

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

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In the Matter of )  
)  
contactMEO Communications, LLC ) File Nos. SAT-LOA-19971222-00222  
) SAT-AMD-20040322-00057  
) SAT-AMD-20040719-00141  
and )  
)  
Northrop Grumman Space & Mission ) File Nos. SAT-LOA-19970904-00080/84  
Systems Corporation ) SAT-LOA-19971222-00219  
) SAT-AMD-20031104-00324  
) SAT-AMD-20040312-00030/34  
) SAT-AMD-20040719-00136/40  
)  
Applications for Authority to Launch and )  
Operate Geostationary Orbit and )  
Non-Geostationary Orbit Satellites in the )  
Fixed-Satellite Service )

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CONSOLIDATED REPLY OF SES AMERICOM, INC.

SES AMERICOM, Inc. ("SES AMERICOM"), by its attorneys and pursuant to Section 25.154 of the Commission's Rules, 47 C.F.R. § 25.145, hereby replies to the Oppositions of contactMEO Communications, LLC ("contactMEO") and Northrop Grumman Space & Mission Systems Corporation ("Northrop Grumman") to SES AMERICOM's Consolidated Petition to Deny the above-captioned applications. SES AMERICOM demonstrated in its Petition that contactMEO and Northrop Grumman have proposed spectrum use that conflicts with the Commission's band plan for Ka-band spectrum without justifying a waiver of that plan.<sup>1</sup> Nothing in the applicants' Oppositions cures this fundamental flaw.

<sup>1</sup> Consolidated Petition to Dismiss or Deny of SES AMERICOM, Inc., filed Sept. 13, 2004 ("SES AMERICOM Petition"). EchoStar Satellite LLC also filed Petitions to Deny against both the contactMEO and Northrop Grumman applications.

## INTRODUCTION

In adopting the Ka-band plan, the Commission determined that sharing between geostationary orbit ("GSO") and non-geostationary orbit ("NGSO") systems was not generally feasible and accordingly segmented use of the band. *See* SES AMERICOM Petition at 4-5. Northrop Grumman and contactMEO clearly would prefer that the International Bureau completely disregard the history of the Ka-band plan's development here. However, unless and until the Commission conducts a rulemaking to re-evaluate its determination that sharing is not possible, and establishes ground rules for spectrum sharing, the current restrictions on spectrum use must be applied. Consistent with prior precedent, the Commission must deny the contactMEO and Northrop Grumman Ka-band applications.

### **I. THE APPLICANTS HAVE NOT JUSTIFIED THEIR PROPOSED USE OF GSO SPECTRUM BY NGSO SATELLITES**

As SES AMERICOM explained in its Petition, contactMEO and Northrop Grumman have not justified their requests for waiver of the Ka-band plan to permit their proposed NGSO satellites to use spectrum allocated on a sole primary basis to GSO systems. In support of the waiver requests, the applicants rely solely on the assertion that their operations will comply with equivalent power flux-density ("EPFD") limits specified in Article 22 of the ITU Radio Regulations. This reliance is misplaced because there has been no Commission action on the Ka-band EPFD limits. *SES AMERICOM Petition at 4-7.*

SES AMERICOM pointed out that in a comparable situation involving EPFD limits adopted internationally for Ku-band co-frequency operations among NGSO and GSO systems, the Commission conducted a rulemaking proceeding to consider whether the limits were appropriate for U.S. domestic implementation. *Id.* at 6-7. In initiating that proceeding (ET

Docket No. 98-206), the Commission made very clear that notwithstanding the extensive analysis of the issues by an international study group, the Commission intended to develop an independent record concerning the adequacy of the limits to protect U.S. satellite operations.<sup>2</sup> Conversely, the Commission has not yet even initiated a proceeding to review the Ka-band EPFD limits. In these circumstances, the applicants here may not rely on those limits to justify a departure from the Commission's band plan. See SES AMERICOM Petition at 7.

In their responses, both Northrop Grumman and contactMEO suggest that the Commission's ultimate decision to adopt the international EPFD limits for the Ku-band should be read as an endorsement of the Ka-band EPFD limits as well.<sup>3</sup> However, there is no foundation for this leap of logic. Most significantly, the applicants' argument ignores the fact that the Commission expressly decided against permitting secondary use of Ka-band GSO downlink spectrum by NGSO systems *after* the international Ka-band EPFD limits were adopted.<sup>4</sup>

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<sup>2</sup> SES AMERICOM Petition at 7, *quoting* 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 and 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, *Notice of Proposed Rulemaking*, 14 FCC Rcd 1131, 1141 (1998).

<sup>3</sup> See Northrop Grumman Opposition at 11-12; contactMEO Opposition at 2-3 n.6.

<sup>4</sup> See Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, *Report and Order*, 15 FCC Rcd 13430, 13456 (2000); *aff'd* 16 FCC Rcd 19808, 19822 (2001). Both the initial decision not to permit secondary NGSO use of GSO 18 GHz spectrum and the order on reconsideration affirming that decision were issued after the conclusion of WRC-2000.

Furthermore, it is crystal clear that the evaluation of GSO/NGSO sharing in Docket 98-206 and the adoption of EPFD criteria were limited to the Ku-band.<sup>5</sup> In fact, in its one hundred and thirty pages, the *Ku-Band Sharing Order* contains only one reference to the Ka-band EPFD limits, in a background paragraph describing the actions taken at WRC-97. *Id.* at 4106. In contrast, the Order has an extensive and detailed analysis of the adequacy of the EPFD limits in each segment of the Ku-band at issue. The attempt by Northrop Grumman and contactMEO to equate the status of the Ku-band and Ka-band EPFD limits ignores the care that the Commission properly takes to prevent unacceptable interference, reflected most prominently in the Ka-band segmentation itself. The Commission ultimately incorporated the Ku-band limits into its rules only after an exhaustive rulemaking proceeding in which all interested parties had an opportunity to comment. The same procedures are necessary in the context of the Ka-band EPFD limits, which to date have not been considered at all in a Commission proceeding.

In fact, the passages from the *Ku-Band Sharing Order* quoted by Northrop Grumman and contactMEO actually support the points SES AMERICOM made in its Petition. We observed that the Commission was emphatic in its *Notice* in Docket 98-206 that it would conduct its own examination of the Ku-band limits in order to determine whether they were appropriate given domestic spectrum use and requirements. The language cited by the applicants in their Oppositions makes clear that the Commission did exactly that: in determining whether

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<sup>5</sup> See, e.g., 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 and 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, *First Report and Order and Further Notice of Proposed Rulemaking*, 16 FCC Rcd 4096, 4099 (2000) ("*Ku-Band Sharing Order*") (decision permits NGSO providers to operate "in certain segments of the Ku-band").

to implement the Ku-band limits in the U.S., the Commission relied not just on the results of the international study process but also on the record developed in the Docket 98-206 proceeding.<sup>6</sup>

No such record exists with respect to the Ka-band limits because the Commission has never sought comment on their appropriateness for U.S. operations. Perhaps after inviting comment on the issues, the Commission ultimately will conclude that the Ka-band limits are suitable for domestic implementation, as it did with the Ku-band limits. We note, however, that the international Ka-band limits were developed for sharing between co-primary GSO and NGSO systems, while the Commission expressly decided against co-primary allocations in its Ka-band plan. In fact, in a portion of the GSO spectrum to which Northrop Grumman and contactMEO seek access, there is no allocation at all for NGSO systems, and in the remaining spectrum, NGSO operations are secondary to GSO systems. *See* SES AMERICOM Petition at 6 n.11.

In any event, the final decision is for the Commission to make once it has the opportunity to consider all the evidence. Until the Commission revisits its conclusion that Ka-band GSO/NGSO sharing is not feasible, the international Ka-band EPFD limits have no force domestically and cannot be used as the basis for a waiver of the Commission's established Ka-band spectrum rules. Accordingly, the requests by contactMEO and Northrop Grumman to have NGSO spacecraft operate in GSO spectrum must be denied.

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<sup>6</sup> *See* Northrop Grumman Opposition at 11-12, *quoting Ku-Band Sharing Order*, 16 FCC Rcd at 4109 (“the agreements reached within the international arena *and the record developed in response to these international agreements*” give the Commission an adequate basis to resolve sharing issues) (emphasis added); contactMEO Opposition at 3 n.6, *quoting Ku-Band Sharing Order*, 16 FCC Rcd at 4130 (“based upon the technical work adopted by the WRC-2000 *and the record developed in this proceeding*” the Commission determines that the Ku-band EPFD limits are appropriate for adoption domestically) (emphasis added).

**II. COMMISSION PRECEDENT REQUIRES THAT THE APPLICANTS' REQUESTS TO OPERATE GSO SATELLITES IN NGSO SPECTRUM BE DENIED**

The SES Petition also demonstrated that the proposals by contactMEO and Northrop Grumman conflict with Commission precedent insofar as they involve operation of GSO satellites using spectrum allocated to NGSO systems. SES AMERICOM Petition at 7-11. The Commission has consistently rejected requests by other GSO operators to access Ka-band NGSO spectrum, most recently in its decision earlier this year denying applications filed by EchoStar.<sup>7</sup> This line of decisions requires rejection of the contactMEO and Northrop Grumman proposals as well.

In their Oppositions, the applicants strain but fail to distinguish their proposals from the previously rejected applications of EchoStar. Northrop Grumman and contactMEO make much of the "technical showings" they submitted with their applications to support their claims of non-interference.<sup>8</sup> But those showings are based on exactly the same mechanism previously relied upon by EchoStar— a commitment to cease operations in the NGSO spectrum when necessary to avoid interference to NGSO systems.<sup>9</sup> The Bureau determined that EchoStar's promise to terminate use of the NGSO spectrum upon notification that an NGSO system was experiencing harmful interference was insufficient to justify a waiver of the Ka-band allocation rules. *EchoStar Order* at ¶ 16. The same conclusion is required here because the proposed interference avoidance approach is exactly the same.

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<sup>7</sup> EchoStar Satellite LLC, *Memorandum Opinion and Order*, DA 04-1167, Sat. Div. rel. Apr. 29, 2004 ("*EchoStar Order*").

<sup>8</sup> See contactMEO Opposition at 6; Northrop Grumman Opposition at 7.

<sup>9</sup> EchoStar makes the same observation in its Petitions against the applications. See *EchoStar Petitions to Deny* at 5-6.

Furthermore, because the Ka-band plan is premised on segmentation of spectrum, the Commission has never even developed standards for evaluating sharing between NGSO and GSO systems. As SES AMERICOM explained in its Petition, the International Bureau in the *EchoStar Order* re-emphasized that there are no protection criteria for NGSO systems, so the Commission cannot possibly evaluate the impact of a sharing proposal on NGSO operations. SES AMERICOM Petition at 8-9, citing *EchoStar Order* at ¶ 17. Northrop Grumman responds with the conclusory statement that its proposed operations would have “no noticeable impact” on other NGSO systems with applications pending before the Commission. Northrop Grumman Opposition at 15. Again, however, it is for the Commission, not Northrop Grumman, to determine whether sharing is possible, and if so, what the technical standards for sharing should be.<sup>10</sup>

Alternatively, Northrop Grumman and contactMEO claim that no waiver of the spectrum plan is needed for their GSO satellites to operate in NGSO spectrum because the satellites are all part of an NGSO system. SES AMERICOM’s Petition conclusively rebutted this novel assertion, demonstrating that the spacecraft proposed by the applicants fit squarely within Commission definitions of geostationary orbit satellites. SES AMERICOM Petition at 9-10. The applicants, however, astonishingly continue to insist that for purposes of the

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<sup>10</sup> Northrop Grumman and contactMEO also each point out that no other NGSO applicant objected to the proposed use of NGSO spectrum here. Northrop Grumman Opposition at 16; contactMEO Opposition at 6 n.14. This, however, proves nothing. Since Northrop Grumman and contactMEO are proposing exactly the same thing, it is hardly surprising that neither company objected to the other’s proposal. Nor is SkyBridge’s silence hard to account for, since according to press reports, the entire SkyBridge system was placed on hold in early 2002. See “Alcatel Halts Plans for SkyBridge,” <http://www.spaceandtech.com/digest/flash2002/flash2002-001.shtml> (Jan. 3, 2002).

Commission's spectrum plans, all their satellites should be treated as non-geostationary, even those whose orbits the applicants concede are in fact geostationary.<sup>11</sup>

In other words, the applicants contend that the Commission should grant spectrum access rights here without regard to the actual orbital characteristics of the satellites at issue. The obvious and fatal flaw in this argument is that the Commission specifically segmented the available Ka-band satellite spectrum based *solely on satellite orbital characteristics*. The distinctions drawn by the Commission in assigning spectrum reflect the practical reality that the interference potentials of satellite systems are a function of their orbits. While geostationary satellites can re-use spectrum every two degrees throughout the arc, nongeostationary satellite systems generally cannot share spectrum in the same coverage area without special measures to avoid interference. The applicants' attempts to re-label their satellites to suit their own purposes cannot change the operational facts.<sup>12</sup>

Northrop Grumman in particular appears to be trying to manipulate the spectrum rules to its own advantage. It proposes to have several of its GSO satellites operate in GSO-primary spectrum in addition to NGSO-primary spectrum.<sup>13</sup> However, despite its claim that all the GSO satellites are all part of a single NGSO system and should be treated as such, Northrop Grumman does not request a waiver of the spectrum rules to permit these satellites to operate in GSO spectrum. Apparently Northrop Grumman hopes to have the GSO satellites treated as GSOs for purposes of seeking access to GSO spectrum but as NGSOs for purposes of seeking

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<sup>11</sup> See Northrop Grumman Opposition at 13; contactMEO Opposition at 6 n.14.

<sup>12</sup> If the applicants were to succeed in this definitional sleight-of-hand, the logical next step would be to propose adding some microwave links as part of their systems, and then argue that their satellites should be allowed to operate in spectrum set aside for the terrestrial fixed service as well.

<sup>13</sup> See Amendment of Northrop Grumman Space & Mission Systems Corporation, File No. SAT-AMD-20040312-00030 ("Northrop Grumman Amendment"), Narrative at 13-14.



access to NGSO spectrum. Northrop Grumman's overreaching attempt to have it both ways only highlights the basic illogic of its underlying argument.

Finally, SES AMERICOM's Petition noted that the Commission has not yet addressed EchoStar's request for initiation of a rulemaking concerning GSO operations in NGSO spectrum, a request that SES AMERICOM supports. SES AMERICOM Petition at 10-11 & n.22. Until the rulemaking petition has been addressed, grant of any individual applications for GSO access to NGSO bands would give the applicants unfair precedence over other GSO operators with an interest in access to this spectrum. SES AMERICOM noted that Northrop Grumman itself raised this point in its objections to the EchoStar applications proposing Ka-band GSO satellites that would operate in NGSO spectrum.<sup>14</sup>

Northrop Grumman now alleges that SES AMERICOM's concern about Northrop Grumman gaining date priority over other potential applicants is moot because Northrop Grumman has proposed only "NGSO" use of the bands. Northrop Grumman Opposition at 16. This statement is simply false. Clearly, granting Northrop Grumman or contactMEO rights to use NGSO Ka-band spectrum at the GSO orbital locations they have requested would preclude any future GSO applicant from acquiring the same rights at those positions.

Northrop Grumman goes on to say that if its applications are granted, there would still be a "plethora" of orbital locations from which other GSO operators could seek to make use of the NGSO-primary bands. *Id.* Of course, the same thing would have been true if the Commission had granted the EchoStar applications. In short, Northrop Grumman provides no

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<sup>14</sup> SES AMERICOM Petition at 10, *citing* Consolidated Petition to Dismiss of Northrop Grumman Space & Mission Systems Corporation, File Nos. SAT-LOA-20030827-00180/00182/00185/00187, filed Oct. 24, 2003, at 2.

reason here why it should be granted an advantage over other potential applicants that it claimed EchoStar should be denied.

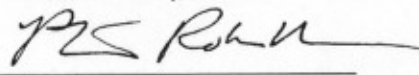
### CONCLUSION

In the proceedings leading up to the adoption of its Ka-band spectrum allocations, the Commission fully considered the prospects for sharing between GSO and NGSO operations and determined that sharing was not feasible. Any re-examination of those conclusions must take place in a rulemaking proceeding to permit all interested parties to weigh in.

Unless and until the Commission conducts a rulemaking to re-evaluate its determination that sharing is not possible, and establishes ground rules for spectrum sharing, the current restrictions on spectrum use must be applied. The waivers requested by contactMEO and Northrop Grumman here conflict with the underlying purpose for segregating the Ka-band satellite spectrum and must therefore be denied.

Respectfully submitted,

**SES AMERICOM, INC.**

By: 

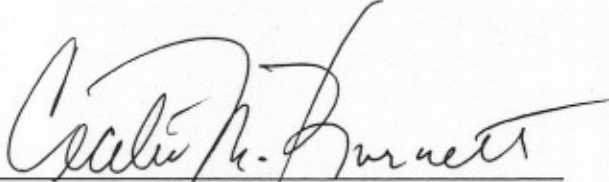
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October 8, 2004

**CERTIFICATE OF SERVICE**

I, Cecelia Burnett, do hereby certify that on this 8<sup>th</sup> day of October, 2004, copies of the foregoing "Consolidated Reply of SES Americom, Inc." were served to the following parties by first class mail:



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