

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

In the matter of)	
)	
PANAMSAT LICENSEE CORP.)	File Nos. SAT-LOA-19960202-00017
)	SAT-AMD-19960411-0055
Application for authority to launch and operate a)	SAT-AMD-19971119-00187
hybrid communications satellite known at)	SAT-AMD-19991217-00129
68.5°E.L.)	SAT-STA-20001115-00162
)	
)	Call Sign S2229

ORDER AND AUTHORIZATION

Adopted: March 31, 2004

Released: March 31, 2004

By the Chief, Satellite Division, International Bureau:

I. INTRODUCTION

1. In this Order, we authorize PanAmSat Licensee Corp. ("PanAmSat") to operate its PAS-21 satellite (call sign S2229) at the 68.5° E.L. orbit location in the 3.4-3.7 GHz, 10.95-11.2 GHz, 11.45-11.7 GHz, 14.0-14.5 GHz, 6.425-6.725 GHz and 13.75-14.0 GHz frequency bands subject to certain conditions.¹ PanAmSat has operated this satellite on a limited basis pursuant to Special Temporary Authority (STA). This grant will permit PanAmSat to make maximum use of its satellite's payload and provide a full range of services to its customers.

II. BACKGROUND

2. On February 2, 1996 PanAmSat filed an application to launch and operate its PAS-21 satellite at 68.5° E.L. to provide fixed-satellite service (FSS) in the 3.4-3.7/6.425-6.725 GHz bands (C-band) and the 10.95-11.2/11.45-11.7/13.75-14.5 GHz bands (Ku-band). According to PanAmSat, PAS-21's orbital location affords interconnection between the Far East, Asia, Africa and Europe. In addition, PanAmSat notes that spot beams will provide the first direct-to-home services in many countries, in addition to data, voice and other specialized services.²

3. PanAmSat requested that we waive the requirement adopted in the *DISCO I* Order that all

¹ In this order, we also consider several minor amendments filed by PanAmSat. In File No. SAT-AMD-19960411-00055 PanAmSat submitted additional information regarding its financial qualifications. In File No. SAT-AMD-19971119-00187, PanAmSat reflected a change in the ownership of its parent company. In File No. SAT-AMD-19991217-00129, PanAmSat amended its application to reflect certain minor differences in the Ku-band frequency plan as in the PAS-21 application and the satellite as constructed. Specifically: (1) the uplink for the South Africa beam that was previously identified as operating in the 14.0-14.5 GHz band uses only the 14.0-14.25 GHz portion of the band; and (2) the 11.45-11.7 GHz band is no longer used for the India beam or the China beam.

² PanAmSat Application Engineering Statement Section 1.2

applications for international satellite systems would be considered in consolidated processing rounds.³ Such a waiver would have permitted PanAmSat to launch and operate PAS-21 outside of a processing round. PanAmSat also requested that we grant a waiver of the one-step financial qualification showing imposed in the *DISCO I* Order. Traditionally, international satellite operators were permitted to make their financial showings in two stages. GE American Communications, Inc. filed petitions to deny both waiver requests.⁴

4. On September 15, 1998, we granted PanAmSat Special Temporary Authority (STA) to launch and operate the satellite using only Ku-band frequencies.⁵ The STA specified that PanAmSat could not activate any of its C-band transponders until it received further Commission authorization. On November 9, 2000, the Commission granted an STA authorizing PanAmSat to use the following C-band frequencies on PAS-21: 3435-3448 MHz, 3492-3528 MHz, 3532-3555 MHz, and 3617-3648 MHz⁶.

III. DISCUSSION

A. Waiver Request

5. PanAmSat's application was filed after our *DISCO I* Order, which required that all applications for FSS space station licenses filed after January 22, 1996, be considered in consolidated processing rounds. Under this framework, we would place the first-filed application on public notice and invite parties to file other potentially competing applications by a specified cut-off date. We would consider all applications filed by the cut-off concurrently. PanAmSat requested a waiver of this requirement.

6. In its *First Space Station Licensing Reform Order*, the Commission eliminated the requirement for processing rounds to award licenses for satellites in geostationary-satellite-like orbits, such as PAS-21. Instead, the Commission adopted a first-come-first-served process for these satellites.⁷ Under this procedure, the Commission will issue a license to the applicant filing first, if the applicant is qualified and the proposed satellite does not conflict with previously licensed satellites. The Commission said it would apply the amended rules to pending applications where the rights an applicant possessed when it filed its application would not be impaired, an applicant's liability for past conduct would not be increased, or no new duties would be imposed upon applicants with respect to transactions already

³ In the *DISCO I Report and Order* the Commission eliminated all regulatory distinctions between domestic and international satellite systems. Specifically, the Commission required that future applications to launch and operate satellites in what was known as the international arc would be considered in consolidated processing rounds. The Commission also required that such applicants would have to make a full financial showing at the time of filing their applications. See *Amendment to the Commission's Regulatory Policy Governing Domestic Fixed Satellites and Separate International Satellite Systems*, Notice of Proposed Rulemaking, 10 FCC Rcd 7789 (1995)(*DISCO I Notice*); Report and Order, 11 FCC Rcd 2429 (1996) (*DISCO I Report and Order*); recon denied, 16 FCC Rcd 15579 (2001) (*DISCO I Recon Order*).

⁴ PanAmSat's waiver requests were also opposed by Hughes Communications Galaxy, Inc. However, Hughes later withdrew its oppositions to several PanAmSat applications following a transfer of control in which Hughes Electronics Corporation became the owner of over 70% of the issued and outstanding stock of PanAmSat Corporation. Although Hughes did not specifically withdraw its oppositions to the PAS-21 application, we believe that it was an oversight. Thus, we do not consider the Hughes oppositions.

⁵ Letter from Thomas S. Tycz, Chief, Satellite and Radiocommunication Division, International Bureau, to Joseph Godles, Esq., Attorney for PanAmSat (Sept. 15, 1998).

⁶ File No. SAT-STA-20000713-00175 (Nov. 9, 2000). See Letter from Joseph Godles, Esq., Attorney for PanAmSat to Thomas S. Tycz, Chief, Satellite and Radiocommunication Division, International Bureau (Nov. 13, 2000) and Letter from Joseph Godles, Esq., Attorney for PanAmSat to Magalie Salas, Secretary, FCC (Nov. 9, 2000). PanAmSat has filed to renew its STA to operate the satellite's C and Ku-band frequencies. See File No. SAT-STA-20001115-00162

⁷ See *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 10792 (para. 71) (2003).

completed.⁸ We find that application of the amended rules in this case meets these requirements. Since a processing round is not required to award a license to PAS-21, PanAmSat's waiver request is no longer necessary and is dismissed as moot.⁹ We also dismiss GE Americom's opposition as moot. We will consider PanAmSat's application under the first-come, first-served licensing procedure.

B. Qualifications

a. Framework

7. In considering an application to launch and operate a satellite system, we determine whether a grant of the application will serve the public interest.¹⁰ In making this determination, we consider whether the applicant is legally, financially, technically and otherwise qualified to launch and operate the satellite.¹¹ The Commission has, on many occasions found that PanAmSat possesses the requisite legal qualifications to hold a Commission license. With respect to financial qualifications, PanAmSat has launched PAS-21 and is operating it under STA. Since the satellite is launched, PanAmSat has, by definition, demonstrated its financial qualifications to implement the system.¹² We next examine PAS-21's technical parameters and find that the public interest will be served by authorizing PanAmSat to operate the C and Ku-band frequencies set forth in its application subject to the conditions specified below.

b. Technical Qualifications

1. 2° Spacing

8. The Commission's satellite licensing policy for C and Ku-band satellites operating in geostationary satellite orbit is predicated upon two-degree orbital spacing between satellites.¹³ This policy permits the maximum use of the geostationary satellite orbit.

9. We find that PAS-21 complies with our 2° spacing requirements. Consequently, we authorize PanAmSat to operate on all of its proposed frequencies provided that these operations have been successfully coordinated with the operations of adjacent satellites licensed by other countries and subject to additional restrictions in certain frequency bands as discussed below.

2. 13.75-14.0 GHz Frequency Band

10. The 13.75-14.0 GHz band has been allocated domestically and internationally to the fixed-satellite service (FSS), subject to restrictions embodied in footnotes to the domestic and international tables of allocations. Because the 13.75-14.0 GHz band is shared on a primary basis with

⁸ *First Space Station Licensing Reform Order*, 18 FCC Rcd at 10863-10864 (para. 275).

⁹ We also note that PanAmSat has been operating PAS-21 pursuant to STA for over five years. No entity has objected to the original STA, to the amended STA requesting to use the Ku-band frequencies, or to PAS-21's continued operations.

¹⁰ 47 U.S.C. § 309.

¹¹ See *Licensing Space Stations in the Domestic Fixed-Satellite Service*, 58 R.R.2d (P&F) 1267, 1272-3 (1985) (*1985 Orbit Assignment Order*).

¹² We need not therefore require PanAmSat to post a performance bond. See *Loral Skynet do Brasil*, File No. SAT-PDR-20021010-00196, DA 03-4095 FCC Rcd _____ (released Dec. 23, 2003). We also dismiss PanAmSat's amendment providing financial information, File No. SAT-AMD-19960411-0055, as moot.

¹³ For more information regarding the Commission's two-degree spacing policy, see *Licensing Space Stations in the Domestic Fixed-Satellite Service*, 48 F.R. 40233 (Sept. 6, 1983).

the Government radiolocation service and with the forward space-to-space and space-to-Earth links of the NASA Tracking and Data Relay Satellite (TDRS) System in the space research service, earth stations in the United States and its possessions operating with the PAS-21 satellite will require coordination through the National Telecommunications and Information Administration (NTIA) Interdepartment Radio Advisory Committee's (IRAC) Frequency Assignment Subcommittee (FAS).¹⁴ In this regard, we have received a letter from the NTIA requesting that we identify these requirements in any grant of authority to operate a satellite in the 13.75-14.0 GHz band.¹⁵

11. Domestically, Footnotes US337, US356, and US357 to the Table of Frequency Allocations are applicable. Footnote US337 to the U.S. Table of Frequency Allocations was specifically adopted because TDRS operations in this band support manned spaceflight.¹⁶ Footnotes US356 and US357 place certain restrictions on FSS operations.¹⁷ Internationally, Footnotes 5.502 and 5.503 to the International Telecommunication Union (ITU) Radio Regulations also place certain restrictions on FSS operations.¹⁸ As Footnotes US356 and US357 have been adopted domestically, the parallel footnotes in the ITU Radio Regulations (i.e., Footnotes 5.502 and 5.503) have been removed from the U.S. Table of Frequency Allocations. The fundamental difference between the U.S. and international footnotes prior to the modifications made at the 2003 World Radio Conference (WRC-03) is that international footnote 5.503 places equivalent isotropically radiated power (e.i.r.p.) density restrictions on satellites to protect data relay services in six megahertz (13.772 - 13.778 GHz), whereas U.S. Footnote US357 extends this protection to ten megahertz (13.77 - 13.78 GHz). We require that earth stations in the United States and its possessions (U.S. & P) operate in accordance with U.S. Footnotes US356 and US357. For earth stations not in the US&P accessing the PAS-21 satellite, we require operation to be consistent with international footnotes 5.502 and 5.503. When the pre-WRC-03 footnotes apply, we further require that PanAmSat coordinate PAS-21's operations in the four additional MHz with the NASA TDRS system. In the absence of a mutually acceptable coordination agreement with the NASA TDRS system forward space-to-space link within the additional four megahertz highlighted above, the operation of the PAS-21

¹⁴ See *Amendment of Parts 2, 25, and 90 of the Commission's Rules to Allocate the 13.75-14.0 GHz Band to the Fixed-Satellite Service*, ET Docket No. 96-20, Report and Order, 11 FCC Rcd 11951, 11960-61 para. 20 (1996).

¹⁵ See letter from William Hatch, Acting Associate Administrator, Office of Spectrum Management, NTIA, to Roderick Porter, Acting Chief, International Bureau, FCC (May 11, 1999).

¹⁶ Footnote US337 requires that earth stations operating in the 13.75-13.8 GHz band be coordinated through the NTIA IRAC's Frequency Assignment Subcommittee to minimize interference to the forward space-to-space link of the National Aeronautics and Space Administration Tracking and Data Relay Satellite System. 47 C.F.R. § 2.106 US337.

¹⁷ Footnote US356 places a restriction minimum antenna size of 4.5 meters for earth stations operating in the 13.75-14.0 GHz band and indicates a minimum equivalent isotropically radiated power ("e.i.r.p.") that should be used. Footnote US357 limits FSS earth station e.i.r.p. spectral density in the 13.77-13.78 GHz band until those geostationary space stations in the space research service for which advance publication information was received by the ITU prior to 31 January 1992 cease to operate in this band.

¹⁸ Footnotes 5.502 and 5.503 were modified at WRC-03 but both versions are still in effect. Applicability of the pre WRC-03 or post-WRC-03 footnote depends on the date of receipt for which complete coordination information is received (prior or after 4 July 2003) by the ITU. The pre-WRC-03, Footnote 5.502 to the ITU Radio Regulations places certain restrictions on the minimum e.i.r.p. and minimum antenna size (4.5m or larger) for earth stations operating in the 13.75-14.0 GHz band. The post-WRC-03 Footnote 5.502 to the ITU Radio Regulations also places certain restrictions on earth stations with antenna sizes greater than 4.5m but also allows for antenna sizes as small as 1.2m that satisfy certain power flux-density limits. Regarding Footnote 5.503, the pre-WRC-03 Footnote limits FSS earth station e.i.r.p. spectral density in the 13.772-13.778 GHz band until those geostationary space stations in the space research service for which advance publication information was received by the ITU prior to 31 January 1992 cease to operate in this band. Whereas the post-WRC-03 Footnote 5.503 to the ITU Radio Regulations limits FSS earth station e.i.r.p. spectral density in the 13.77-13.78 GHz band until those geostationary space stations in the space research service for which advance publication information was received by the ITU prior to 31 January 1992 cease to operate in this band.

satellite network outside the U.S.&P in the entire 13.77-13.78 GHz band will be subject to U.S. footnote US357.

12. Although the dates that were stated in ITU Radio Regulation footnote 5.503A have passed,¹⁹ NTIA notes that NASA's Tropical Rainfall Measuring Mission (TRMM) satellite system radar in the band 13.793-13.805 GHz is still operating.²⁰ Since TRMM is a highly valuable and visible U.S. asset, with a broad range of international users, NTIA has requested cooperation from the Commission and non-Federal Government entities in providing assistance in reducing interference with the TRMM radar.²¹ NTIA notes that it desires that FSS earth stations with operations in the 13.793 - 13.805 GHz frequency band located south of 39° North Latitude and east of 110° West Longitude operate with emissions levels below -150 dBW/600 kHz at the TRMM space station receiver. Because this is not a requirement, considering the secondary nature of the TRMM operation, we urge, but do not require, operators of earth stations accessing the PAS-21 satellite in the 13.75-14.0GHz band to cooperate voluntarily with NASA in order to facilitate continued operation of the TRMM satellite. NTIA also notes that none of the other space-based radar operations covered by 5.503A will seek continued cooperation in this respect.²²

3. 3.4-3.6 GHz Frequency Band

13. The 3.4-3.6 GHz frequency band is not allocated to the fixed-satellite service (FSS) in the United States and its possessions. Accordingly, we will not authorize earth stations operating in this band within the United States and its possessions. We recognize, however, that 3.4-3.6 GHz is allocated to the FSS on a worldwide basis in the ITU Radio Regulations. Therefore, we will permit PanAmSat to operate on this frequency band to serve earth stations outside the United States and its possessions consistent with PanAmSat's ability to acquire appropriate authorization to use this frequency band in other countries. However, we also note that the U.S. government utilizes the 3.4-3.6 GHz band on a worldwide basis as part of its military operations, including high-powered, highly mobile, shipborne and airborne radar systems. Because PanAmSat will be operating satellites in this band for service to non-U.S. earth stations, we require PanAmSat to inform the recipients of services from its satellites to non-U.S. earth stations that such services could be subject to interference from worldwide U.S. government operations.

4. 3.6-3.7 GHz Frequency Band.

14. The 3.6-3.7 GHz band is allocated to the non-government fixed satellite service (space-to-Earth) and to the Government radiolocation and aeronautical radionavigation services on a co-primary basis. FSS operations in the United States in the 3.6-3.7 GHz frequency band are limited by Footnote US245 to the U.S. Domestic Table of Allocations which states that "the fixed satellite service is limited to international intercontinental systems and subject to case-by-case electromagnetic compatibility

¹⁹ At WRC-03, Footnote 5.503A was suppressed. Footnote 5.503A stated that: "Until 1 January 2000, stations in the fixed-satellite service shall not cause harmful interference to non-geostationary space stations in the space research and Earth exploration-satellite services. Additionally, when planning earth stations in the fixed-satellite service to be brought into service between 1 January 2000 and 1 January 2001, in order to accommodate the needs of spaceborne precipitation radars operating in the band 13.793-13.805 GHz, advantage should be taken of the consultation process and the information given in Recommendation ITU-R SA.1071."

²⁰ See letter from Frederick R. Wentland, Acting Associate Administrator, Office of Spectrum Management, NTIA, to Donald Abelson, Chief, International Bureau, FCC (February 28, 2002).

²¹ *Id.*

²² *Id.*

analysis.”²³ We also note, however, that the U.S. government uses the 3.6-3.65 GHz band on a worldwide basis as part of its military operations, including high-powered, highly mobile, shipborne and airborne radar systems. Based on Footnote US245, the coordination of receiving FSS earth stations operating in the United States and possessions will be required with respect to Federal Government transmitting radio location stations. In February 1995, NTIA, pursuant to the Omnibus Budget Reconciliation Act of 1993, identified the 3.65-3.7 GHz band for transfer, effective January 1999, from Government/non-Government shared-use status to a mixed-use status.²⁴ The Commission later adopted a Report and Order²⁵ allocating the 3650-3700 MHz band to non-government fixed-service on a primary basis. The Commission limited primary FSS (space -to-Earth) operations in the 3650-3700 MHz band to grandfathered earth stations and stated that all other FSS earth station operations in the 3650-3700 MHz band shall be on a secondary basis. The Commission defined grandfathered earth stations as those authorized prior to December 1, 2000, or granted as a result of an application filed prior to December 1, 2000, which requested a license for an earth station to be located within 10 miles of an authorized primary earth station and constructed within 12 months of initial authorization.²⁶ Any future use of this band by PanAmSat or any other entity in the United States will be subject to this.

5. 6.425-6.725 GHz Frequency Band

15. PanAmSat proposes to uplink in the 6425-6675 MHz frequency band. Section 25.202(a) of the Commission's rules does not specifically list 6425-6675 MHz among the bands available for satellite licensing.²⁷ However, under Section 25.202(b) of the Commission's rules, this band may be licensed on a case-by-case basis to space systems in conformance with Section 2.106 and the Commission's rules and policies.²⁸ It should be noted, though, that the 6425-6675 MHz band requested by PAS-21 is shared with and used by a number of terrestrial services domestically.²⁹ Specifically, the frequency range 6425-6525 MHz is used by the mobile service under Parts 74, 78 and 101, including for aeronautical mobile and mobile remote pickup operations.³⁰ The frequency range 6525-6725 MHz is heavily used by the fixed service under Part 101.³¹

16. We note that because of PAS-21's orbital location, it is no likely that there will be a

²³ 47 U.S.C. §2.106 n. US245.

²⁴ See Omnibus Reconciliation Act of 1993, Pub. L. No. 103-66, Title VI, § 6001 (2) (3), 107 Stat. 312 (enacted Aug. 10, 1993); see also H.R. Rep. No. 103-213, 103rd Cong., 1st Sess. (1993).

²⁵ The 3650-3700 MHz band is a portion of the “extended C-band.” See *In the Matter of Amendment of the Commission's Rules with Regard to the 3650-3700 MHz Government Transfer Band*, Report and Order, 15 FCC Rcd 20488 (2000).

²⁶ 47 C.F.R. § 2.106 (NG169).

²⁷ 47 C.F.R. § 25.202(a).

²⁸ 47 C.F.R. § 25.202(b). The domestic frequency allocation table allocates the bands 6425-6525 MHz and 6525-6725 MHz to the fixed satellite service on a co-primary basis. 47 C.F.R. § 2.106.

²⁹ Conversely, the 6425-6725 MHz band is lightly used by satellite operations in the United States.

³⁰ At present there are 211 licenses for operations in the 6425-6525 MHz under Parts 74 and 101. Approximately 35 percent of these licenses are for channels on a nationwide basis, which allows the broadcast news gathering community, with proper coordination, to cover news worthy events across the country on an as-needed basis. Pursuant to Part 78, the Commission also has licensed 13 mobile cable television relay service (CARS) stations in the 6425- 6525 MHz band, mostly in major metropolitan areas including New York, Chicago, Phoenix, and Miami. While these 13 mobile stations are licensed to a particular community, they can be used anywhere in the United States with 24-hour advance notice to the Commission.

³¹ The 6525-6825 MHz band, which includes a portion of the extended C-Band requested by PAS-21, is used by the fixed, point-to-point community with 14,238 links presently licensed. It is our understanding that many fixed service licensees have relocated to the extended C-Band from the 2 GHz band and from other parts of the C-Band due to congestion arising from sharing with satellite and other terrestrial fixed operations.

significant number of associated earth station within the United States and its possessions. Nevertheless, we emphasize that our decision to authorize PAS-21 to use the 6425-6675 MHz portion of the extended C-Band in no way prejudices any decision on access to that band by U.S. earth stations seeking to uplink to the PAS-21 satellite.³² Similarly, our decision is not intended to change in any way conditions for accessing the band by the terrestrial services.

17. Consequently, we authorize the PAS-21 satellite to operate in the 6425-6675 MHz band mindful that certain issues associated with earth stations accessing the satellite in this band may be separately addressed, as discussed in part below. In a 1999 proceeding the Commission addressed a number of sharing issues Mobile Satellite Service (MSS) feeder links and terrestrial fixed and mobile operations in the upper portion of the extended C-Band, 6875-7025 MHz.³³ We believe that some of the coordination issues discussed there are applicable to our decision today. For example, future earth stations seeking to access PAS-21, because of their co-primary status, will need to protect incumbent terrestrial facilities through a coordination process.³⁴ It also was noted in the *MSS Report and Order* that there are a number of other proceedings in which the Commission is evaluating issues related to satellite and terrestrial fixed coordination in several frequency bands, including those at issue here.³⁵ Consequently, with respect to the 6525-6675 MHz segment of the extended C-band, which is shared between fixed and fixed satellite services, we reiterate that "existing coordination rules found in Parts 25 and 101 of our rules are adequate to address immediate coordination concerns and that the issues raised in separate proceedings can be applied uniformly across all bands as appropriate."³⁶ Subject to future Commission decisions, we thus will require applicants for earth stations seeking to access the PAS-21 from the United States or its possessions in the 6525-6675 MHz band to coordinate with terrestrial fixed services in accordance with Section 25.203 of the Commission's Rules prior to submitting an application to the Commission.³⁷

18. The Commission also stated in the *MSS Report and Order* that sharing between the mobile, including aeronautical mobile, and satellite services in the 6875- 7025 MHz band can be much more difficult because of the mobile service.³⁸ It added that a future proceeding would address how coordination is to be achieved between satellite and mobile television pickup operations and that the Commission would place any appropriate *ad hoc* coordination requirements on any gateway authorizations that are requested prior to the completion of that proceeding.³⁹ In light of the

³² We recognize the primary purpose of the PAS-21 satellite is to serve the Asia and Africa markets. Consequently, our decision today is not intended to impact in any way the ability of earth stations sited in other countries to access the PAS-21 satellite.

³³ See, e.g., *Amendment of Parts 2, 25 and 97 of the Commission's Rules with Regard to the Mobile-Satellite Service Above 1 GHz*, ET Docket No. 98-142, Report and Order, 17 FCC Rcd (2002) (*MSS Report and Order*). Compare *Amendment of Parts 2 and 90 of the Commission's Rules to Allocate the 5.850-5.925 GHz Band to the Mobile Service for Dedicated Short Range Communications of Intelligent Transportation Services*, ET Docket No. 98-95, FCC 99-305, 17 Comm. Reg. (P&F) 1015 (1999).

³⁴ See *Id.* at ¶ 48.

³⁵ *Id.* at ¶ 53.

³⁶ *Id.* at ¶ 54.

³⁷ See 47 C.F.R. § 25.203.

³⁸ *Id.* at ¶ 55. We note that mobile licensing in the 6425-6525 MHz band also is unique in that some mobile licensees receive nationwide authorizations and coordinate actual operations with other terrestrial licensees through local coordinators as mobile service needs dictate.

³⁹ *Id.* at ¶ 57.

considerations in the MSS Report and Order, we note that the technical rules that were intended to allow terrestrial stations to share fixed-satellite service uplink bands in the 6425-6825 MHz band were adopted in 1987 and may need to be updated. Therefore, any requests for authorization for uplink earth stations in the 6425-6525 MHz band will continue to be subject to coordination pursuant to Section 25.203(c) of the Rules,⁴⁰ but operators should be aware that we may need to place appropriate *ad hoc* obligations on any future requests for earth station authorization for uplinks pending a future rulemaking proceeding addressing any additional coordination requirements in this bands.

6. 10.95-11.2 GHz and 11.45-11.7 GHz Frequency Bands

19. The 10.95-11.2 GHz and the 11.45-11.7 GHz frequency bands are allocated to terrestrial services and the FSS on a co-primary basis.⁴¹ FSS operations in this band, however, are limited to international service.⁴² Thus, PanAmSat can only downlink in the United States in the 10.95-11.2 GHz and the 11.45-11.7 GHz frequency bands if the corresponding uplink, in any frequency band, originates outside the United States. We note that PAS-21 transponders operating in the 10.95-11.2 GHz and the 11.45-11.7 GHz band are specifically intended to serve Asia and Africa, and that downlink service into the United States is not likely.

7. International Coordination

20. Under the Radio Regulations of the International Telecommunications Union (ITU), operators of satellite systems are required to coordinate their spectrum use to prevent interference to, and receive protection from, other systems. PanAmSat is currently in coordination discussions with some adjacent satellite operators which may impact operations in the frequency bands we authorize today. Those frequencies where coordination has not yet been successfully completed are limited to operation on a non-harmful interference basis. That is, PanAmSat shall not cause harmful interference to, and shall not claim protection from interference caused to it by, any other lawfully operating satellite. In the event that any harmful interference occurs as a result of PanAmSat's operations on frequencies where coordination has not yet been completed, PanAmSat shall cease operations immediately upon notification of such interference and shall inform the FCC in writing immediately of such an event. Upon successful completion of coordination, PanAmSat shall be subject to any restrictions resulting from those agreements.

IV. ORDERING CLAUSES

21. Accordingly, pursuant to Section 309 of the Communications Act, 47 U.S.C. § 309, and Section 0.261 of the Commission's rules, 47 C.F.R. § 0.261, IT IS ORDERED that Application Files Nos. SAT-LOA-19960202-00017, SAT-AMD-19971119-00187, and SAT-AMD-19991217-00129, ARE GRANTED and PanAmSat Licensee Corp. is authorized to operate its PAS-21 satellite (call sign S2229) at the 68.5° E.L. orbit location in the 3.4-3.7 GHz, 10.95-11.2 GHz, 11.45-11.7 GHz, 14.0-14.5 GHz, 6.425-6.725 GHz and 13.75-14.0 GHz frequency bands in accordance with the terms, conditions, and

⁴⁰ See 47 C.F.R. § 25.203(c)(5).

⁴¹ Allocation of a given frequency band for a particular service on a primary basis entitles operators to protection against harmful interference from stations of "secondary" services. Further, secondary services cannot claim protection from harmful interference caused by stations of a primary service. See 47 C.F.R. §§ 2.104(d) and 2.105(c).

⁴² Use of the band by the FSS domestically in the United States is subject to certain restrictions. Specifically, Non-Government footnote NG104 to the U.S. Table of Frequency Allocations states that the use of the bands 10.7-11.7 GHz in the fixed-satellite service is limited to international systems, i.e. "other than domestic systems." The Commission interpreted this language to mean that U.S.-licensed systems may use the 10.7-11.7 GHz band to provide international service only. See PanAmSat Licensee Corp., FCC Rcd. 7725 (Int'l Bur. 1999).

technical specifications set forth in its application and subject to the conditions below.

22. IT IS FURTHER ORDERED that the application, SAT-STA-20001115-00162, is DISMISSED as MOOT.

23. IT IS FURTHER ORDERED that application, File No. SAT-AMD-19960411-0055, IS DISMISSED as MOOT.

24. IT IS FURTHER ORDERED that PanAmSat's request for waiver of the consolidated processing round requirement IS DISMISSED as MOOT.

25. IT IS FURTHER ORDERED that PanAmSat shall prepare the necessary information, as may be required, for submission to the ITU to complete the advance publication, international coordination, due diligence, and notification process of this space station, in accordance with the ITU Radio Regulations. PanAmSat shall be held responsible for all cost recovery fees associated with these ITU filings. We also note that no protection from interference caused by radio stations authorized by other administrations is guaranteed unless coordination and notification procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments of other administrations. See 47 C.F.R. § 25.111(b).

26. IT IS FURTHER ORDERED that PanAmSat shall operate the PAS-21 satellite in the 3.4-3.7, 6.425-6.725, 10.95-11.2, 11.45-11.7, 13.75-14.0, and 14.0-14.5 GHz bands pursuant to the restrictions imposed as the result of international frequency coordination with and among adjacent operators. No harmful interference shall be caused to operations of any satellite having ITU date priority and PanAmSat shall cease those operations from the PAS-21 satellite causing the interference immediately upon notification of harmful interference and shall inform the FCC in writing immediately of such an event.

27. IT IS FURTHER ORDERED that PanAmSat shall not permit any earth station in the United States and its possessions to operate with the PAS-21 satellite in the frequency band 3.4 GHz to 3.6 GHz band.

28. IT IS FURTHER ORDERED, that PanAmSat shall inform its customers and operators using the frequency band 3.6 to 3.7 GHz in the United States and its possessions, that their earth stations operations are limited, in accordance with footnote US245, to international inter-continental systems and subject to case-by-case electromagnetic compatibility analysis.

29. IT IS FURTHER ORDERED that PanAmSat shall inform its customers and operators using the frequency band 3.4-3.6 GHz of the potential for interference from U.S. Government operations worldwide.

30. IT IS FURTHER ORDERED that PanAmSat's use of the 10.95-11.2 GHz and 11.45-11.7 GHz frequency bands shall comply with the terms of Footnote NG104 which permits use of these downlink frequencies for international service only, i.e. where the corresponding uplink does not originate in the United States.

31. IT IS FURTHER ORDERED that the Petition to Deny filed by GE American Communications Inc. IS DISMISSED as MOOT.

32. IT IS FURTHER ORDERED that the license term for the PAS-21 satellite is fifteen years. Because PAS-21 is already in operation, we will compute the fifteen years from September 15,

1998, the launch date of the PAS-21 satellite.

33. Assignment of any orbital location is subject to change by summary order of the Commission on 30 days notice and does not confer any permanent right to use the orbit and spectrum.

34. PanAmSat is afforded thirty days to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.

35. This Order is effective upon release. Petitions for Reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within thirty days of the date of the release of this Order (see 47 C.F.R. § 1.4(b) (2)).

FEDERAL COMMUNICATIONS COMMISSION

Thomas S. Tycz
Chief
Satellite Division