

May 18, 2004

Mr. Peter Hadinger
Northrop Grumman Space & Mission Systems Corporation
1000 Wilson Boulevard
Arlington, VA 22209

Re: Northrop Grumman Space & Mission Systems Corporation Proposed Ka-Band/V-Band Hybrid Fixed Satellite Service Network:
Application and Amendments to Application for Authority to Operate a Global Satellite System Employing Geostationary and Non-geostationary Satellites in the Fixed Satellite Service – File Nos.
SAT-LOA-19970904-00080, SAT-AMD-19971222-00219, SAT-AMD-20031104-00324, SAT-AMD-20040312-00030 (S2254)
Applications and Amendments to Applications For Authority to Operate a Geostationary Satellite in the Fixed Satellite Service – File Nos.
SAT-LOA-19970904-00081, SAT-AMD-20040312-00032 (S2256)
SAT-LOA-19970904-00082, SAT-AMD-20040312-00033 (S2257)
SAT-LOA-19970904-00083, SAT-AMD-20040312-00034 (S2258)
SAT-LOA-19970904-00084, SAT-AMD-20040312-00031 (S2255)

Dear Mr. Hadinger:

On March 12, 2004, Northrop Grumman Space & Mission Systems Corporation (Northrop Grumman) filed amendments to pending satellite applications for authority to launch and operate non-geostationary satellite orbit (NGSO) satellites and geostationary-orbit (GSO) satellites as part of a proposed Ka-Band/V-Band hybrid fixed satellite service (FSS) network, referred to as the Global EHF Satellite Network (GESN). Northrop Grumman filed these amendments in response to the Commission's January 29, 2004 Public Notice inviting existing V-Band applicants to amend pending applications to conform to the Commission's revised V-Band rules.¹

Section 25.114(c) of the Commission's rules² requires all space station applicants, to submit all applicable items of information listed in its subsections. In the *First Space Station Reform Order*,³ the

¹ See *International Bureau Invites Applicants to Amend Pending V-Band Applications*, DA 04-234, Report No. SPB-199 (rel. January 29, 2004).

² 47 C.F.R. § 25.114(c).

³ Amendment of the Commission's Space Station Licensing Rules and Policies, *First Report and Order and Further Notice of Proposed Rulemaking*, IB Docket No. 02-34, 18 FCC Rcd 10760, 10852 (para. 244) (2003) (*First Space Station Reform Order*); International Bureau To Streamline Satellite And Earth Station Processing, *Public Notice*, Report No. SPB-140, October 28, 1998 (emphasizing the obligation to comply with 47 C.F.R. § 24.114(c) and stating that applications that did not comply would be dismissed).

Commission affirmed the policies embodied in this rule by continuing to require applications to be substantially complete when filed.⁴ As the Commission noted, the procedures and rules it adopted will enable the Commission to establish satellite licensees' operating rights clearly and quickly, and as a result, allow licensees to provide service to the public much sooner than might be possible under our previous licensing procedures.⁵ Finding defective applications acceptable for filing is not consistent with the rules and policies adopted by the Commission in the *First Space Station Reform Order* and only serves to create uncertainty and inefficiency in the licensing process.

Northrop Grumman states in the technical appendix⁶ for each of the amendments it filed on March 12, 2004, that the technical information contained in the amendments “replaces, in its entirety, the technical information” in the initial applications. However, in each case, Northrop Grumman failed to submit a two-degree spacing interference analysis for its GSO FSS network operating in the 37.5-42.0 GHz and 47.2-50.2 GHz frequency bands (V-Band) as required by Section 25.140(b)(2) of the Commission’s rules.⁷ Consequently, the amendments as well as the underlying applications are defective with respect to the V-band portion of each GSO FSS application under Section 25.114(b)⁸ of the Commission’s rules, and must be returned pursuant to Section 25.112(a).⁹

Accordingly, we dismiss, to the extent indicated, the following amendments and underlying applications:

<u>File No.</u>	<u>Location/ Call Sign</u>	<u>Proposed Spectrum</u>	<u>Reason for Dismissal</u>
SAT-AMD-20040312-00031 SAT-LOA-19970904-00084	119° W.L. (S2255)	Up-Link: 47.2-50.2 GHz (Gateway): V-Band Down-Link: 37.5-42 GHz (Gateway): V-Band	Incomplete: Interference study not provided. 47 CFR §§ 25.114(b), 25.140(b)(2)
SAT-AMD-20040312-00032 SAT-LOA-19970904-00081	89° W.L. (S2256)	Up-Link: 47.2-50.2 GHz (Gateway): V-Band Down-Link: 37.5-42 GHz (Gateway): V-Band	Incomplete: Interference study not provided. 47 CFR §§ 25.114(b), 25.140(b)(2)
SAT-AMD-20040312-00033 SAT-LOA-19970904-00082	15° E.L. (S2257)	Up-Link: 47.2-50.2 GHz (Gateway): V-Band Down-Link: 37.5-42 GHz (Gateway): V-Band	Incomplete: Interference study not provided. 47 CFR §§ 25.114(b), 25.140(b)(2)

⁴ *First Space Station Reform Order*, 18 FCC Rcd at 10852 (para. 244), citing *Space Station Reform NPRM*, 17 FCC Rcd at 3875 (para. 84).

⁵ *First Space Station Reform Order*, 18 FCC Rcd at 10765-66 (para. 4).

⁶ See Page 1 in the Technical Appendix for Application File Numbers SAT-AMD-20040312-00030, SAT-AMD-20040312-00031, SAT-AMD-20040312-00032, SAT-AMD-20040312-00033, and SAT-AMD-20040312-00034.

⁷ 47 C.F.R. § 25.140(b)(2). See also Clarification of 47 C.F.R. § 25.140(b)(2) Space Station Application Interference Analysis, Public Notice In re Int'l Bureau Satellite Div. Info, 2003 WL 22850140 (F.C.C., Dec 03, 2003) (NO. DA 03-3863).

⁸ 47 C.F.R. § 25.114(b).

⁹ 47 C.F.R. § 25.112(a).

SAT-AMD-20040312-00034	116.5°	Up-Link: 47.2-50.2 GHz (Gateway): V-Band	Incomplete: Interference study not provided. 47 CFR §§ 25.114(b), 25.140(b)(2)
SAT-LOA-19970904-00083	E.L. (S2258)	Down-Link: 37.5-42 GHz (Gateway): V-Band	

We note, however, that the following amendments and underlying applications relating to orbit locations 89° W.L. and 116° E.L., to the extent indicated, are complete and will be placed on Public Notice.

<u>File No.</u>	<u>Location/ Call Sign</u>	<u>Proposed Spectrum</u>
SAT-LOA-19970904-00081	89° W.L.	Up-Link: 28.35-28.6 GHz (Primary)
SAT-AMD-20040312-00032	(S2256)	29.25-29.5 GHz (Primary)
		Down-Link: 18.3-18.8 GHz (Primary)
SAT-LOA-19970904-00083	116.5°	Up-Link: 28.35-28.6 GHz (Primary)
SAT-AMD-20040312-00034	E.L. (S2258)	29.25-30 GHz (Primary)
		Down-Link: 18.3-18.8 GHz (Primary)
		19.7-20.2 GHz (Primary)

We also dismiss the amendments and underlying application filed by Northrop Grumman for NGSO satellites that will operate in highly-elliptical orbits (HEO) and in GSO orbit locations at 119° W.L., 89° W.L., 15° E.L., and 116.5° E.L. The orbital debris mitigation plan submitted by Northrop Grumman states that its HEO satellites “will have their perigee altitude lowered to less than 250 km such that the satellite will re-enter the atmosphere in less than 25 years.”¹⁰ Under the Commission rules, each NGSO FSS applicant must “submit a casualty risk assessment if planned post-mission disposal involves atmospheric reentry of the spacecraft.” 47 C.F.R. 25.145(c)(3). Northrop Grumman failed to include this risk assessment as part of its orbital debris mitigation plan statement in each of the amendments or the underlying application. Because Northrop Grumman has failed to include this risk assessment, we find the amendments and the underlying application unacceptable for filing, and therefore dismiss, without prejudice to refile, the following NGSO FSS application and related amendments:

<u>File No.</u>	<u>Location</u>	<u>Proposed Spectrum</u>	<u>Reason for Dismissal</u>
SAT-AMD-20040312-00030	3 proposed	Up-Link: 28.6-29.1 GHz (Primary)	Incomplete orbital debris mitigation plan – failure to provide casualty risk assessment 47 CFR § 25.145(c)(3)
SAT-AMD-20031104-00324	NGSO/HEO	29.5-30 GHz (Secondary)	
SAT-AMD-19971222-00219	satellites and	47.2-50.2 GHz (Gateway): V-Band	
SAT-LOA-19970904-00080	4 proposed	Down-Link: 18.8-19.3 GHz (Primary)	
	GSO satellites	19.7-20.2 GHz (Secondary)	
		37.5-42 GHz (Gateway): V-Band	

We also note, however, that Northrop Grumman proposes to operate its GSO satellites using NGSO spectrum, on a secondary, non-harmful interference basis to other NGSO satellite systems. Northrop Grumman’s proposed uplink band, 28.6-29.1 GHz is designated to NGSO FSS on a primary basis and GSO FSS on a secondary basis.¹¹ In considering requests to operate on a secondary basis, the Commission has always required applicants to demonstrate that their proposed secondary operations are not likely to cause interference to primary operations. Northrop Grumman did not submit any technical showing demonstrating that its proposed GSO satellites can operate compatibly with other NGSO FSS systems.

¹⁰ Northrop Grumman NGSO application, SAT-AMD-20040312-00030, FCC Form 312, Exhibit G.

¹¹ Stations operating in primary services are protected from interference from stations of secondary services. Stations operating in the secondary service cannot cause harmful interference or claim protection from harmful interference from stations of a primary service. 47 C.F.R. § 2.104(d).

Northrop Grumman also requested a waiver to operate GSO satellites in the 18.8-19.3 GHz band (space-to-Earth). This spectrum is designated for NGSO FSS only. A request to waive this rule and operate GSO satellites in this spectrum would have to, among other things, show that the proposed use would not undermine the policy objective of the rule in question, which establishes a dedicated band for NGSO FSS use on a primary basis to encourage the development of such systems. Also, the applicant must submit a technical showing demonstrating that its proposed GSO satellites can operate compatibly with other NGSO FSS systems. Northrop Grumman did not submit such showings. To date, no GSO applicant has demonstrated that it can operate on a non-harmful interference basis to NGSO operations and, consequently, the Commission has not authorized GSO FSS operations in spectrum designated for NGSO FSS services.¹²

Accordingly, to the extent Northrop Grumman failed to submit information and did not request a waiver, we find the applications, as amended, defective. Consequently, Application File Nos. SAT-AMD-20040312-00030, SAT-AMD-20031104-00324, SAT-AMD-19971222-00219, SAT-LOA-19970904-00080, SAT-AMD-20040312-00031, SAT-LOA-19970904-00084; SAT-AMD-20040312-00033, and SAT-LOA-19970904-00082 are dismissed in whole and Application File Nos. SAT-AMD-20040312-00032, SAT-LOA-19970904-00081, SAT-AMD-20040312-00034, and SAT-LOA-19970904-00083 are dismissed in part¹³ without prejudice to refileing.¹⁴

Sincerely,

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¹² See EchoStar Satellite LLC, Applications for Authority to Construct, Launch and Operate Geostationary Satellites in the Fixed-Satellite Service using the Ka and/or Extended Ku-bands at the 83° W.L., 105° W.L., 113° W.L. and 121° W.L. Orbital Locations, *Memorandum Opinion and Order*, DA 04-1167 (rel. April 29, 2004), and cases cited therein.

¹³ As noted, GSO applications and amendments for Ka-Band authorization at the 89° W.L. (SAT-LOA-19970904-00081, SAT-AMD-20040312-00032) and 116.5° E.L.(SAT-LOA-19970904-00083, SAT-AMD-20040312-00034) orbit locations are not dismissed, and will be placed on public notice.

¹⁴ Generally, applications returned to applicants for additional information will not require an additional fee when resubmitted if the resubmitted application is identical to the returned application except for the missing information. See 47 C.F.R. § 1.1109(d).