Before the

Federal Communications Commission

Washington, D.C. 20554

In the Matter of	)	
	)	
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;	)	IB Docket No. 01-185
	)	
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

To: The Commission

COMMENTS OF BLUE SKY INFORMATION SERVICES

IN RESPONSE TO THE NOTICE OF PROPOSED RULEMAKING

Blue Sky Information Services submits this Reply Comment relating to the Notice of Proposed Rulemaking for Spectrum Review of the Big LEO Band Plan.

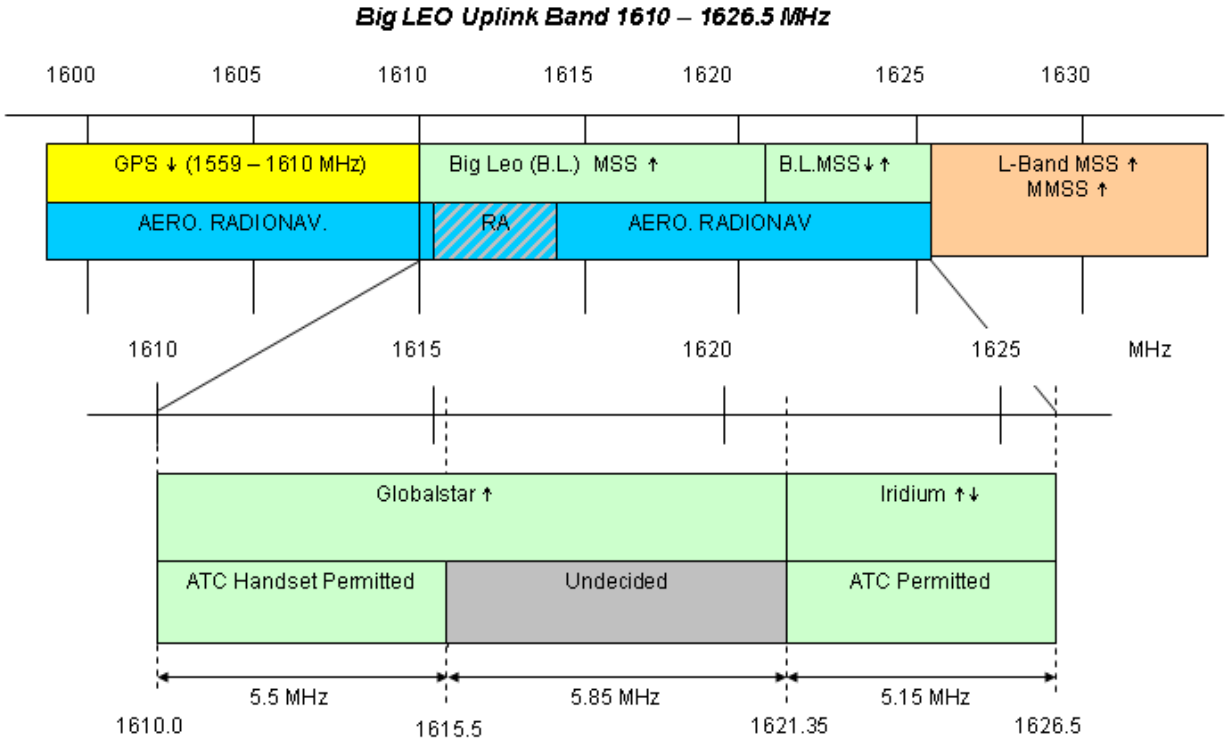
BACKGROUND

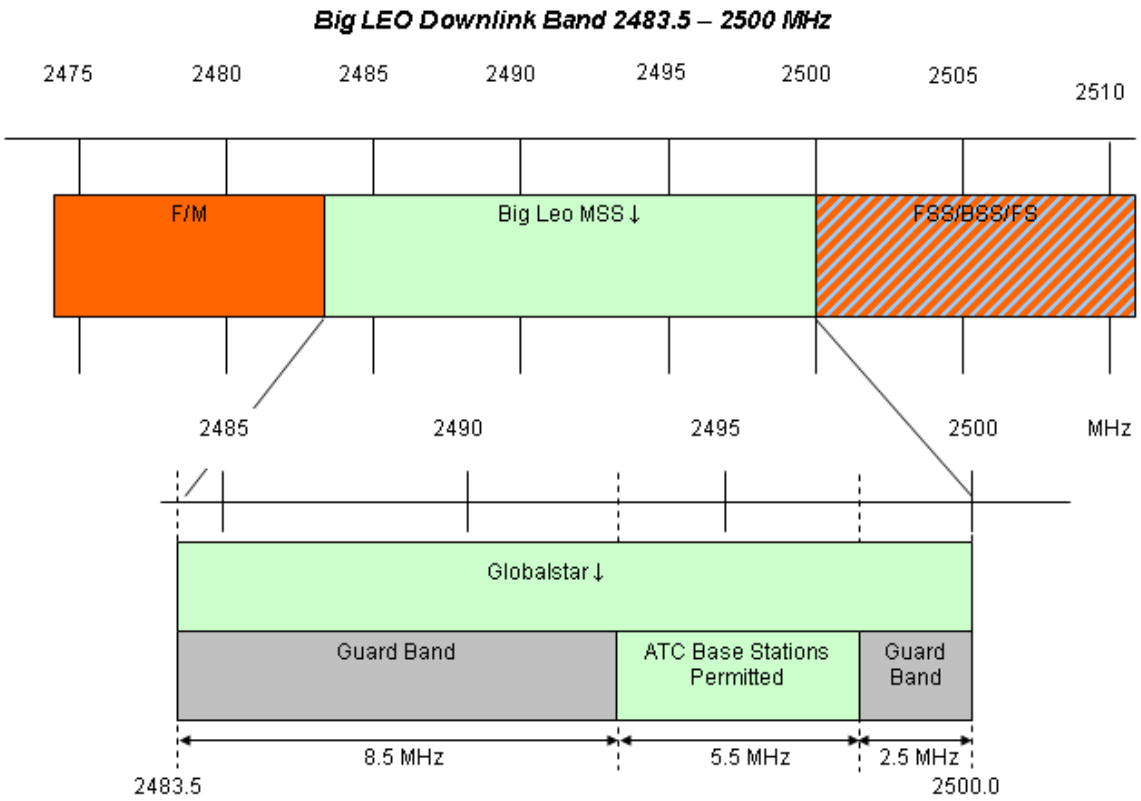
In 1994, Five Applicants sought to provide MSS service in the "Big LEO" 1610-1626.5 Mhz and 2483.5-2500 Mhz frequency bands.

Constellation Communications, Inc.	-	TRW
Loral/Qualcomm Partnership, L.P.	-	Globalstar
Mobile Communications Holdings, Inc.	-	MCHI
Motorola Satellite Communications, Inc.	-	Motorola, (Iridium)
TRW, Inc.	-	TRW

The Big LEO Band- Plan was conceived to accommodate Frequency Division Duplex (FDD) paired spectrum operations. In order to achieve functionality in FDD operations, the Big LEO Band Plan was created with homologous Uplink and Downlink spectrum allocations.

This Big LEO Band Plan's FDD architecture is highlighted in the following graphical format provided in the Commissions own Report and Order [FCC 03-15] Appendix F.





All but one of the Big LEO applicant's designs, Motorola "Iridium" complied with the FDD architecture of the Big LEO band. Motorola/Iridium made a business decision and willingly chose a technology in which the Uplink and Downlinks were shared on only the Uplink Frequencies of the Big LEO Band.

It was found that the four CDMA applicants could share the remaining paired spectrum in Big LEO Uplink and Downlink Bands. If all 5 of the original Big LEO MSS applicants had completed their construction and milestone requirements, and the band had been divided equally. Then each applicant would have been assigned just 3.3 Mhz in each the Big LEO Uplink, and Downlink Bands. Since Motorola "Iridium" had elected on it's own merits, a business decisions not to employ a paired FDD system architecture. The FCC provided Motorola a comparative 'windfall' of 5.15 Mhz of spectrum of which was all allocated in the Big LEO Uplink Band. In addition, Motorola/Iridium, was also allocated what might be considered "the premium spectrum" in the Big LEO Uplink Band. This is witnessed by the fact that, all of the Motorola/Iridium's spectrum assigned at the upper edge of the Big LEO Uplink Band, which was furthest away from required Inter-service Sharing requirements. What Motorola/iridium received by this fortuitous allocation was the lack of requirements and associated system costs required to coordinate operations with the Radio Astronomy, and GPS services in the Lower End of the Big LEO Uplink Band. A requirement that fell squarely on the 4 remaining CDMA applicants whose systems employed paired FDD architecture.

All of this was done in order to attempt to provide what was viewed as a "spectrum balance" for Motorola/Iridium, between the sole TDMA/FDMA applicant and the 4 CDMA applicants. The effects of this decision by the Commission left the Big LEO Uplink and Downlink allocations available to the CDMA applicants largely unsymmetrical. The end result of this grant to Iridium is very inefficient spectrum utilization in the Big LEO Band Plan. A Band Plan, which was originally drafted and optimized for paired FDD operations.

Discussion
Iridium declares in their "Petition for Rulemaking".

"Because Iridium has been authorized to operate only within a 5.15 Mhz Band – and must operate both its uplinks and downlinks in that narrow band – it faces significant spectrum constraints."

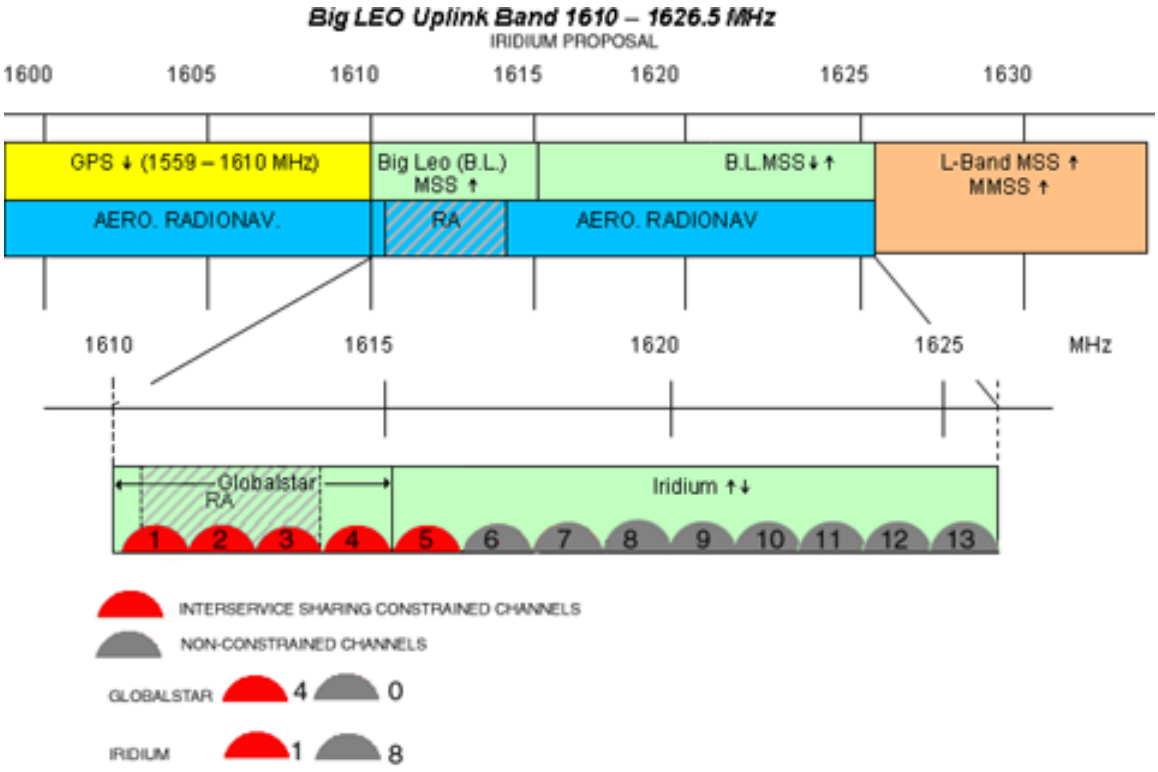
However, Iridium was not "forced" by the Commission to choose it's current technology format. Iridium's technology decision was conceived and deployed based on Iridium's internal business, and technology choices. It continues.

"In an effort to meet current critical needs and near-term future demand, it is essential that Iridium be permitted to expand it's operations into the 1615.5 – 1621.35 Mhz frequency band. As demonstrated below, this can be done without undue constraint on Globalstar which has "access" to a total of 22 Mhz; 5.5 Mhz in the 1.6 Ghz band and 16.5 Mhz "

Now Iridium requests the Commission to further damage the 'symmetrical' aspects and efficiencies of the Big LEO Band Plan in order to continue to accommodate and expand Iridium's "unique" and highly inefficient use of a Band Plan that was clearly designed to promote paired FDD technologies.

Motorola/Iridium originally petitioned to be allowed to select which portion of the Big LEO Uplink Band they wanted to occupy. Iridium chose the upper portion of the Big LEO Uplink Band, doing so afforded Iridium the operational flexibility of not being required to directly coordinate Down Band spectrum utilization with the Radio Astronomy Services or GNSS Services. A luxury that was not afforded the CDMA applicants.

Now, Iridium contends that it again is "*entitled to choose*" which frequencies it wants to expand into. With little surprise, Iridium has chosen to continue its domination of the Non Inter-service Sharing Spectrum in the Big LEO Uplink Band as detailed below.



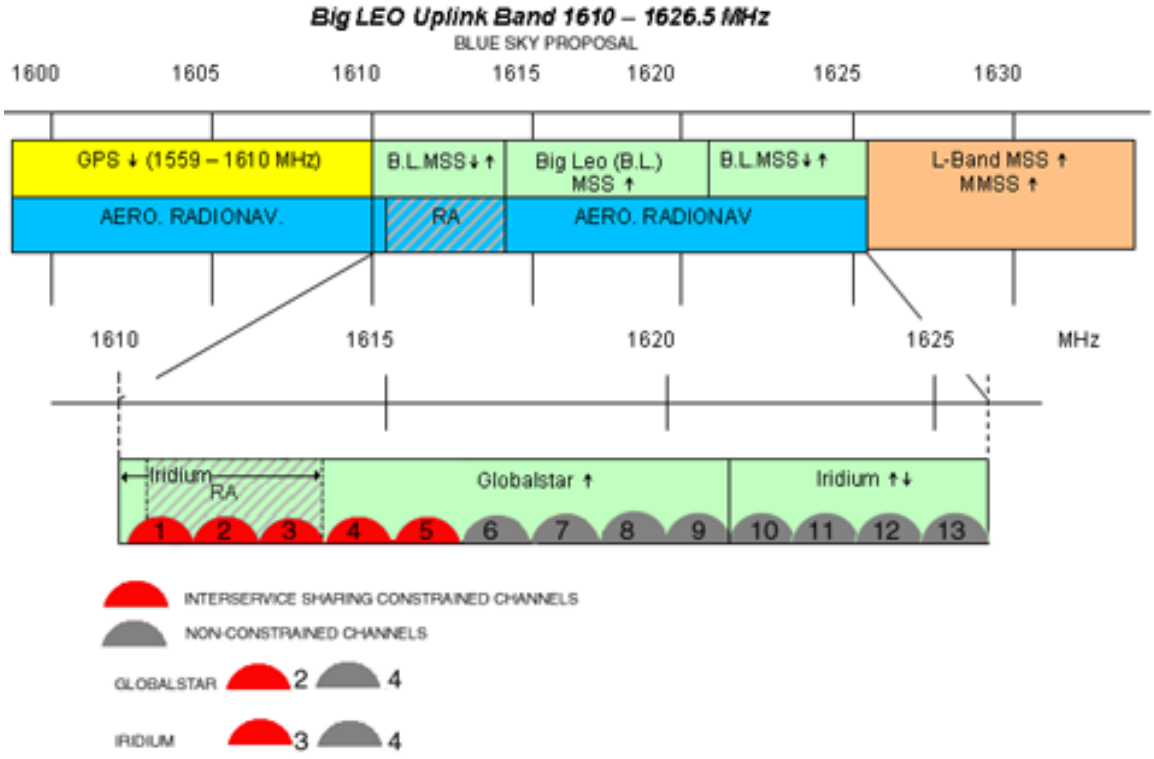
What becomes evident is that Iridium's request to "rebalance" the Big LEO Band has little to do with "Balance". It appears more to be a self-serving attempt to force it's only Big LEO Band competition, (Globalstar), into a non-competitive entity. A self-serving petition that leaves Globalstar with only 4 Channels of Inter-service sharing spectrum in the Big LEO Uplink Band. Which, at the same time, provides Iridium with 8 Channels of non-constrained spectrum.

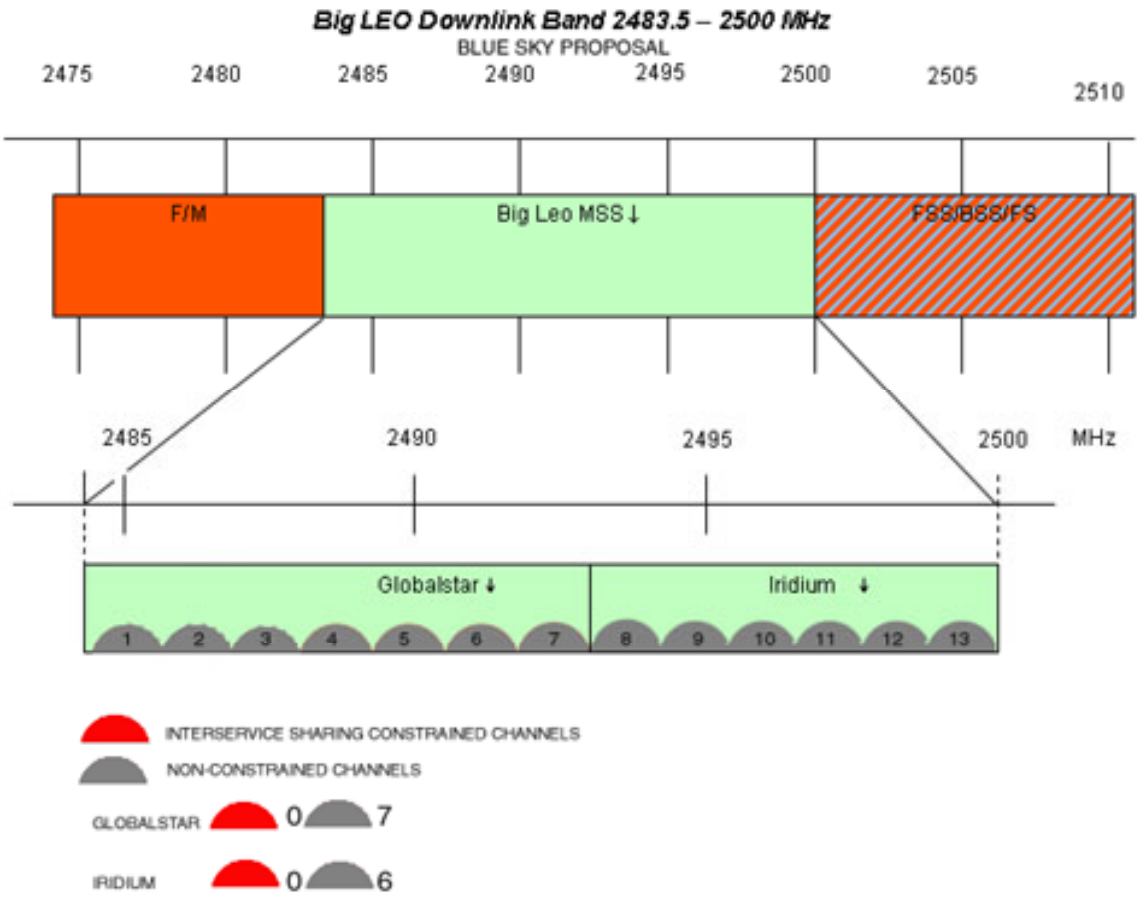
Blue Sky believes that a Rebalancing of the Big LEO spectrum is in order. However, it believes that special consideration SHOULD NOT be given to an individual Big LEO licensee based on their adaptation of "specialized technology", or lack of system architecture concepts which were evaluated, but ultimately rejected, as a business decision of the original applicant.

The Blue Sky Proposal

Blue Sky proposes that the Big LEO Band be equally Balanced between the two remaining Big LEO Licensee's.

Blue Sky believes that Inter-service Sharing is a burden to a Big LEO operator. Likewise. Blue Sky believes that both Big LEO Operators should shoulder this burden equally. And that equal bandwidth should be allocated to each of the remaining Big LEO licensee's similar to the format referenced below.


Big LEO Uplink Band 1610 – 1626.5 MHz
BLUE SKY PROPOSAL
1600
1605
1610
1615
1620
1625
1630
GPS ↓ (1559 – 1610 MHz)
B.L.MSS↓↑
Big Leo (B.L.) MSS ↑
B.L.MSS↓↑
L-Band MSS ↑ MMSS ↑
AERO. RADIONAV.
RA
AERO. RADIONAV
1610
1615
1620
1625
MHz
Iridium
RA
Globalstar ↑
Iridium ↑↓
1
2
3
4
5
6
7
8
9
10
11
12
13
INTERSERVICE SHARING CONSTRAINED CHANNELS
NON-CONSTRAINED CHANNELS
GLOBALSTAR 2 4
IRIDIUM 3 4



Conclusion
The result of this proposal is a "true" balance in the Big LEO Band Plan.

Iridium receives an additional 4 Mhz of spectrum in the Big LEO Uplink Band as requested. Both licensees receive exactly an equal amount of Non Inter-service Sharing Channels in the Big LEO Uplink Band and each receives 13 overall channels combined in the Uplink and Downlink Bands. This format will ensure equal competition in service offerings like Aviation and Voice/Data between the two Big LEO licensees.

As noted in the STATEMENT OF CHAIRMAN MICHAEL K. POWELL
Re: ***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 (adopted January 28, 2003).***

> ***"Satellite providers should succeed or fail in the marketplace on their own merits"***

In case of the Big LEO Licensees, Iridium and it's predecessor chose to abstain from including the technology to adapt to Inter-service Sharing requirements for Down Band spectrum utilization, and paired FDD technology. These requirements were well known restrictions of the Big LEO Band Plan, from the time of the original Big LEO

applications were accepted for filing. The FCC has a record of molding spectrum policies, in order to aid Iridium's "specialized" business and technology merits.

In the words of Chairman Michael K. Powell, from his statements regarding
" 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 (adopted January 28, 2003)."

"Satellite providers should succeed or fail in the marketplace on their own merits"

It is time for Globalstar and Iridium to succeed of fail on their own merits. A rebalancing of the BIG LEO Band plan is in order. However, the burden of Inter-service sharing and efficient use of a FDD paired Band Plan should fall equally on both operators.

Blue Sky Information Services

Steve Fitzgerald
CTO