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November 1, 2005

VIA HAND DELIVERY AND ECFS

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

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Federal Communications Commission  
Office of Secretary

**Re: Iridium Satellite LLC, Special Temporary Authority, File Nos. SAT-STA-20050923-00180/00181**

**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:

Iridium Satellite LLC ("Iridium") hereby responds to the October 21, 2005 and October 28, 2005 letters filed by Globalstar LLC ("Globalstar") in connection with Globalstar's October 17, 2005 demand that the FCC terminate Iridium's special temporary authorization ("STA") for use of the 1616.0 - 1618.25 MHz spectrum to support the Katrina and Rita hurricane relief efforts (the "Termination Request"). As explained below, Iridium's recent filings demonstrate that the Termination Request lacks merit. Furthermore, the STA at issue will expire today, rendering the Request moot except to the extent that it shows that Iridium caused no harmful interference to Globalstar.

In its October 19, 2005 response to the Termination Request, Iridium expressed its concern and skepticism over Globalstar's accusation that Iridium was causing harmful interference. In particular, Iridium explained that the data provided by Globalstar was inconsistent in numerous ways with a showing of harmful interference. In its October 20, 2005 letter to Globalstar, the FCC asked for clarification from Globalstar in a series of fifteen questions that were consistent with Iridium's concerns.

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Globalstar's October 21 and 28 responses to these questions have validated Iridium's – and the Commission's – concerns. Globalstar's response shows that the alleged increase in interference began on August 29, 2005, before Iridium began operations under the STA. In fact, Globalstar's Radio Link Failure (“RLF”) value *tripled* in the days prior to the grant of the STA (which occurred in the late afternoon on September 2). The interference *decreased* after Iridium began operations.<sup>1</sup> Thus, Globalstar's own engineering data demonstrates that Iridium did not cause any harm to Globalstar's operations.

Globalstar's other responses also underscore the deficiencies in the Termination Request, as described below:

- It is now clear that the Termination Request can, at best, be relevant only to a portion of the spectrum granted by the STA. The spectrum granted by the STA covers the 1616.0 – 1618.25 MHz band, which corresponds to part of Globalstar's channel 5, all of Globalstar's channel 6 and part of Globalstar's channel 7. Globalstar has since acknowledged that the only one of these channels in use for the hurricane relief effort is in fact channel 7. Therefore the scope of this issue is entirely limited to alleged interference to part of Globalstar's channel 7.
- **Questions 1, 2, and 3 (Notification of “Interference”):** The FCC requested an explanation regarding the delay in timing of Globalstar's reporting of interference to the FCC and Iridium, as well as Globalstar's failure to attempt to coordinate with Iridium prior to October 17.

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<sup>1</sup> Globalstar responds to the FCC's request for further data on return link failure (RLF) rates by providing a graph (Figure 1 on page 4 of Globalstar's Oct. 28, 2005 letter) that shows daily RLF data for its affected channels, from Aug. 3 through Oct. 19, at the Clifton gateway. This data shows a sharp increase in RLF on channel 7 (the only channel in the graph that is affected by the STA) starting on Aug. 29. The RLF increases from a nominal value of about 7% to about 21-22% on Aug. 31. In fact, on Sept. 3 (the first full day of the STA), the RLF on Globalstar's channel 3, which is entirely outside the shared band, was nearly identical to that of channel 7; moreover, in the immediate days after the STA, there was a sharp *decrease* in channel 7's RLF. This can only mean that Globalstar's increased RLF problems were due to its own increased traffic loading, resulting in a high level of intra-system interference. Iridium notes that capacity in CDMA technology systems is limited by self-interference.

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Globalstar acknowledges that, although allegedly experiencing severe interference from Iridium since the inception of the STA at the beginning of September, it made no attempt to contact Iridium or the FCC until its October 17 letter. In discussing with Globalstar the need for coordination prior to the STA, Iridium was advised by Globalstar that it would be monitoring any possible harmful interference at the outset of the STA activation. Since it took Globalstar a month and a half to notice the alleged interference, Iridium doubts that the interference can be classified as "harmful."

Iridium would also like to clarify that as a practical matter, it will not be "suspending" its use of channels 7 and 8. This is because Iridium's STA expires as of today, November 1, 2005. Therefore, Iridium will end its current use of these channels under the STA.

- **Question 6 (System Performance at Other Gateways):** Globalstar states that its Sebring, FL gateway experienced some degradation on channel 9 during the observed period. Globalstar should provide system loading information for that gateway as well as others, to help demonstrate whether the problems experienced on the Clifton gateway are due to increased system loading.
- **Question 7 (Return Link Failure Data):** In response to Question 7, Globalstar also states that its channel 3 (which was turned on after grant of the STA and was therefore unaffected by the STA) demonstrates "consistent system behavior"<sup>2</sup> a few days after being turned on. This does not appear to be correct – the 'settled down' RLF for channel 3 (about 12-13%) is about twice the nominal value of 7% claimed by Globalstar. In other words, Globalstar's channel 3, which is not part of the STA spectrum sharing, is experiencing approximately twice the normal RLF, which again, can only be attributed to self-interference.
- **Questions 11 and 12 (Relationship between Frame Error Rate (FER) and RLF):** Although Globalstar did relate its increased Frame Error Rate (FER) to its increased RLF, there was no explanation or evidence provided

<sup>2</sup>

Globalstar Oct. 28, 2005 Letter at 3.

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of how Iridium interference affected FER. There is no mention of the direct impact that self-interference has on FER in CDMA systems.

- **Question 13 (Return Link Failure on Channel 3):** Globalstar also states that the initial, high RLF on channel 3 was due “almost entirely to the new users’ lack of familiarity with the Globalstar handsets.”<sup>3</sup> However, Globalstar provides no explanation of how it reached this conclusion, or any supporting data. It actually appears that the small decrease in RLF after the first few days of activating channel 3 was due to a decrease in traffic load, rather than Globalstar users becoming familiar with how to use the handsets.

Iridium fully intends to continue to work with Globalstar in good faith to resolve any coordination issues in the L-Band. However, because Globalstar inexplicably chose to wait a month after the alleged interference event to submit the Termination Request, the STA will expire today and the Termination Request will become moot. As Globalstar’s own data shows no correlation between the alleged interference and Iridium’s operations, any further investigation on the Commission’s part with respect to the Termination Request would clearly be a waste of valuable resources.

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<sup>3</sup>

*Id.* at 6.

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Please direct any questions regarding this matter to the undersigned.

Sincerely,

/s/ R. Michael Senkowski

R. Michael Senkowski  
*Counsel to Iridium Satellite LLC*

cc: Daniel Gonzalez  
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