

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)
)
Amendment of Parts 25, 74, 78 and 101 of the)
Rules regarding Coordination between the Non-) ET Docket No. 03-254
Geostationary and Geostationary Satellite Orbit)
Fixed-Satellite Service and Fixed, Broadcast)
Auxiliary and Cable Television Relay Services in)
the 7 GHz, 10 GHz and 13 GHz Frequency Bands)

**REPLY COMMENTS OF
THE BOEING COMPANY**

The Boeing Company (“Boeing”), by its attorneys and pursuant to Section 1.415 of the Commission’s rules, 47 C.F.R. § 1.415, respectfully submits these reply comments in response to the comments that were filed by the Society of Broadcast Engineers, Inc. (“SBE”) in the above-captioned proceeding.

I. INTRODUCTION

The Commission proposed in its Notice of Proposed Rulemaking (“*NPRM*”) in this proceeding to adopt coordination rules for satellite and terrestrial services in various spectrum bands that are consistent with existing coordination requirements for other shared spectrum bands. The Commission’s proposed rules are designed to enable flexible spectrum sharing, while fully accommodating the needs of each service and not imposing excessive burdens on any service.

Boeing and other parties filing comments supported the Commission's proposed rules. In contrast, SBE called for a number of changes in the Commission's proposal that are both unnecessary and burdensome. Boeing urges the Commission to disregard SBE's comments and adopt the spectrum coordination rules proposed in the *NPRM*.

II. AS SBE ACKNOWLEDGES, THE COMMISSION HAS REPEATEDLY CONSIDERED AND REJECTED SBE'S PROPOSAL TO WITHHOLD COORDINATION PROTECTION FOR PORTIONS OF THE SPECTRUM LICENSED TO MSS FEEDER LINK EARTH STATIONS

The Commission has repeatedly explained in numerous orders the equitable and spectrally efficient basis for its coordination rules for satellite and terrestrial services operating in shared frequency bands. The Commission has noted that fixed and satellite services have significantly different requirements for access to spectrum to meet their particular business needs.¹ These differing requirements are accurately reflected in the Commission's spectrum coordination rules. Furthermore, the Commission has never been presented with any evidence that the current coordination rules have caused appreciable harm to terrestrial fixed licensees.²

Notwithstanding these findings, SBE filed comments in this proceeding that include its often repeated argument that terrestrial services (in this case, BAS licensees) should not be required to provide coordination protection for MSS feeder link earth stations across their entire

¹ See *Amendment of Parts 2, 25 and 97 of the Commission's Rules With Regard to the Mobile-Satellite Service Above 1 GHz*, Memorandum Opinion and Order, FCC 03-69, ¶ 18 (Apr. 2, 2003) ("*MSS Feeder Link Sharing Order*"); *FWCC Request for Declaratory Ruling on Partial-Band Licensing of Earth Stations in the Fixed-Satellite Service That Share Terrestrial Spectrum, et al.*, IB Docket No. 00-203, *Second Report and Order*, 17 FCC Rcd 2002, 2006-08 (2002) ("*FWCC Coordination Order*").

² See *MSS Feeder Link Sharing Order*, ¶ 18; *FWCC Coordination Order*, ¶ 12.

licensed spectrum assignment.³ Instead, SBE argues that satellite earth station facilities operating in the 12750-13250 MHz (“13 GHz”) band should receive coordination protection only for the spectrum the earth station operator can “demonstrate an immediate need” for at the start of operations.⁴

The record assembled by the Commission in ET Docket Number 98-142 and IB Docket Number 00-203 is replete with evidence demonstrating that SBE’s proposal is ill-advised. For example, on January 8, 2001, in joint comments (“*Satellite Industry Comments*”) filed by the Satellite Industry Association, the Satellite Broadcasting and Communications Association, the World Teleport Association, and the Aerospace Industries Association of American, the parties provided a detailed analysis of the substantial harm that satellite network operators would suffer as a consequence of SBE’s proposal.⁵

As the *Satellite Industry Comments* explained, satellite gateway facilities are extremely expensive to construct and, once completed, highly impractical to relocate. Therefore, before beginning construction, satellite network operators take pains to identify geographic locations that can be coordinated for all of the spectrum (and orbital look angles) that the gateway facility may need to use during the life of the network. Once in operation, a satellite network will often

³ See *SBE Comments* at 1-3.

⁴ *Id.* at 2.

⁵ See *Comments of the Satellite Industry Association, the Satellite Broadcasting and Communications Association, the World Teleport Association, and the Aerospace Industries Association of American*, IB Docket No. 00-203 (Jan. 8, 2001) (“*Satellite Industry Comments*”). The Global VSAT Forum subsequently filed reply comments expressing the support of its members for the *Satellite Industry Comments*. See *Reply Comments of the Global VSAT Forum*, IB Docket No 00-203 (Feb. 9, 2001).

require more spectrum to serve additional customers or to support new, more-bandwidth intensive services. Alternate spectrum and different orbital look angles may also be needed to respond to changes in customer requirements, to restore service in the event of a spacecraft failure, to make operating adjustments to accommodate coordination with newly launched satellites or to support replacement satellites that use new technologies.

For example, Boeing anticipates that the overall spectrum requirements of its 2 GHz MSS network will grow significantly as Boeing develops its customer base. Boeing will also need access to additional feeder link spectrum if Boeing enters into agreements with other 2 GHz MSS licensees to share service link spectrum. Boeing will further need access to additional spectrum to provide backup restoration service for its network in the event of a failure of one of its two planned gateway facilities. Boeing has thoroughly demonstrated these feeder link spectrum requirements in the 2 GHz MSS licensing materials that it has filed with the Commission. Boeing must ensure that its coordination agreements with other spectrum users provide Boeing with access to this spectrum at each of the two gateway facilities that the Commission has authorized Boeing to construct in the United States.

In rejecting SBE's argument in the past, the Commission not only acknowledged the day-to-day operating requirements of satellite networks, but also repeatedly observed that the existing spectrum coordination approach has not harmed terrestrial licensees.⁶ SBE once again fails in its current comments to demonstrate any harm that may result to BAS licensees. Instead, SBE

⁶ See *MSS Feeder Link Sharing Order*, ¶ 18; *FWCC Coordination Order*, ¶ 12.

grounds its position on subjective claims that the current coordination approach is somehow “unfair” to BAS licensees because it treats them differently than satellite networks.⁷

The Commission carefully devised its spectrum coordination rules to accommodate the actual and unique spectrum needs of all users of the 13 GHz band, including BAS licensees and satellite network operators. No evidence exists that the current approach harms or impairs the growth of terrestrial services or could be improved through changes in the rules. The Commission should therefore disregard SBE’s comments as unpersuasive and repetitious.

III. SBE’S PROPOSAL FOR MOBILE BAS “GROWTH ZONES” IS EFFECTIVELY ADDRESSED IN THE COMMISSION’S EXISTING RULES

The Commission appropriately proposed in the *NPRM* to permit satellite network operators to coordinate their operations with mobile BAS and CARS operators using the coordination procedures that already exist in Sections 25.203, 25.251 and 101.102(d) of the Commission’s rules.⁸ The Commission also appropriately proposed to permit new mobile BAS and CARS licensees to initiate coordination in the 13 GHz band using either the *ad hoc* coordination procedures in Sections 74.638 and 78.36 of the Commission’s rules or the

⁷ In repeating its argument, SBE also claims that Section 309(j)(4)(B) of the Commission’s Act is relevant to the Commission’s analysis. *See SBE Comments* at 1-3. Section 309(j)(4)(B) instructs the Commission to use “performance requirements” such as deadlines and licensing milestones to prevent spectrum warehousing. 47 U.S.C. § 309(j)(4)(B). Section 309(j)(4)(B) was adopted by Congress in 1993, *see Agricultural Reconciliation Act of 1993*, 107 Stat. 387, § 6002(a) (1993), and, as SBE acknowledges, the Commission was already aware of its Section 309(j)(4)(B) obligations when it rejected SBE’s arguments in the past. *See SBE Comments* at 3 (acknowledging that the Commission made reference to Section 309(j)(4)(B) in a 2003 Notice of Proposed Rulemaking). Therefore, the statutory language provides no justification for the Commission to reconsider its prior analysis in this proceeding.

⁸ *See NPRM*, ¶ 22.

procedures included in Section 101.103(d) of the rules.⁹ Such an approach is appropriate because satellite and BAS/CARS terrestrial networks can share the 13 GHz band on a cooperative basis.

SBE, however, argues that the Commission should impose burdensome restrictions on satellite earth station operators – barring them from operating in the 13 GHz band within 150 kilometers of the top 100 television markets.¹⁰

Boeing opposes SBE’s proposal because it is far too restrictive on satellite network operators and would significantly limit their ability to locate gateway facilities. Boeing, however, observes that the Commission already bars gateway facilities used for non-geostationary (“NGSO”) satellite networks from operating in the 13.15-13.2125 GHz band within a 50 kilometer radius of the top 100 television markets.¹¹ The Commission imposed this same restriction on the feeder link earth station facilities used for Boeing’s 2 GHz MSS network.¹²

As explained in the previous section, Boeing will construct its feeder link gateway facilities only in locations where Boeing can have assured access to its entire authorized spectrum assignment. The Commission’s restriction on operating in the 13.15-13.2125 GHz

⁹ *See id.*

¹⁰ *See SBE Comments* at 5-6.

¹¹ *See Amendment of Parts 2, 25 of the Commission’s Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band*, Second Memorandum Opinion and Order, FCC 03-25, ¶ 11 (Feb. 11, 2003).

¹² *See The Boeing Company, Modification of Authority For Use of the 1990-2025/2165-2200 MHz and Associated Frequency Bands for a Mobile-Satellite System*, Order and Authorization, DA 03-2073, ¶ 36 (Int’l Bur., June 24, 2003).

band within a 50 kilometer radius of the top 100 television markets therefore creates a *de facto* restriction that applies to Boeing's network across the entire 13 GHz band. In light of the existence of this *de facto* restriction, no need exists for the Commission to adopt further operating limitations on MSS feeder link gateway facilities in the 13 GHz band. Furthermore, the Commission should not extend its existing restriction beyond 50 kilometers because such action would limit significantly the flexibility of satellite network licensees without providing any demonstrated benefit to BAS and CARS operations in the 13 GHz band.

IV. CONCLUSION

For the reasons set forth above, the Commission should reject SBE's comments and adopt its proposed spectrum coordination rules for satellite earth stations and terrestrial services in the 13 GHz band.

Respectfully submitted,

THE BOEING COMPANY

By:  _____

Marylou Cahir, Esq.
Counsel
Boeing Satellite Systems, Inc.
The Boeing Company
P.O. Box 92919
M/C W-S10-S327
Los Angeles, CA 90009-2919

Joseph P. Markoski
Bruce A. Olcott
Squire, Sanders & Dempsey L.L.P.
1201 Pennsylvania Avenue, N.W.
P.O. Box 407
Washington, D.C. 20044-0407
(202) 626-6600

Its Attorneys

March 18, 2004