

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

In the Matter of)
)
Procedures to Govern the Use of Satellite) IB Docket No. 02-10
Earth Stations on Board Vessels in the 5925-)
6425 MHz/3700-4200 MHz Bands and 14.0-)
14.5 GHz/11.7-12.2 GHz Bands)
)

REPLY

Pursuant to Section 1.429 of the Commission’s rules,¹ ViaSat, Inc. (“ViaSat”) replies to the response filed by Maritime Telecommunications Network, Inc. (“MTN”) on April 29, 2010 in the above-captioned proceeding.² MTN responds to the petitions for reconsideration filed by ViaSat³ and The Boeing Company (“Boeing”),⁴ which ask the Commission to modify certain aspects of its new regulatory framework for earth station on vessel (“ESV”) networks.⁵

More specifically, ViaSat’s petition asks the Commission to clarify, with respect to the antenna pointing limits applicable to ESV terminals, that: (i) the “default” 0.2 degree pointing tolerance level is a *peak* level;⁶ (ii) the term “pointing error”⁷ includes both deliberate and non-deliberate forms of mispointing; and (iii) ESV operators may vary simultaneously from

¹ 47 C.F.R. § 1.429.

² Consolidated Response of Maritime Telecommunications Network, Inc., IB Docket No. 02-10 (Apr. 29, 2010) (“MTN Response”).

³ Petition for Clarification or Reconsideration of ViaSat, Inc., IB Docket No. 02-10 (Oct. 15, 2009) (“ViaSat Petition”).

⁴ Petition for Reconsideration of The Boeing Company, IB Docket No. 02-10 (Oct. 15, 2009) (“Boeing Petition”).

⁵ Report and Order, 24 FCC Rcd 10369 (2009).

⁶ See 47 C.F.R. § 25.222(a)(1)(ii)(A).

⁷ See 47 C.F.R. §§ 25.222(a)(1)(ii) and 25.222(a)(1)(iii).

both “default” pointing tolerances *and* the Commission’s off-axis EIRP density (“OAED”) mask, provided those variances have been coordinated with adjacent satellite networks.

Notably, neither MTN nor Boeing—the only other parties participating in this proceeding on reconsideration—oppose these proposed clarifications. In fact, with the exception of one relatively minor issue, there appears to be a consensus on the various proposals advanced by the parties. Therefore, ViaSat believes the Commission can and should implement Boeing’s and ViaSat’s proposed clarifications without delay.

While MTN does not oppose ViaSat’s requested clarifications on antenna pointing, MTN does ask the Commission to “proceed with caution” so that accommodating this proposal does not result in inconsistencies in Commission rules.⁸ As an initial matter, ViaSat seeks clarification of certain aspects of the ESV antenna pointing rules in order to *cure* vagaries and internal inconsistencies in those rules—a point MTN does not dispute. The Commission should not hesitate to address *actual and documented* issues with its rules because of the *unsubstantiated possibility* that other issues *could* emerge as a result. In any event, ViaSat is confident that the Commission can make the proposed clarifications in a manner that ensures consistency across its rules.

While MTN notes that ViaSat did not specifically ask the Commission to make the same clarifications to Section 25.221 (governing C-band ESV operations) as it requested with respect to both Section 25.222 (governing Ku-band ESV operations) and Section 25.226 (governing vehicle-mounted earth station (“VMES”) operations),⁹ the reason is simple. ViaSat did not address Section 25.221 because it does not have particular views on C-band ESV

⁸ See MTN Response at 3-4.

⁹ See Petition for Reconsideration of ViaSat, Inc., IB Docket No. 07-101 (Dec. 4, 2009) (“ViaSat VMES Petition”).

operations. The public comment process in rulemakings allows entities who have such views, such as MTN, to identify additional places where the Commission's rules could be conformed and made consistent. ViaSat does not object to parallel clarifications being made to that section. After all, as MTN suggests, such clarifications would ensure uniformity in the Commission's rules.

Indeed, ViaSat supports efforts to harmonize the Commission's rules for ESV and VMES systems, including Boeing's proposal that the Commission revise the ESV rules to specifically account for the operation of ESV networks employing variable power-density control, including certain code-division multiple access ("CDMA") systems.¹⁰ As ViaSat has explained in its parallel petition for reconsideration of certain aspects of the Commission's VMES rules, spectrally-efficient variable power-density systems significantly enhance the provision of affordable mobile broadband services to the public, and actually reduce the likelihood of harmful interference (as compared to systems that operate terminals at the same, fixed power-density levels).¹¹ Accordingly, ViaSat supports rule clarifications that would provide the regulatory certainty necessary to develop and implement such systems (*e.g.*, making clear that, in the case of variable power-density systems using CDMA protocols, OAED limits are calculated by assuming an "N" equal to one¹²—a change that Boeing supports,¹³ and to which MTN does not object¹⁴).

¹⁰ See Boeing Petition at 8.

¹¹ See ViaSat VMES Petition at 3.

¹² *Id.* at 12. See also 47 C.F.R. § 25.226(a)(3).

¹³ See Boeing Petition at 8.

¹⁴ See MTN Response at 2.

ViaSat specifically supports Boeing’s suggestion that ESV systems employing variable power-density control be allowed to operate with ALSAT authority, and without any requirement that they maintain effective aggregate power density at a level that is roughly 20 percent (1 dB) below the power-density levels at which other types of ESV (and VMES and very small aperture terminal (“VSAT”)) terminals routinely are allowed to operate.¹⁵ These constraints make little sense in light of Commission efforts to remove unnecessary and counterproductive constraints on the ability of network operators to provide mobile broadband services to the public. Notably, the National Broadband Plan identifies “flexible access to spectrum” as “an essential innovation policy that the FCC should continue to develop.”¹⁶ Similarly, the National Broadband Plan seeks to eliminate unnecessary technical restrictions on the use of spectrum—including overly conservative prophylactic limits—recognizing that such unnecessary constraints harm the ability of network operators to close the broadband availability gap.¹⁷

Moreover, as explained in ViaSat’s VMES petition, the types of unnecessary restrictions that Boeing seeks to eliminate in the ESV context in fact are contrary to the public interest because:

¹⁵ See Boeing Petition at 8.

¹⁶ See Federal Communications Commission, *Connecting America: The National Broadband Plan*, at 79 (2010), available at <http://www.broadband.gov>.

¹⁷ For example, the National Broadband Plan proposes revising Wireless Communications Service (“WCS”) technical rules, including out-of-band emission limits, to enable robust use of WCS spectrum while protecting other users from harmful interference. *Id.* at 85. The Plan also proposes updating broadcast technical rules to “enable stations to operate at currently prohibited spacing on the same or adjacent channels without increasing interference to unacceptable levels” in order to free spectrum for broadband use, and supports the further development and deployment of “opportunistic” spectrum uses. *Id.* at 89, 95.

- (i) There is no record evidence to suggest that the use of variable power-density control poses a risk of harmful interference, or that operators of terminals with that capability are not able to comply with the same power-density levels applicable to other types of earth stations;
- (ii) Variable power-density control systems are actually less “complex,” with a lower potential for causing harmful interference, than many CDMA and time-division multiple access (“TDMA”) systems, which are not subject to any requirement to reduce power-density levels to provide some general “margin for error;”
- (iii) Any applicant proposing to employ variable power-density control could be required to “make a detailed showing of the measures it intends to employ” to satisfy the applicable power-density limit, giving the Commission, in the licensing process, a full opportunity to review the sufficiency of such measures, and precluding the need to impose an inflexible, *ex ante* power reduction requirement;¹⁸ and
- (iv) As acknowledged by the Commission, these restrictions would “impact the capacity and robustness of the relevant . . . networks,”¹⁹ sharply limiting network efficiency and flexibility while having a direct, quantifiable, and adverse impact on the ability of licensees to provide mobile broadband services to the public—without any offsetting benefit.

Accordingly, ViaSat respectfully requests that the Commission reconsider its ESV rules as Boeing and ViaSat suggest and, more specifically, that the Commission implement any rule changes in a manner consistent with the clarifications of the VMES rules sought by ViaSat in that proceeding.

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¹⁸ This would provide precisely the type of “case-by-case” review that MTN supports, *see* MTN Response at 3, but without imposing the onerous, expensive, and time-consuming requirements that would flow from reliance on Section 25.226(a)(3)(ii) as a basis for exceeding “default” power density limits (*e.g.*, completing coordination with all adjacent satellite operators, operating without ALSAT authority, operating within “default” antenna pointing limits, etc.).

¹⁹ *Amendment of Parts 2 and 25 of the Commission's Rules to Allocate Spectrum and Adopt Service Rules and Procedures to Govern the Use of Vehicle-Mounted Earth Stations in Certain Frequency Bands Allocated to the Fixed-Satellite Service*, Report and Order, 24 FCC Rcd 10414, at ¶ 118 (2009).

For the reasons set forth herein, ViaSat urges the Commission to grant ViaSat's petition for reconsideration in an expeditious manner.

Respectfully submitted,

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May 12, 2010

CERTIFICATE OF SERVICE

I, Jarrett S. Taubman, an attorney at the law firm of Latham & Watkins LLP, hereby certify that on this 12th day of May, 2010, I served a copy of the foregoing Reply on the following, via first-class mail, postage prepaid:

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