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May 26, 2004

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

Re: ***Notice of 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:

On May 24, 2004, Tyrone Brown, Mark Adams, and Donna Bethea Murphy of Iridium Satellite, LLC ("Iridium") and Michael Senkowski, and I, as counsel for Iridium, met with Barry Ohlson, Senior Legal Advisor to Commissioner Adeltsein.

In the meeting, Iridium made a presentation that is summarized in the attached document. Copies of this document were also distributed at the meeting. In addition, during the course of the meeting, Iridium reviewed the points raised in its comments and reply comments filed with the Commission in the above-referenced proceeding on July 11, 2003 and July 25, 2003, respectively. In particular, Iridium discussed its increased demand for spectrum.

Pursuant to Section 1.1206(b)(2) of the Commission's rules, 47 C.F.R. §1.1206(b)(2) (*incorporating* 47 C.F.R. §1.49), a copy of this letter and the attached document are being filed electronically for inclusion in the above-noted docket. Please feel free to contact me if you have any questions regarding this matter.

Sincerely,

/s/ *Peter D. Shields*
Peter D. Shields
Counsel for Iridium Satellite, LLC

Attachment

IRIDIUM

ONE SYSTEM, GLOBALLY.

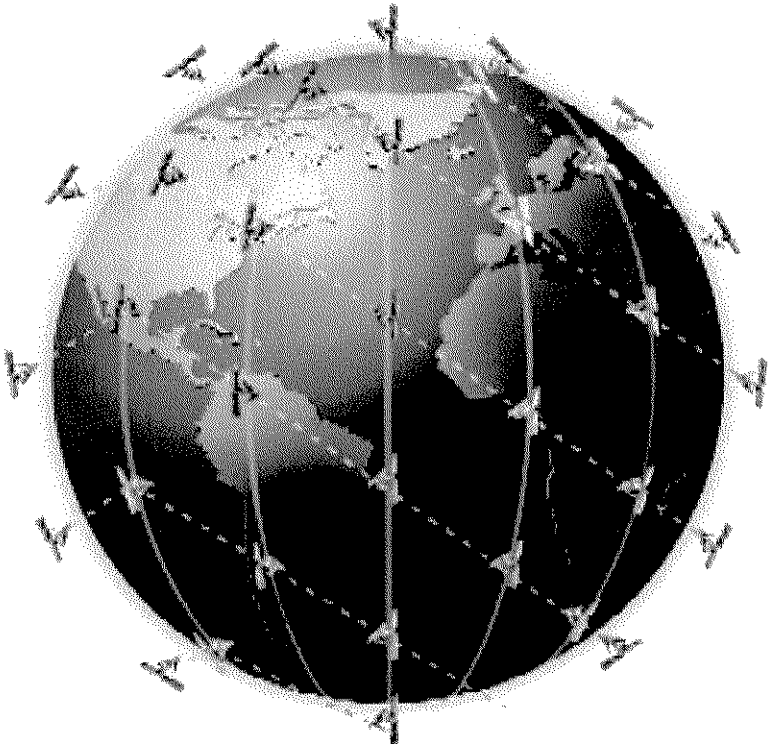
Big LEO Plan

May 2004

IRIDIUM
ONE SYSTEM, GLOBALLY.

Iridium Satellite LLC Overview

- Global Services
  - Voice
  - Data
  - Paging/Messaging
- Dramatic Growth Since Service Re-launch in March 2001
- Extensive Government Utilization
- Focused vertical market distribution strategy for voice and data services
  - Maritime
  - Oil and Gas
  - Rural Services
  - Emergency Services
  - Government



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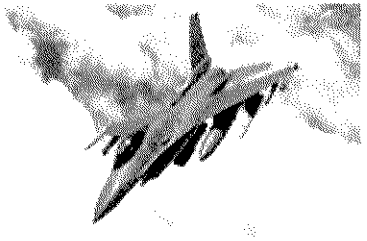
Iridium DOD Utilization

19 Fold Increase over past 24 Months

Reliability



- **Command and Control**
- **Targeting**
- **Tracking**

Mobility

- **Deployable-on-the-move**
- **Pole-to-pole coverage**
- **DOD Priority Access**

Provides secure on-the-move global voice/data for DOD's special requirements

Secure Communication

- **NSA Type-1 Security**
- **TS Accredited**

Operational Support

- **Operation Enduring Freedom**
- **Operation Iraqi Freedom**
- **Homeland Security/Terrorism**

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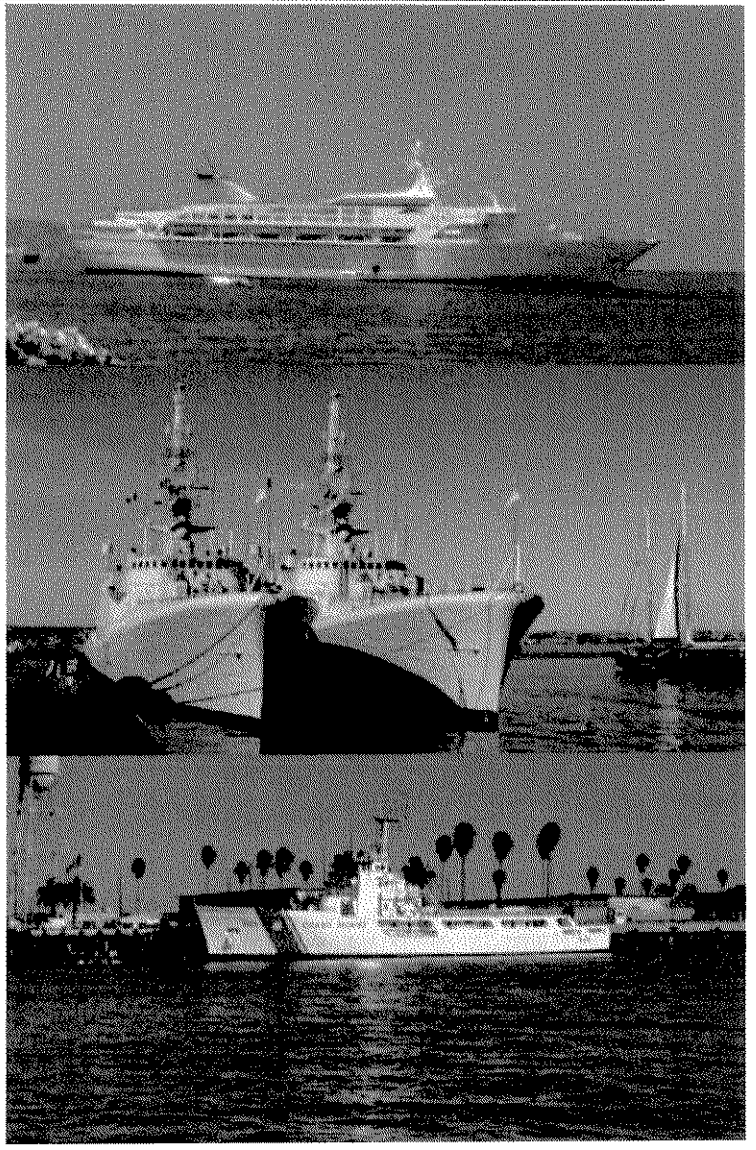
Rapid Maritime Penetration

Iridium's equipment is suitable for any sized vessel across a variety of markets

- **Explosive Growth Continued in 2003**
- **Cost-effective equipment is easy to install on small fishing trawlers and charter boats.**
- **Rugged gear appropriate for demanding situations encountered by cutters and workboats.**
- **Global Services**
- **A broad set of equipment and services are attractive to mariners worldwide:**
  - **Dial up and Direct Internet data**
  - **Embedded connectivity for vessel monitoring, ship alert and tracking**
  - **Two Way SMS**
  - **Crew calling**



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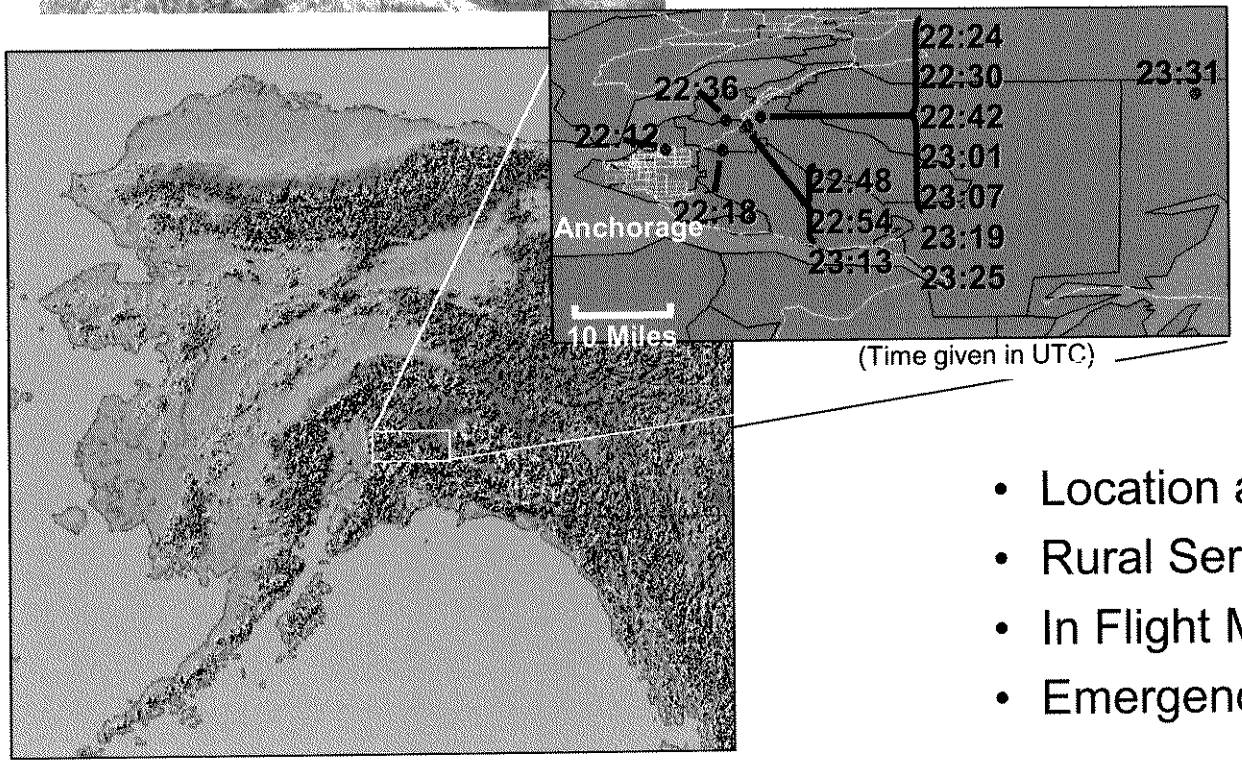
Aviation and Related Emergency Services

- Extensive Aviation Utilization
  - General Aviation
  - Private Aviation
- Global Voice and Data Connectivity



- Location and Tracking Services
- Rural Services
- In Flight Monitoring
- Emergency Services

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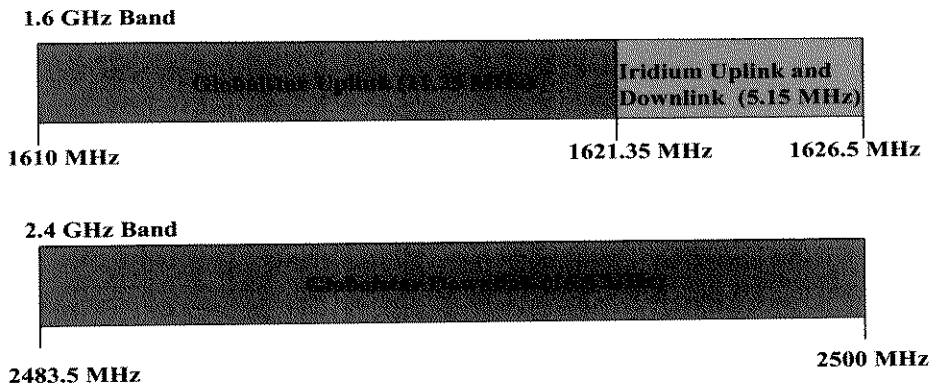
Iridium Spectrum Crisis

- **Insufficient spectrum is severely impacting Iridium's Service**
  - ***Failed Call Attempts***
  - ***Degraded Voice Quality***
  - ***Limited Enhanced Services***
    - ***Constrained Data Rates***
    - ***Service Extensions***

- **Iridium supported more than 1.5 times the minutes of use than Globalstar in the first half of 2003 with less than 1/5 of the spectrum**

Current Band Plan



The CDMA uplink and downlink spectrum was to be shared among Globalstar, Odyssey, Ellipso and Constellation; however only Globalstar remains

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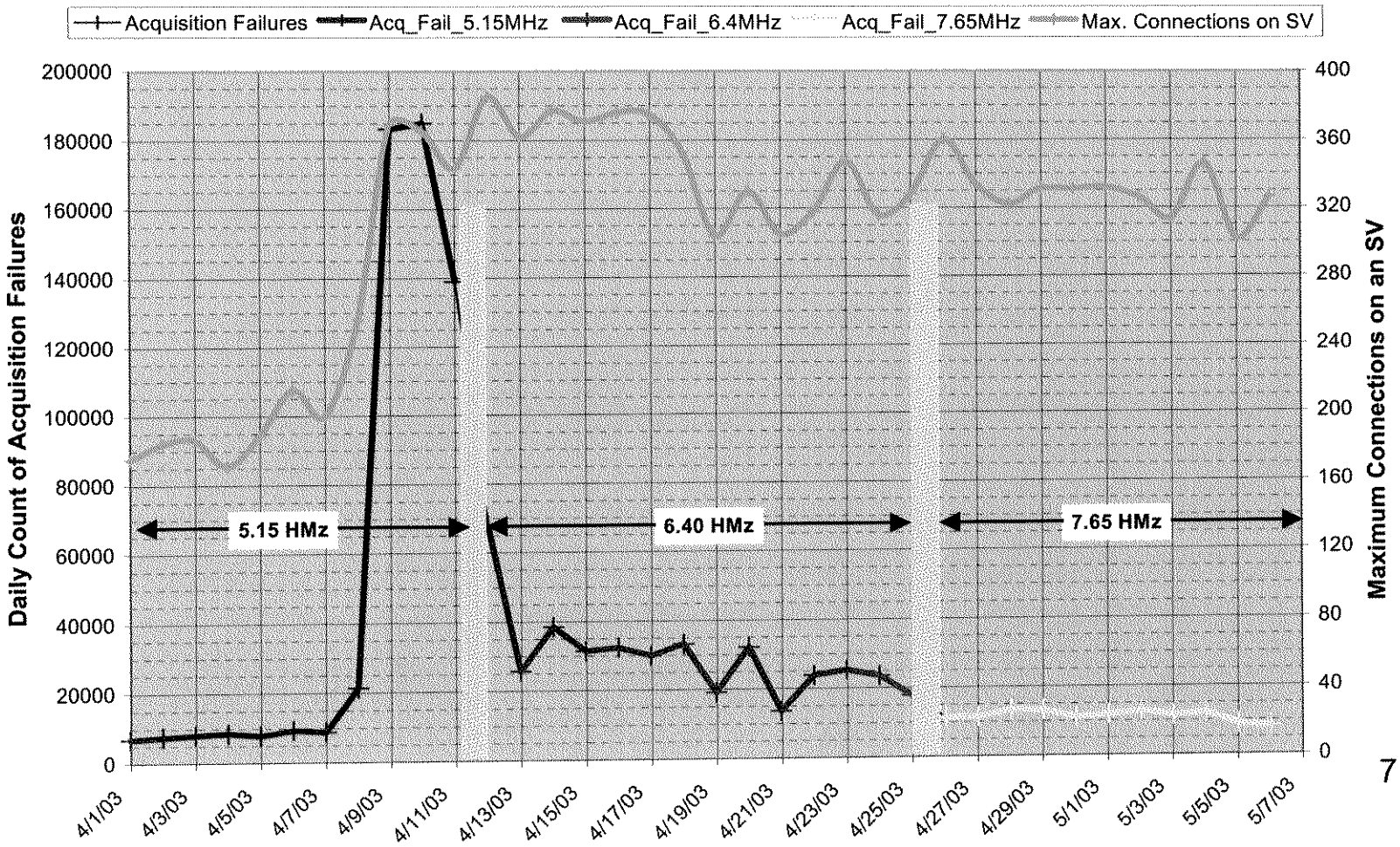
Spectrum Exhaustion Impact

– The graph below illustrates the Acquisition Attempt Failures per Day – Explicitly Due to "No L-Band Channel" --Lack of available spectrum.

System Acquisition Failures - No Channel Available April 1 - May 6 2003



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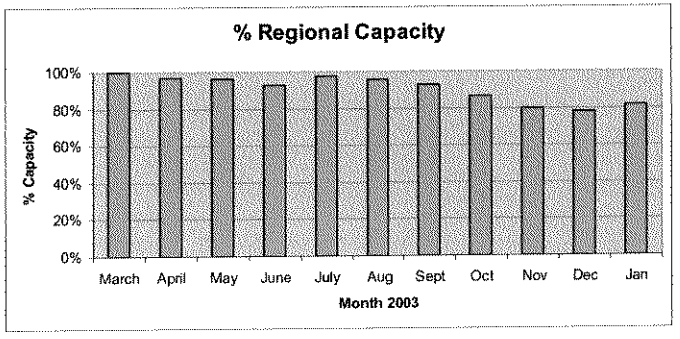
Iridium Growth and Spectrum Depletion

- **July 2002 and January 2003 – Iridium notified the commission that it had a near-term need for additional spectrum**
  - **Iridium Spectrum Report (Dated 13 January 2003) highlighted tremendous system usage growth from 2001 to 2002 and estimated system usage in 2003**
- **2003 Usage Results**
  - **Results below are 2003 usage compared with Jan 2003 estimates**

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

- **April 2003 – Spectrum Shortage Causes Capacity Crisis. Iridium Operates under STA to accommodate traffic.**
  - **2003: Iridium realized 274 days that experienced *overloading* of the 5.15 MHz spectrum**
  - **2003: Over 170 Days over 50% utilization in Western US**
  - **2003: Over 370% Minute Usage Growth**

- **Middle East Regional Capacity Utilization with 6.4 MHz (STA Spectrum)**



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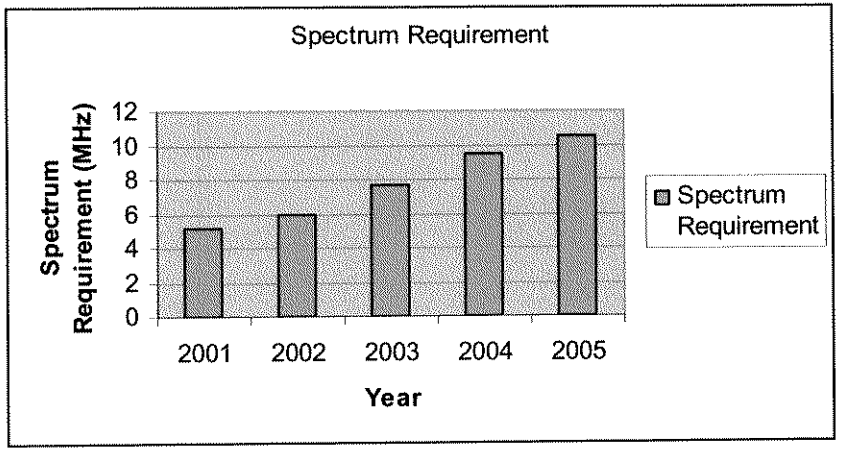
Iridium's Urgent Spectrum Requirement

- Dramatic Growth Necessitating Additional Spectrum
- Critical Services
  - Improved voice quality and higher data rate
  - High volume rural services
  - Emerging DOD Services (tactical radio and secure messaging)
  - Homeland Security Initiatives (Border security, first responders and coast guard)



- Iridium Urgently Requests 10.5 MHz Spectrum to meet these needs

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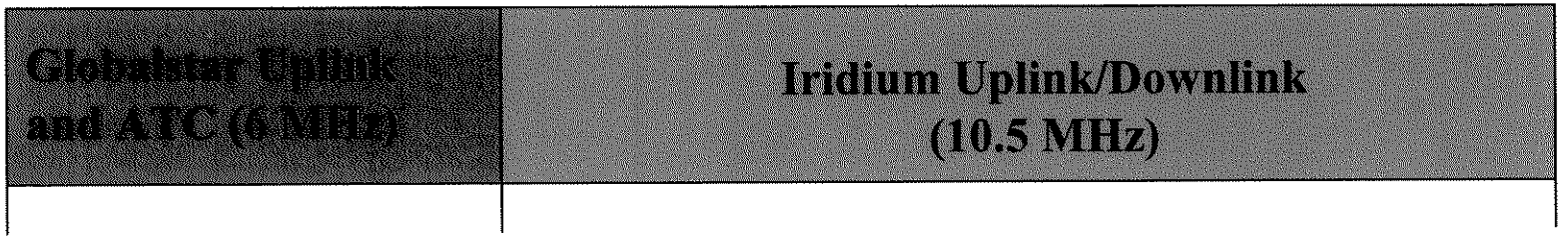
Iridium Proposed Big LEO Band Plan

1.6 GHz Band



1610 MHz 1616 MHz 1626.5 MHz

2.4 GHz Band

2483.5 MHz 2490 MHz 2500 MHz

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Balanced Plan Serves The Public Interest

- Achieves Competition
  - Equal division of spectrum
  - Allows Iridium to support full rate voice and data channels, which Globalstar has enjoyed from inception
- Provides Sufficient Spectrum for All
  - Meet current and growing demands
- Allows both systems to innovate and introduce new services
- Improves Big-LEO Spectrum Efficiency
  - Eliminates wasted spectrum
- Achieves FCC's Original Intent