

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

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
 Amendment of Parts 2 and 25 of the)
 Commission's Rules to Permit Operation of)
 NGSO FSS Systems Co-Frequency with)
 GSO and Terrestrial Systems in the Ku-Band)
 Frequency Range)
)
 Amendment of the Commission's Rules to)
 Authorize Subsidiary Terrestrial Use of the)
 12.2-12.7 GHz Band by Direct Broadcast)
 Satellite Licensees and Their Affiliates; and)
)
 Applications of Broadwave USA, PDC)
 Broadband Corporation, and Satellite)
 Receivers, Ltd. to Provide A Fixed Service in)
 the 12.2-12.7 GHz Band)

ET Docket No. 98-206
RM-9147
RM-9245

JOINT PETITION FOR PARTIAL RECONSIDERATION

Hughes Communications, Inc., Hughes Communications Galaxy, Inc. and Hughes Network Systems, a division of Hughes Electronics Corporation (together "Hughes") hereby petition for reconsideration of the Commission's First Report and Order in the above-captioned proceeding.¹ As set forth below, language in the Report and Order expresses expectations or recommendations about the way in which satellite subscriber antennas should be installed to ensure that providers of NGSO FSS services appropriately address RF hazards to subscribers and the public. Although certain of these recommendations and expectations may be appropriate in certain circumstances, Hughes requests that the Commission reconsider and retract this language

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because the general recommendations that the Commission has put forth go beyond the steps that are needed in many cases to ensure RF safety.

Hughes Communications, Inc. has participated in this proceeding and is also the applicant for two Ku band NGSO FSS satellite systems—HughesLINK and HughesNET²—that will be subject to the Ku band NGSO FSS service rules adopted by the Commission in this docket. As such, Hughes Communications, Inc. is an interested party to this proceeding. Furthermore, Hughes Communications Galaxy, Inc., as the licensee of the SPACEWAYTM Ka band satellite system,³ and Hughes Network Systems, as the operator of the two-way DirecPC broadband internet service, have a more general interest in the method by which the Commission ensures that consumer-oriented, two-way satellite systems comply with the Commission’s RF safety guidelines.

In the Notice of Proposed Rulemaking in this proceeding,⁴ the Commission asked generally for comment on the ways in which the Commission could ensure that Ku band NGSO FSS systems comply with the RF safety guidelines in the Commission’s rules.⁵ Obviously the Commission’s primary concern in this respect is to make certain that emissions from subscribers’

¹ *Amendment of Parts 2 and 25 of the Commission’s Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range*, FCC 00-418 (rel. December 8, 2000) (the “*Report and Order*”).

² Application of Hughes Communications, Inc. for the HughesLINK Satellite System, FCC File No. SAT-LOA-19990108-00002 (filed January 8, 1999) (“*HughesLINK Application*”); Application of Hughes Communications, Inc. for the HughesNET Satellite System, FCC File No. SAT-LOA-19990108-00003 (filed January 8, 1999) (“*HughesNET Application*”).

³ *Hughes Communications Galaxy, Inc.*, 13 FCC Rcd. 1351 (1997).

⁴ *Amendment of Parts 2 and 25 of the Commission’s Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range*, FCC 98-310 (rel. November 24, 1998) (the “*NPRM*”).

⁵ NPRM at ¶ 84.

transmitting earth stations do not pose an RF hazard to subscribers or other members of the public.

In the Report and Order, the Commission correctly noted that FSS transmitting earth stations are subject to the same RF requirements as all other FCC-regulated transmitters.⁶ Hughes agrees, and, indeed, Hughes is motivated to make sure that its products are safe and its subscribers are protected from undue exposure to RF emissions. The Report and Order also adopted a labeling requirement relating to RF hazards for NGSO subscriber equipment.⁷ The Commission has adopted similar labeling requirements in other services,⁸ and Hughes does not object to the provision that the Commission adopted in this proceeding.

However, the Report and Order also includes language that “recommend[s]” professional installation of two-way subscriber antennas and “expect[s]” two-way subscriber antennas to be placed where persons are not easily able to venture into the uplink beam.⁹ These statements are overly broad, are not necessary or appropriate for all circumstances and should, therefore, be reconsidered and retracted.

With respect to the physical location of transmitting antennas, there is no question that, as the Commission indicates in the Report and Order,¹⁰ satellite service providers have every incentive to ensure that subscriber antennas are installed in a manner that does not allow service to be readily interrupted by persons who venture into the transmit beam. However, in some installation contexts, the capability may not exist to locate an antenna where it is

⁶ Report and Order at ¶ 248.

⁷ *Id.* at ¶ 249.

⁸ *See id.*

⁹ *Id.* at ¶ 250.

¹⁰ *Id.*

impossible for the beam to be interrupted. Thus, requiring that antennas be installed above a certain height, for example, could preclude the provision of service to a customer.

With respect to professional installation, as indicated above, Hughes acknowledges the need for satellite service providers to ensure that their two-way transmitting antennas do not pose an RF hazard to subscribers or the public. However, professional installation of antennas is not the only way those guidelines can be met. Indeed, the Commission acknowledges as much when it encourages the use of safety “interlock” features.¹¹ Yet, the Report and Order appears to recommend professional installation even in cases where such safety interlocks (or other means) adequately address RF concerns. Obviously, requiring professional installation where it is not needed would unduly increase the cost and complexity of providing satellite service.

To the extent that the Commission’s motivation in making these two statements is ensuring RF safety, Hughes believes that the Commission’s concerns can be met through other means. Among other things, certain technologies exist or are being developed that could address those concerns, such as physical barriers that prevent human contact with the transmit beam, and software “shutdown” mechanisms that ensure that transmissions stop promptly when a human body part interrupts the beam path. Thus, the Commission’s statements regarding antenna placement and professional installation are overbroad and should be rescinded in favor of a case-by-case determination as a part of the Commission’s licensing process.

As the Commission notes in the Report and Order, the Commission has also raised the issue of RF safety for subscriber transceivers, including transmitting earth stations, in

¹¹ *Id.*

the Commission's *Competitive Networks* proceeding.¹² Hughes notes that the Satellite Broadcasting and Cable Association/Satellite Industry Association Broadband & Internet Division has petitioned for reconsideration of the Report and Order in the *Competitive Networks* proceeding and expressed similar concern about the Commission's antenna siting and installation language in that proceeding.¹³ As the SBCA/SIA rightly notes in its Petition, the Commission's statements are susceptible of being misapplied by local governments, property owners and homeowner associations in a way that may unduly constrain the deployment of satellite antennas, and the provision of broadband services to the public.

The Commission indicates in the Report and Order that it intends to initiate a rulemaking to review and harmonize its regulations regarding transceiver equipment approval for RF exposure.¹⁴ That proceeding would provide an appropriate opportunity to explore more fully the RF concerns that have given rise to the Commission's statements about antenna placement and installation in this proceeding and the *Competitive Networks* proceeding. The Commission should not bias the outcome of that future rulemaking proceeding by its statements in this proceeding, and should, therefore, defer to that future rulemaking proceeding the question of how consumer-oriented, transmitting earth stations should ensure RF safety. Among other things, doing so would allow a record to be developed about the latest technological means that can be employed to limit human exposure to RF emissions, and about the most commercially expedient means that are available to address those RF concerns.

¹² *Id.* at ¶ 249.

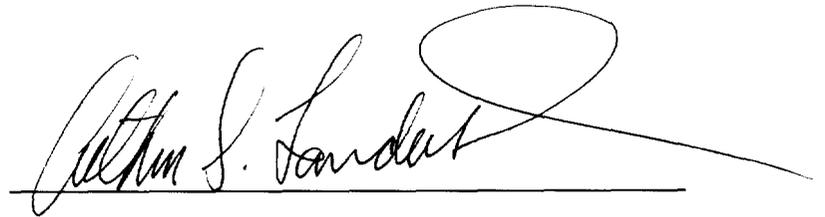
¹³ Petition for Clarification and Partial Reconsideration of the Satellite Broadcasting and Cable Association/Satellite Industry Association Broadband & Internet Division, at 10-12, WT Docket 99-217 (filed February 12, 2001).

¹⁴ Report and Order at ¶ 252.

Thus, for all of the foregoing reasons, Hughes Communications, Inc., Hughes Communications Galaxy, Inc. and Hughes Network Systems respectfully request that the Commission reconsider and retract the language in the Report and Order discussed herein.

Respectfully submitted,

HUGHES COMMUNICATIONS, INC.
HUGHES COMMUNICATIONS GALAXY, INC.
HUGHES NETWORK SYSTEMS

A handwritten signature in black ink, appearing to read "Arthur S. Landerholm", is written over a horizontal line. The signature is fluid and cursive, with a large loop at the end.

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