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October 31, 2006

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

Re: *Ex Parte* Notice in IB Docket Nos. 02-364 and 03-66 and RM 10586

Dear Ms. Dortch:

On October 31, 2006, William Adler, Vice President – Regulatory Affairs of Globalstar, Inc. ("Globalstar"), David Weinreich, Globalstar's Manager – Spectrum and Regulatory Engineering, and Josh Roland, counsel to Globalstar, met with Howard Griboff, John Martin, Lisa Cacciatore and Paul Locke (via telephone) of the Commission's International Bureau, Jamison Prime, Patrick Forster, and Nicholas Oros of the Commission's Office of Engineering and Technology, and John Schauble and Nancy Zaczek of the Commission's Wireless Telecommunications Bureau. The purpose of the meeting was to discuss Globalstar's opposition to certain Petitions for Reconsideration filed in the above-referenced proceedings. A copy of the materials distributed during the meeting is attached to this letter.

Pursuant to Sections 1.49(f) and 1.1206(b) of the Commission's rules, a copy of this letter has been filed electronically.

Respectfully submitted,

Josh L. Roland
Counsel to Globalstar Inc.

cc: Howard Griboff (via email)
John Martin (via email)
Lisa Cacciatore (via email)
Paul Locke (via email)
Jamison Prime (via email)
Patrick Forster (via email)

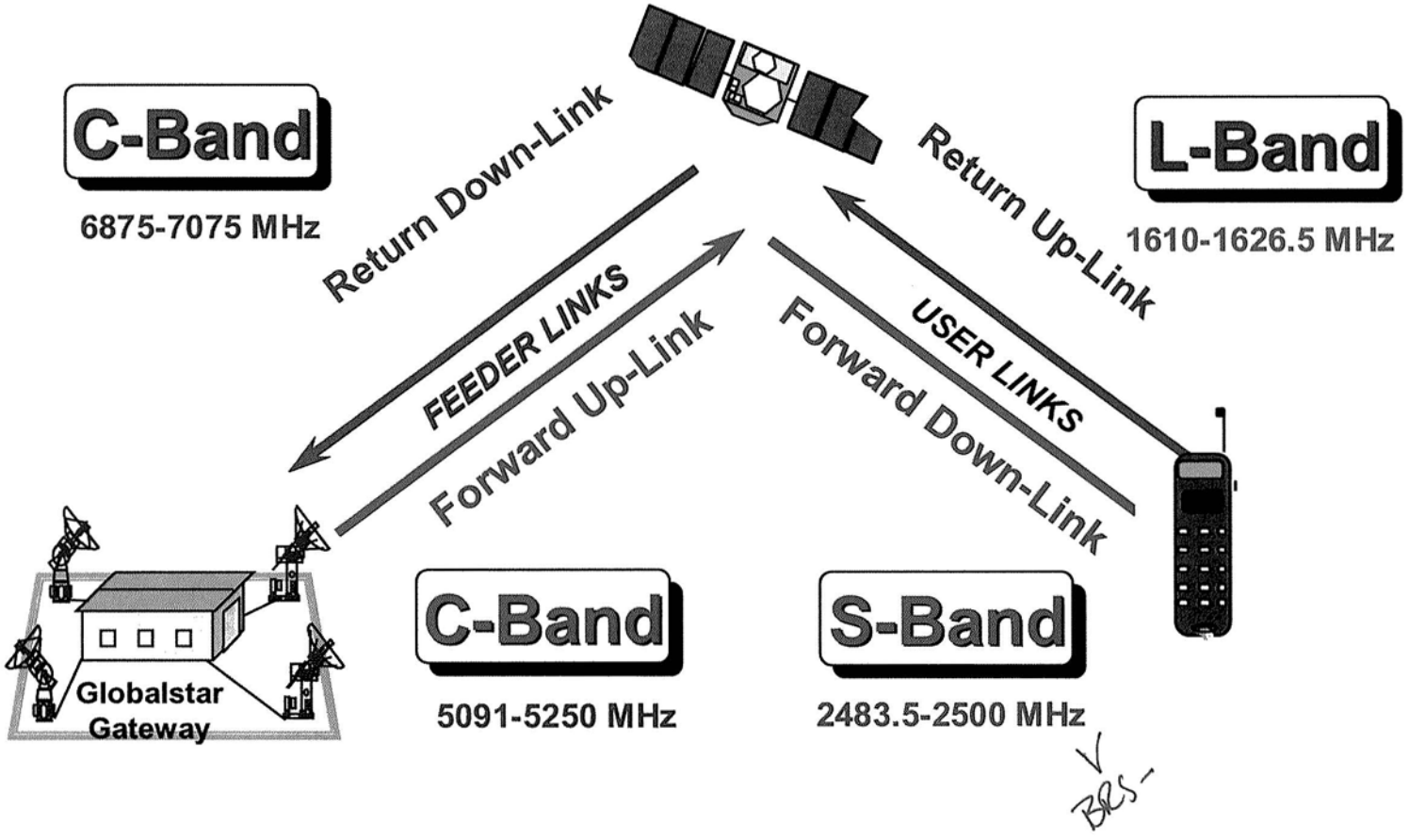
Nicholas Oros (via email)
John Schauble (via email)
Nancy Zaczek (via email)

SATELLITE DOWNLINK PFD ANALYSIS

Globalstar, Inc.

31 October 2006

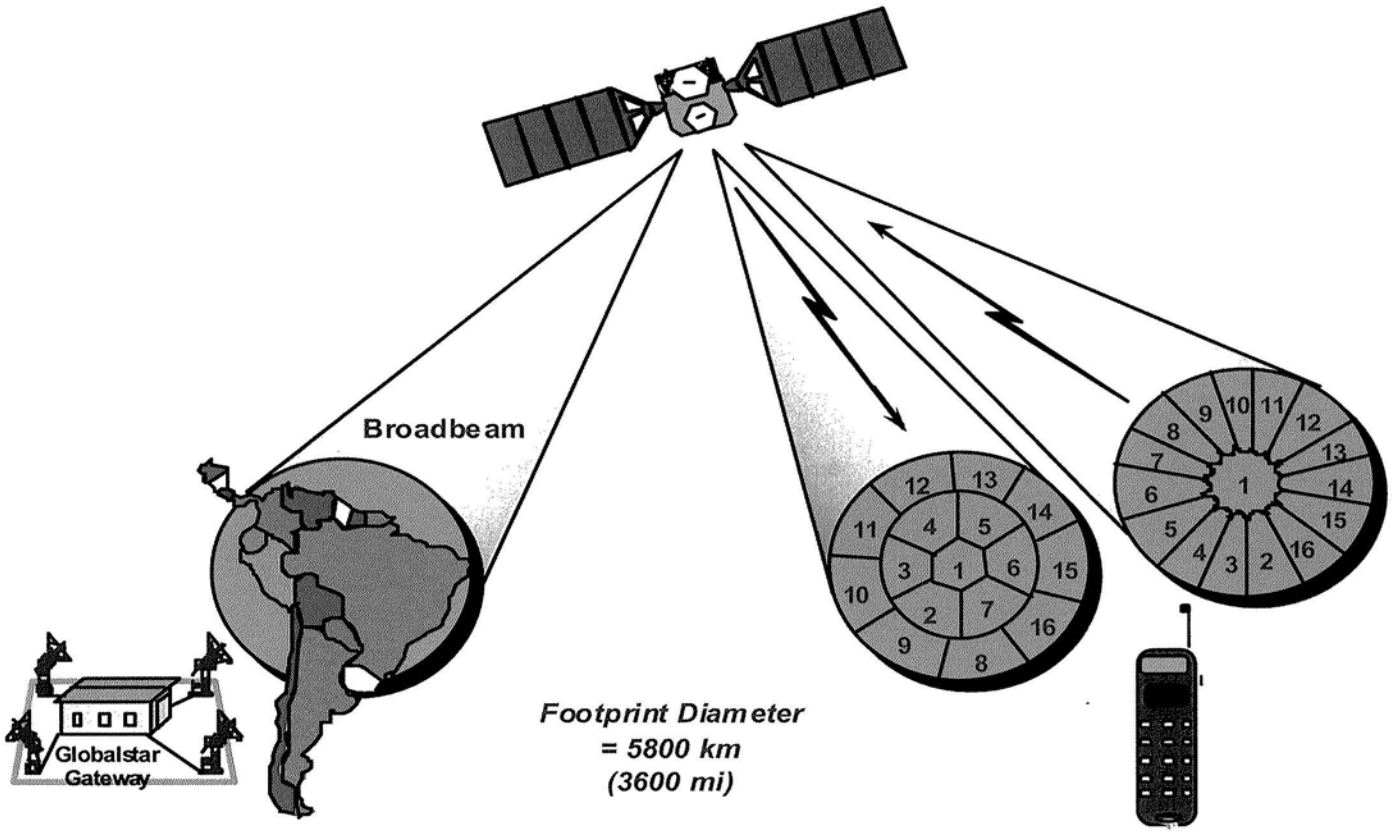
Globalstar Frequency Plan



2006

S-Band and L-Band Satellite Beams

Globalstar

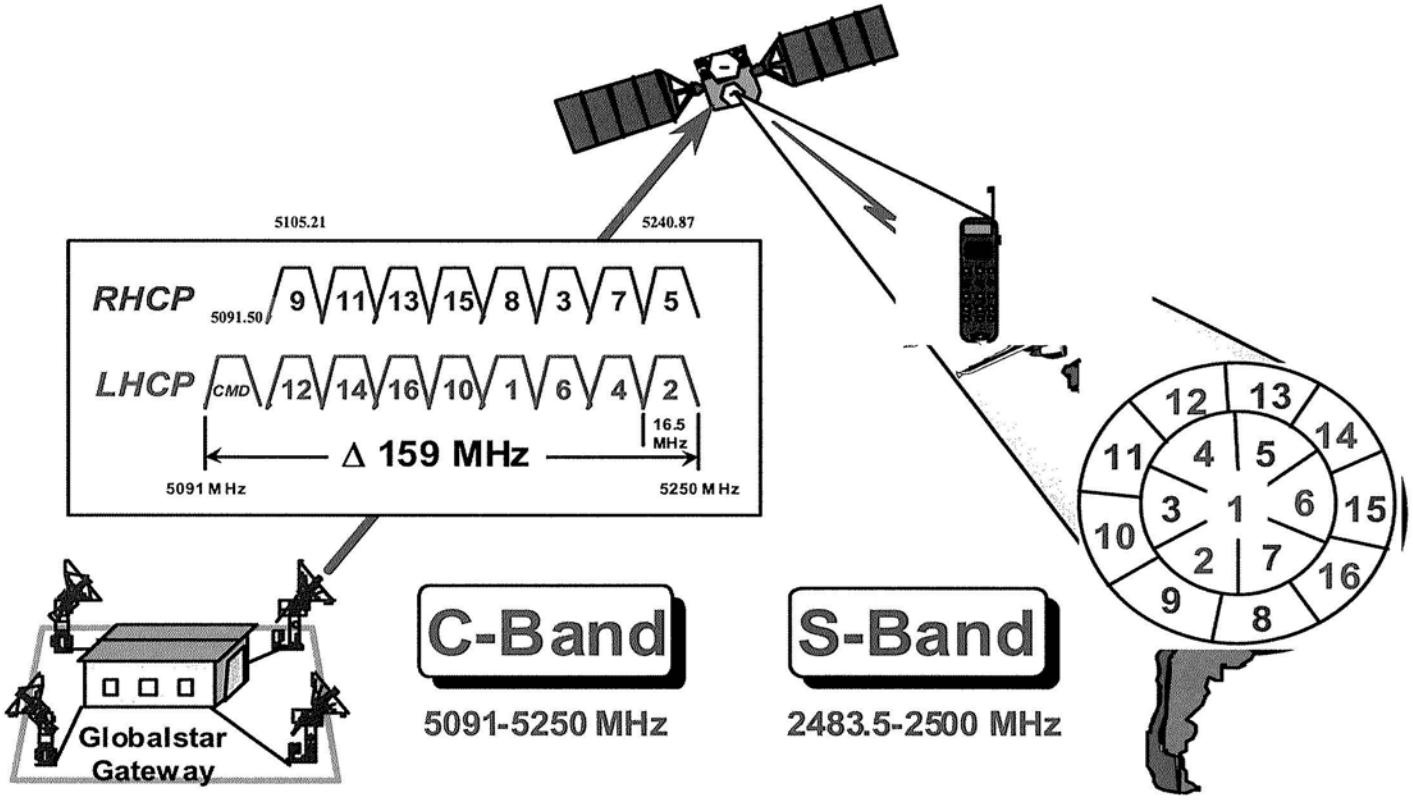


Power Flux Density (PFD)

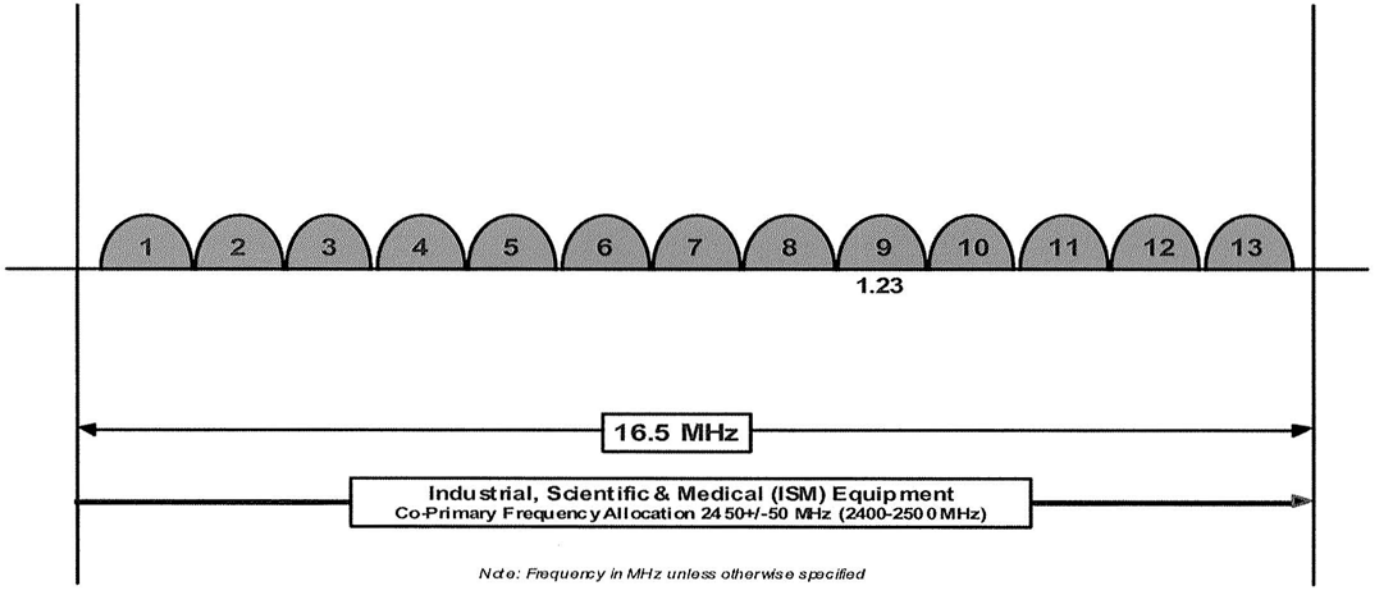
- Power Flux Density, from a space station, is the amount of power that impinges on the surface of the earth due to spacecraft emissions over a given area and within a given bandwidth.
- The units of PFD are Watts/square meter/Hz or dBW/m^2/MHz.
- PFD restrictions generally change as a function of elevation angle from or angle of arrival to the terrestrial station. Greater PFD is allowed for increased angles of arrival. For terrestrial applications, antenna patterns usually "look" towards the horizon or downward in order to limit noise and interference.
- Power Flux Density restriction has a long and venerable history within the International Telecommunications Union (ITU) (Radio Regulations Article 21 and Appendix 5) and the FCC Rules for allowing frequency sharing between terrestrial and space services.

Forward Link Beam Pattern

Forward Link Pattern



S-Band Frequencies



Regulation of PFD from Globalstar Spacecraft

- PFD is regulated on a per beam basis. Inner beams, those "looking" directly at the earth instead of off at an angle, generally are allowed greater PFD than outer beams.
- The Gateway Station radiating a given spacecraft restricts the amount of uplink power it emits in order to regulate the downlink PFD.
- The allocation of power per beam is done by the Globalstar Satellite Planning Center (GSPC) on a day-to-day basis, due to changes in spacecraft characteristics, but always maintains the correct PFD level.
- The Gateway Station determines the number of users that can be served in any beam based upon the allocated uplink power.

CONCLUSIONS

- Bell South and the WCA propose tightening the required MSS PFD to -136 dBW/m^2/MHz for angles of arrival below 5 degrees and -122 dBW/m^2/MHz for angles of arrival above 25 degrees (Petition for Partial Reconsideration of BellSouth Corporation, BellSouth Wireless Cable, Inc and South Florida Television, Inc; Consolidated Reply of WCA, IB Docket 02-364, filed July 19, 2006 & August 31, 2006, respectively).
- The proposed, more stringent, MSS PFD limits are just that, only a proposal, and may not be adopted by WRC-07.
- The proposed MSS PFD limits derived by ITU-R Joint Task Group 6-8-9 are based upon debatable terrestrial system parameters.

Conclusions (con't)

Globalstar

- ITU-R Report M.2041, cited in terrestrial proponents' pleadings as concluding that *co-frequency, co-coverage sharing is not feasible*, does not address sharing between NGSO MSS systems and terrestrial systems and, therefore, lacks relevance.
- The Commission, in its 2004 decision on sharing in the 1.6/2.4 GHz Bands, required sharing between CDMA MSS and Fixed and Mobile Applications in 2495 – 2500 MHz.
- The existing PFD coordination trigger has been effective in preventing interference between CDMA MSS and terrestrial Services for the past 8 years.

Conclusions (con't)

Globalstar

- Globalstar already has been forced to accommodate a number of competing users in its spectrum assignment.
  - Globalstar must afford in-band protection to the Radio Astronomy Service and adjacent-band protection to GPS and GLONASS.
  - In 2004, Globalstar was required to share 3.1 MHz of spectrum with Iridium; the Commission has sought comment on the possibility of yet further sharing.
  - In that same decision, BRS licensees were granted access to 4 MHz of Globalstar's spectrum.
- The imposition of additional operating constraints on Globalstar's spectrum could severely threaten Globalstar's ability to continue to serve its customers, which include a number of federal, state and local public safety agencies and first responders.
- Globalstar has only a limited amount of unencumbered spectrum in which to operate; in contrast, as the Commission has recognized, the terrestrial proponents now collectively have 194 MHz in which to operate.