

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)	
2000 Biennial Regulatory Review --)	
Streamlining and Other Revisions of)	
Part 25 of the Commission's Rules)	
Governing the Licensing of, and)	IB Docket No. 00-248
Spectrum Usage by, Satellite Network)	
Earth Stations and Space Stations)	
)	
Amendment of Part 25 of the Commission's)	
Rules and Regulations to Reduce Alien Carrier)	
Interference Between Fixed-Satellites)	CC Docket No. 86-496
at Reduced Orbital Spacings and to Revise)	
Application Procedures for Satellite)	
Communication Services)	

**PETITION FOR RECONSIDERATION OF
THE SATELLITE INDUSTRY ASSOCIATION**

The Satellite Industry Association (“SIA”), pursuant to Section 1.429 of the Commission’s rules, hereby petitions for reconsideration of the order in the above-captioned proceedings entitled Fifth Report and Order in IB Docket No. 00-248 and Third Report and Order in CC Docket No. 86-496 (“R&O”).¹

SIA is a U.S.-based trade association providing worldwide representation of the leading satellite operators, service providers, manufacturers, launch services providers, remote sensing operators, and ground equipment suppliers. SIA is the unified voice of the U.S. satellite industry on policy, regulatory, and legislative issues affecting the satellite business.²

¹ FCC 05-63 (March 15, 2005).

² SIA includes Executive Members: The Boeing Company; Globalstar LLC; Hughes Network Systems LLC; ICO Global Communications; Intelsat; Iridium Satellite LLC; Lockheed Martin Corp.; Loral Space & Communications Ltd.; Mobile Satellite Ventures; Northrop Grumman Corporation; PanAmSat Corporation and SES Americom, Inc. and Associate Members Eutelsat Inc., Inmarsat Ltd., New Skies Satellites Inc., Stratos Global Corporation, and The DirecTV Group.

1. Introduction and summary

SIA applauds the actions that the Commission has taken in the R&O. These actions will streamline earth station application processing and facilitate the provision of services using small earth station antennas.

This petition is limited to a few refinements and clarifications that SIA believes are needed to effectuate the Commission's goals.³ In particular:

- To reflect properly all of the portions of § 25.209 of the rules identifying which earth station antennas are “non-conforming,” references in the new rules to antennas that do not comply with §§ 25.209(a) and (b) should be replaced by references to antennas that do not comply with §§ 25.209(a), (b) and (g).
- The new rules should be modified to clarify that non-conforming receive antennas continue to be entitled to protection against interference from other space stations up to the point at which harmful interference would not be expected to be caused to conforming receive antennas.
- In cases in which the adjacent satellite and the target satellite both are U.S.-licensed, the certification required under § 25.220(e)(1)(ii), to the effect that operation at higher-power has been coordinated, should be signed by both the target satellite operator and the adjacent satellite operator.
- Determinations as to whether a non-conforming antenna must be coordinated with the operator of an adjacent satellite should be made case-by-case, based on the level of compliance within the GSO arc spanning $\pm 1^\circ$ from the nominal position of the operator's adjacent satellite.

2. References to antennas that do not comply with §§ 25.209(a) and (b) should be replaced by references to antennas that do not comply with §§ 25.209(a), (b) and (g).

SIA proposes a technical correction to portions of the new rules identifying which earth station antennas are “non-conforming” and therefore are subject to the procedures specified in § 25.220 of the rules. In the R&O, the Commission added paragraph (b)(3) to § 25.132 of the rules and added § 25.220. Both provisions require that § 25.220 procedures be followed for antennas not satisfying §§ 25.209(a) and (b) of the rules, which establish performance standards for conforming antennas.

³ In addition, SIA is in the process of evaluating whether the changes adopted in the Sixth Report and Order and proposed in the Third Further Notice of Proposed Rulemaking in this proceeding warrant revisiting any of the matters addressed in the R&O. See *Sixth Report and Order and Third Further Notice of Proposed Rulemaking*, IB Docket No. 00-248, FCC 05-62 (March 15, 2005).

In order to be deemed conforming, antennas generally must satisfy the performance standards specified in §§ 25.209(a) and (b) beginning at an off-axis angle of one degree. As an exception to this general requirement, however, § 25.209(g) provides that 12/14 GHz band antennas having a diameter as small as 1.2 meters will be deemed conforming if they satisfy the performance standards beginning at an off-axis angle of 1.25 degrees. To take this exception into account, the references in § 25.132(b)(3) and § 25.220 to antennas that do not comply with §§ 25.209(a) and (b) should be revised to refer to antennas that do not comply with §§ 25.209(a), (b) and (g).

3. Non-conforming receive earth stations should be protected to the levels specified in §25.209(c).

The Commission has a longstanding policy that non-conforming receive antennas are entitled to protection against interference from other space stations up to the point at which harmful interference would not be expected to be caused to conforming receive antennas. This policy is codified in Section 25.209(c) of the rules.

It is clear from the R&O that the Commission intended to continue its receive antenna policy.⁴ The wording of the rules that the Commission adopted in the R&O, however, does not properly reflect the Commission's intention. Rather, those rules suggest that, absent coordination, a non-conforming receive antenna is entitled to *no* interference protection.

To correct this deficiency, SIA proposes that the following changes be made to §§ 25.220(c)(3) and (d)(1) of the rules (the proposed new text is underlined):

“§25.220(c)(3)

The applicant will not receive protection, beyond that established by §25.209(c), from adjacent satellite interference from any satellite unless the applicant has provided the certifications listed in paragraph (d)(1) of this section from the operator of that satellite(s) from which it plans to receive.”

⁴ See R&O, ¶ 32 (“In response to SIA's recommendation to protect transmit/receive antennas from interference only to the extent that an antenna consistent with the requirements of Section 25.209(a) would not be expected to receive interference, we observe that this is what is required in the Commission's rules now.”)(footnotes omitted); R&O at ¶ 84 (“Earth station operators that reduce their power levels are eligible to be protected from receiving harmful interference only to the extent that harmful interference would not be caused to an earth station employing an antenna conforming to the antenna gain patterns in the Commission's rules.”)(footnote omitted).

“§25.220 (d)(1)

If an antenna proposed for use by the applicant does not comply with the performance standards contained in §25.209(a) and (b), the applicant must submit the certifications listed in paragraphs (d)(1)(i) through (d)(1)(iv) of this Section to qualify for protection from receiving interference from other satellite systems. The applicant will not be granted protection from receiving interference beyond that established by §25.209(c) except with respect to the satellite systems included in the coordination agreements referred to in the certification required by paragraph (d)(1)(ii) of this section, and only to the extent that protection from receiving interference is afforded by those coordination agreements.”

- 4. In cases in which the adjacent satellite and the target satellite both are U.S.-licensed, a certification under § 25.220(e)(1)(ii) to the effect that operation at higher-power has been coordinated should be signed by both the target satellite operator and the adjacent satellite operator.**

Under § 25.220(e)(1)(ii) of the new rules, earth station applicants proposing to use transmitted satellite carrier EIRP densities and/or maximum power into the antenna in excess of the levels specified in §§ 25.134, 25.211, 25.212, or in excess of the power density levels derived through the procedure set forth in § 25.220(c)(1), must submit certifications to the effect that the higher power/power density levels have been coordinated with adjacent satellite operators. § 25.220(e)(1)(ii) requires that the certifications be signed by the “specified satellite operator.” Although the rules do not define this term, it appears that the Commission only has required that a certification be signed by the operator of the target satellite, *i.e.*, the operator of the satellite with which the higher-power antenna will communicate, and has not required that the certification be signed by the operators of the adjacent satellites.

SIA respectfully requests that the Commission reconsider its decision as it applies to coordinations in which the target operator and the adjacent operator both are U.S.-licensed. SIA believes that requiring the adjacent satellite operators to sign the certifications in such cases will prevent any misunderstanding with respect to the agreement that the “specified satellite operator” has obtained. Such a requirement also will ensure that adjacent satellite operators have up-to-date information concerning the interference environment in which they are operating.

In cases in which the target satellite and the adjacent satellite both are U.S.-licensed, requiring a signature from the adjacent satellite operator will have minimal impact, apart from the benefits discussed above, on either party. U.S. operators generally address services that are not two-degree

compliant on a case-by-case basis. Consequently, when both satellites are U.S.-licensed the two operators will already be in contact and will have to arrive at an understanding concerning coordination of the proposed non-compliant service. Signing a certification memorializing that understanding is a natural part of this process.

Accordingly, SIA proposes that on reconsideration the Commission revise § 25.220(e)(1)(ii) to read as follows (the proposed new text is underlined):

“§ 25.220(e)(1)(ii)

A statement from the specified satellite operator that it has coordinated the operation of the subject non-conforming Earth Station accessing its satellite(s), and its corresponding downlink power density requirements (based on the information contained in the application) with all adjacent satellite networks within 6° of orbital separation from its satellite(s), and the operations will not violate any existing coordination agreement for its satellite(s) with other satellite systems. If both satellites involved in a coordination are U.S.-licensed, the statement must be signed by the specified satellite operator and by the operator of the adjacent satellite network.”

The circumstances are distinguishable when the adjacent satellite is not U.S.-licensed. Coordination between U.S.-licensed operators and non-U.S. licensed operators are the subject of formal procedures conducted in accordance with the ITU's Radio Regulations, and once a coordination agreement has been reached, the operators may not be in regular contact. Moreover, renewing contact with the operator of a non-U.S. licensed satellite can be difficult and time consuming, because the operator in some cases will not have a U.S. presence. Having to secure the signature of the adjacent satellite operator when the adjacent operator's satellite is not U.S.-licensed, therefore, carries with it a potential for delay that outweighs the benefits of requiring the signature. For this reason, SIA is not asking that the Commission revise its rule in the case of coordination between the target operator and the operator of an adjacent satellite that is not U.S.-licensed.

5. The Commission should modify the arc within which the operator of the target satellite must coordinate under § 25.220(e)(1).

Under the § 25.220(e)(1) coordination procedures discussed in the preceding section, the operator of the target satellite must coordinate with the operators of all satellites that are located within six degrees of the target satellite. In the R&O, however, the Commission stated that as a matter of policy it would not require coordination for a full (plus or minus) six degrees in certain circumstances:

If an earth station antenna's side lobes do not exceed the Section 25.209 envelope at, for example, four degrees off-axis, then the earth station will not cause harmful interference to a satellite located four degrees away from the target satellite if the power density into that antenna meets the applicable Part 25 rule. In that case, no useful purpose would be served by requiring the target satellite operator to coordinate with the operator of the satellite four degrees away prior to submission of the earth station application.⁵

SIA agrees in principle with the Commission that full six degree coordination need not be required in all cases. SIA believes, however, that cutting off the coordination requirement at the orbital location matching the off-axis angle at which the § 25.209 envelope has been satisfied is insufficient to protect adjacent satellites against interference. This approach does not account for the fact that the precise angle between the axis of the main lobe of the transmit earth station antenna and the adjacent spacecraft will vary depending on the earth station location, the stationkeeping box of the satellite, and the pointing accuracy of the earth station antenna.

In order to protect adjacent satellite operators adequately without requiring coordination unnecessarily, SIA proposes that the need for coordination be evaluated separately with respect to each adjacent operator, based on the level of compliance within the GSO arc spanning $\pm 1^\circ$ from the nominal position of the operator's adjacent satellite. Coordination would not be required with the operator if, within the $\pm 1^\circ$ GSO arc of the adjacent operator's satellite, either: (1) the earth station antenna fully complies with the antenna mask specified in §§ 25.209 (a), (b), and (g) and does not exceed the power and power density levels specified in §§ 25.134, 25.211, and 25.212; or (2) the earth station antenna does not comply with the antenna mask specified in §§ 25.209 (a), (b), and (g), but the applicant has compensated for the lack of compliance with § 25.209 by reducing the input power or power density into the antenna.

The Commission could implement this approach by adding a new § 25.220(e)(1)(v) that would be worded as follows:

“25.220(e)(1)(v)

Coordination under paragraph (e)(1)(ii) is not required with the operator of an adjacent satellite if, within the GSO arc spanning $\pm 1^\circ$ from the nominal position of the operator's adjacent satellite, either: (xx) the earth station antenna fully complies with the antenna mask specified in §§ 25.209 (a), (b), and (g) and does not exceed the power and power density levels specified in

⁵ R&O at ¶47.

§§ 25.134, 25.211, and 25.212; or (yy) the earth station antenna does not comply with the antenna mask specified in §§ 25.209 (a), (b), and (g), but the applicant has compensated for the lack of compliance by reducing the input power or power density into the antenna.”

CONCLUSION

For the reasons stated herein, on reconsideration the rules that the Commission adopted in the R&O should be modified in the manner discussed in this petition.

Respectfully submitted,

SATELLITE INDUSTRY ASSOCIATION

A handwritten signature in black ink, appearing to read "David Cavossa". The signature is fluid and cursive, with a large loop at the end.

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July 5, 2005