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

In the Matter of	)	
	)	
Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands	)	IB Docket No. 07-253 RM-11339
	)	
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

COMMENTS OF MOTOROLA, INC.

Motorola, Inc. ("Motorola") submits these comments in response to the Federal Communications Commission's Notice of Proposed Rulemaking ("NPRM") that seeks comment on Globalstar, Inc.'s ("Globalstar") request to expand its authority to provide Ancillary Terrestrial Component ("ATC") services from the current 11 megahertz of its assigned spectrum to all of the L-band and S-band spectrum in which it is licensed to operate.[1] Motorola believes that any consideration for expanding ATC authority in the S-band must ensure compatibility and protection of adjacent Broadband Radio Service ("BRS") operations.

[1] *Spectrum and Service Rules for Ancillary Terrestrial Components in the 1.6/2.4 GHz Big LEO Bands; Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands*, Second Order on Reconsideration, Second Report and Order, and Notice of Proposed Rulemaking, FCC 07-194 (2007) ("*NPRM*").

In 2004, the FCC established a primary fixed and mobile allocation in the 2495-2500 MHz band but also allowed Mobile Satellite Service ("MSS") providers to continue to provide their services in the same band on an unprotected basis.[2] The Commission, however, did not allow use of these frequencies for MSS ATC and ultimately decided to "move ATC operations down five MHz to the 2487.5-2493 MHz band, which continue to allow at least two megahertz of MSS-only use between ATC operations and non-MSS services."[3] The Commission's reallocation actions provided a 3 MHz guard band between MSS ATC and BRS operations, which begin at 2496 MHz.

Motorola previously commented on Globalstar's request to expand its ATC authority and supplied technical data demonstrating the incompatibility of co-channel BRS and MSS ATC operations in the 2495-2500 MHz frequencies.[4] Motorola continues to believe that independently operated wide-area terrestrial networks cannot share the same spectrum space without interference and, therefore, continues to support the need for either some guard band or other technical remedies to minimize interference between BRS and MSS ATC operations.

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[2] Review of the Spectrum Sharing Plan Among Non-Geostationary Satellite Orbit Mobile Satellite Service Systems in the 1.6/2.4 GHz Bands; Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Service to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, Report and Order, Fourth Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 13386, ¶¶ 69-71 (2004). The 2495-2496 MHz band was established as a guard band so as to protect MSS operations below 2495 MHz. *Id.* at ¶ 72.

[3] *Id.*

[4] Comments of Motorola, RM-11339 (filed Aug. 28, 2006).

While it may be possible to apply mitigation techniques that would reduce the amount of guard band spectrum required, such techniques will likely require coordination between the licensees. For instance, one means of reducing the amount of guard band needed is for adjacent band networks to synchronize the uplink and downlink frames so that base and subscriber transmissions will occur at the same time intervals. Such synchronization will minimize the near/far interference scenarios that can occur when a base station receiver is expecting low power subscriber transmissions but instead receives higher power signals for adjacent channel base stations. Synchronizing adjacent channel operations, however, requires close collaboration between the licensees and may impact the traffic model assumptions for the licensees. Absent mitigation techniques such as synchronization, significant guard bands are necessary to prevent inter-service interference in these S-band frequencies.

Respectfully submitted,

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