue to provide communications services in the 1620.10-1621.35 MHz band ("Channel 9").

I. INTRODUCTION

Iridium's above-captioned STA request was the latest in a series of requests occasioned by the impact of the unusually heavy use of the Iridium System by the U.S. and Coalition Forces in the Middle East Region, beginning in the spring of 2003 and projected to continue at least through May 12, 2004. Iridium has demonstrated over and over again, with hard data gathered from monitoring and tracking the Iridium satellites, that Iridium requires the additional spectrum to avoid the resumption of acquisition failures that arose just before Iridium first received temporary access to additional spectrum. Globalstar's Petition to Deny essentially repeats

arguments that the Commission has previously rejected in response to similar objections relating to Iridium's temporary emergency use of Channel 9 and that the Commission should reject again. Specifically, Globalstar repeats its contention that the Commission may not authorize the operation of Iridium's mobile satellite system outside the United States; and, although it still has not been able to demonstrate that it has been harmed in any way by Iridium's use of Channel 9, Globalstar again alleges that Iridium's STA may cause harmful interference to Globalstar's satellite operations. Iridium responds to Globalstar's objections below.

II. BACKGROUND

Since April 2003, the International Bureau has permitted Iridium to operate in the 1620.10-1621.35 MHz band to allow Iridium to meet important and critical communications needs of the U.S. and Coalition Forces in the Middle East region.¹ On October 10, 2003, Iridium filed a request for continued access to this spectrum for an additional 180 days—from November 15, 2003 through and including May 12, 2004.² On October 17, 2003, the FCC placed Iridium's

¹ See Iridium Request for Special Temporary Authority to Provide MSS in the 1616-1621.35 MHz frequency band, File No. SAT-STA-20030414-00066 (filed Apr. 11, 2003; grant dated April 11, 2003 and April 14, 2003). See, e.g., Iridium Request for Special Temporary Authority to Provide MSS in the 1618.85-1620.10 MHz Frequency Band, File No. SAT-STA-20030425-00074 (filed Apr. 25, 2003; granted Apr. 25, 2003); and SAT-STA-20030502-00077 (filed May 2, 2003; granted May 13, 2003); *Modification of Licenses held by Iridium Constellation, LLC and Iridium, US LP, For a Mobile Satellite System in the 1.6 GHz Frequency Band*, 18 FCC Rcd 11480 (Sat. Div., Int'l Bur. 2003) (Order); *Modification of Licenses held by Iridium Constellation, LLC and Iridium, US LP, For a Mobile Satellite System in the 1.6 GHz Frequency Band*, 18 FCC Rcd 11564, ¶ 8 (Sat. Div., Int'l Bur. 2003) (Order); *Modification of Licenses Held by Iridium Constellation, LLC and Iridium, US LP, For a Mobile Satellite System in the 1.6 GHz Frequency Band*, File Nos. SAT-MS-20030515-00089, SES-MS-20030515-00666, DA 03-2906 (Oct. 7, 2003) ("October 7, 2003 Order").

² *October 10 STA Request*, supra note 1. Iridium also filed a STA request on November 13, 2003 for the period from November 15, 2003 through and including the date on which the FCC takes action on Iridium's pending October 10, 2003 STA request. The Commission granted such authority through December 15, 2003. Iridium Request for Special Temporary Authority to Provide MSS in the 1620.10-1621.35 MHz Frequency Band, File No. SAT-STA-20031113-00327 (filed Nov. 13, 2003; granted Nov. 14, 2003).

request on public notice.³ On November 12, 2003, the Defense Information Systems Agency (“DISA”) filed a letter in support of Iridium’s continued use of Channel 9 through May 12, 2004. On November 17, 2003, Globalstar filed a Petition to Deny Iridium’s October 10, 2003 STA request. Herein, Iridium opposes that Petition to Deny.

III. IRIDIUM’S CONTINUED USE OF CHANNEL 9 WILL SERVE THE PUBLIC INTEREST

Iridium’s uninterrupted access to Channel 9 remains necessary to ensure that the continued needs of U.S. and Coalition Forces in the Middle East region are met without substantial degradation in service. DISA has once again indicated its support of Iridium’s continued access to Channel 9, stating that “current and projected requirements” and unsettled conditions in the region support an extension of the STA through May 12, 2004.⁴ In addition, DISA notified NTIA that there was an increase in usage of the Iridium system by the Department of Defense in its support of operations in Iraq over the first two weeks of November.⁵ Moreover, DISA advised the Commission that:

“Due to acts of sabotage and terrorism, commercial non-satellite communications in SWA have not stabilized sufficiently for DOD usage. There is a continued threat to our forces, as well as to DOD contractors installing fixed communications equipment, which has increased dramatically over the past few weeks. This hinders DOD’s ability to install and activate regional communication alternatives to Iridium.”⁶

³ Satellite Space Applications Accepted for Filing, *Public Notice* (Oct. 17, 2003).

⁴ See Letter from Carl Wayne Smith, General Counsel, DISA to Frederick R. Wentland, Office of Spectrum Management, NTIA (November 12, 2003) (*November 12, 2003 DISA Letter*).

⁵ “Through September and October of this year, Iridium users in SWA [Southwest Asia] put approximately 105,000 minutes per day through the Iridium System without difficulty, a rate that was not sustainable prior to the allocation of the additional 1.25 MHz. In the first week of November, we have noted an increase in usage above that rate.” *Id.* at 2.

⁶ *Id.*

Again, as it had on August 7, 2003,⁷ DISA advised NTIA that, based on its experience after the allocation of the additional spectrum, DOD concluded that “the STA for the Iridium system to use the additional 1.25 MHz continues to positively affect system performance.”⁸ DISA also informed NTIA that it will “advise your office immediately if the continued heavy usage of the Iridium system by US forces and other US entities subsides to a level that would permit relinquishing the additional 1.25 MHz without degrading service to our deployed forces.”⁹

Based on these statements, it is clear that granting Iridium continued access to Channel 9 will enable Coalition Forces to continue to have access to critical communications services. It is equally clear that limiting access to Channel 9 provides Iridium no more spectrum than absolutely necessary.¹⁰ Thus, grant of the requested STA is in the U.S. national interest and the public interest.¹¹

IV. CONTRARY TO GLOBALSTAR’S CLAIMS, IRIDIUM HAS DEMONSTRATED REPEATEDLY ITS NEED FOR ADDITIONAL SPECTRUM

In its *Petition to Deny*, Globalstar continues to deny the reality that the Iridium system requires additional spectrum in order to continue operating effectively. In doing so, Globalstar once again engages in its well-worn practice of mischaracterizing as incomplete and/or irrelevant

⁷ Letter from Carl Wayne Smith, General Counsel, DISA to Frederick R. Wentland, Office of Spectrum Management, NTIA (August 7, 2003) (*August 7, 2003 DISA Letter*).

⁸ *November 12, 2003 DISA Letter* at 2; *see also August 7, 2003 DISA Letter* at 2.

⁹ *Id.*

¹⁰ It should be noted that Channel 9, the one channel that Iridium seeks to use on a temporary basis, constitutes less than 5 percent of the total 27.85 MHz of Globalstar’s Big LEO spectrum assignment.

¹¹ Although this Globalstar Petition does not repeat Globalstar’s contention that it is “clear that the requirement for mission critical communications has ebbed,” (*see* Globalstar Letter to Thomas S. Tycz, dated May 13, 2003 at 2), Globalstar totally ignores the tremendous public interest benefits—indeed the critical national security benefits—that extension of the STA will provide by ensuring U.S. and Coalition Forces have continued access to vital communications services in the Middle East region.

Iridium's data and then statistically manipulating that same data to conceal the data's true message—in-region demand necessitates that Iridium retain access to additional spectrum.

In contrast to Globalstar's continued attempts at misdirection, Iridium consistently has provided data showing that additional spectrum is necessary to handle the elevated level of system traffic it has been experiencing in the Middle East region. Iridium has demonstrated that need most effectively by providing evidence of the dramatic reduction of acquisition failures after the incorporation of the additional spectrum under the STAs. Indeed, Iridium has continually recorded, and then provided to the Commission, evidence from its satellites showing that, with additional STA spectrum, Iridium has alleviated the capacity demands on its system and nearly eliminated the acquisition failures that peaked just prior to the incorporation of that additional STA spectrum.

As Iridium has noted previously, a significant increase in Middle East regional traffic density in March and April of 2003 eventually exhausted Iridium satellite capacity, resulting in hundreds of thousands of acquisition failures due to limited or no channel availability for extended periods of time.¹² However, as Iridium has demonstrated repeatedly, once Iridium's spectrum exhaustion was temporarily cured by the grant and incorporation of an additional 2.5 MHz of L-band spectrum pursuant to the April 11, 2003 and April 26, 2003 STAs, Iridium's acquisition failures dramatically declined.¹³ Specifically, Iridium's constant monitoring and

¹² See *Comments of Iridium Satellite, LLC*, IB Dkt. No. 02-364 (filed July 11, 2003) (*Big LEO Spectrum Rebalancing Comments*).

¹³ See *Request for Extension of Special Temporary Authority for Iridium Constellation LLC to Provide Mobile Satellite Service in the 1618.85-1621.35 MHz Frequency Band* (filed May 9, 2003) (*May 9 Iridium STA Extension Request*); *Iridium's Response to Globalstar's May 1, 2003 Letter* (filed May 8, 2003) (*Iridium Response*). See also *November 12, 2003 DISA Letter* at 2 (noting reduction in service interruptions experienced by DOD users after grant of STAs).

tracking of service interruptions reveals that Iridium's acquisition failure rate declined 95 percent from its April 11 rate.¹⁴

While Iridium's data clearly shows that acquisition failures declined significantly with the incorporation of the STA spectrum, Globalstar's *Petition to Deny* overlooks this fact and instead focuses on perceived inconsistencies in Iridium's system capacity numbers. In essence, Globalstar argues that despite the introduction of additional spectrum via the STAs, Iridium's capacity increased only slightly, if at all.¹⁵ As Figure 1 below demonstrates, the monthly traffic density per MHz reported from Iridium's satellites crested at just over 70 peak Erlangs per MHz in May 2003.¹⁶ However, Globalstar either overlooks or simply ignores the fact that the spreading of calls over an increased amount of spectrum has the effect of making the traffic density appear lower than it really is.¹⁷

Despite Globalstar's charges of spectral inefficiency on Iridium's part, Iridium's STA experiences have demonstrated Iridium to be an efficient and judicious user of the spectrum. Realizing that the traffic density had actually decreased in early June and that it could meet the needs of Coalition Forces in the Middle East region with just one additional channel, Iridium voluntarily discontinued using one of the two 1.25 MHz channels then authorized in its STA. As

¹⁴ *May 9 Iridium STA Extension Request* at 3; *Iridium Response* at 1.

¹⁵ *Petition to Deny* at 5, 11.

¹⁶ The peak Erlang/MHz figures represent the total call minutes over the month adjusted for the average daily peak loading factor. As a result, these loading numbers were not one singular peak for the month, but represent the peak average throughout the month.

¹⁷ Globalstar also alleges again that Iridium's continued use of Channel 9 spectrum on a temporary basis will cause harmful interference to Globalstar's operations. *Petition to Deny* at 8. However, to date, Globalstar has not shown that Iridium's use of Channel 9, as well as its previous use of Channel 8, has caused any harmful interference. Moreover, Globalstar itself conceded as much in a May 1, 2003 filing: "The good news for Globalstar is that we have not experienced harmful interference into our satellites." See Letter from William F. Adler, Globalstar L.P., to Thomas S. Tycz, Chief, Satellite Division, IB, FCC, Attachment 2, page 1 (May 1, 2003).

shown in both Figures 1 and 2 below, traffic density has remained relatively constant since that time. However, one channel still remains necessary to meet the level of demand that has remained almost constant over the last four and half months.

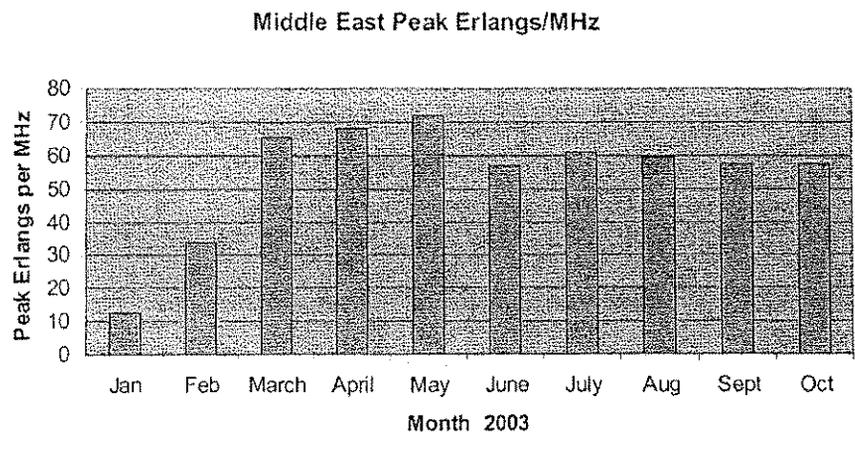


Figure 1

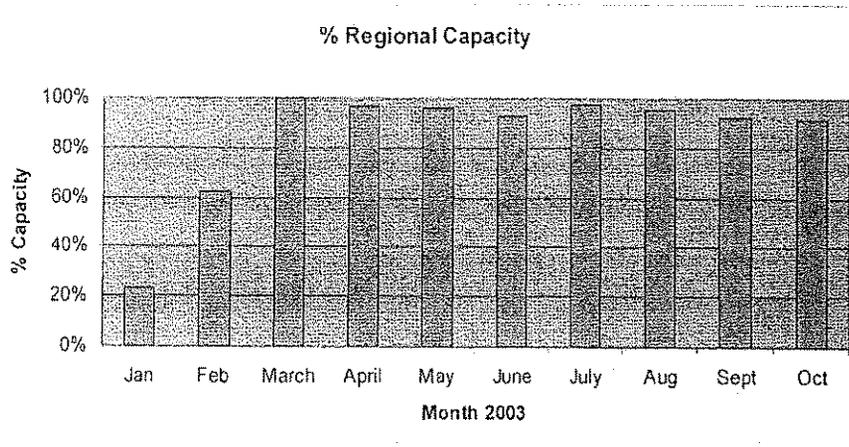


Figure 2

V. THE COMMISSION’S LEGAL AUTHORITY TO REGULATE IRIDIUM’S OPERATIONS IS WELL ESTABLISHED

In its *Petition to Deny*, Globalstar once again challenges the Commission’s legal authority to issue the STA.¹⁸ In doing so, Globalstar mischaracterizes the issue as “whether the Commission can extend its regulations into other administrations globally and authorize the terms and conditions under which Iridium can operate in foreign countries, even on a secondary basis.”¹⁹

The Commission is not “extend[ing] its regulations into other administrations globally” or supplanting authorities in other jurisdictions when it addresses the frequencies on which the space station segment may operate. As the Commission explained in its October 7, 2003 Order, a satellite system consists of a space station segment and an earth station segment.²⁰ As the licensing administration of the Iridium System and Globalstar System space station segments, the Commission has the authority to issue restrictions and conditions governing the operations of

¹⁸ *Petition to Deny* at 12-16.

¹⁹ *Id.* at 14.

²⁰ *See October 7, 2003 Order* at 5.

the satellite systems; and that authority is included in the Communications Act.²¹ Moreover, the U.S., as the licensing administration for the Iridium system, is responsible for the system's global operations in accordance with its treaty operations.²² Thus, as the licensing administration of the space segment, the Commission has ample authority to authorize the Iridium System to operate on a temporary basis on Channel 9. In no way, however, is the Commission "dictating" to other countries what types of services will be provided in those countries or on what frequencies the Iridium system will be authorized to operate within other countries' borders. The Commission's October 7, 2003 Order is certainly clear on that point.

VI. CONCLUSION

For the foregoing reasons, Iridium respectfully requests that Iridium's above-captioned October 10, 2003 request for special temporary authority to continue to provide communications services in the 1620.10-1621.35 MHz band be granted and that Globalstar's Petition to Deny Iridium's October 10, 2003 STA request be denied.

Respectfully submitted,

IRIDIUM CONSTELLATION, LLC

By:



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Its Attorneys

December 2, 2003

²¹ *Id.* at 6.

²² *Id.*

CERTIFICATE OF SERVICE

I, Joseph M. Ward, certify that on December 2, 2003, the foregoing was served on all parties listed below by email, as indicated by an asterisk, or by U.S. mail, first class, postage prepaid.


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