

S2687 SAT-RPL-20051118-00233 IB200500266
PanAmSat Licensee Corp.
Galaxy 16

Approved by OMB
3060-0678

RPL
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Callsign/Satellite ID: S2687

APPLICATION FOR SATELLITE SPACE STATION AUTHORIZATIONS
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APPLICANT INFORMATION

Enter a description of this application to identify it on the main menu:
G16 new license (at 99 WL) FINAL

1-8. Legal Name of Applicant

Name:	PanAmSat Licensee Corp.	Phone Number:	202-292-4300
DBA Name:		Fax Number:	202-292-4378
Street:	1801 K Street, N.W. Suite 440	E-Mail:	
City:	Washington	State:	DC
Country:	USA	Zipcode:	20006 -
Attention:	Mr Kalpak S Gude Esq		



File # SAT-RPL-20051118-00233

Call Sign S2687 Grant Date 3/3/06
(or other identifier)

Term Dates
From launch + operation To: 15 yrs

Approved: [Signature]
w/conditions Policy Branch Chief

ATTACHMENT

Conditions of Authorization: IBFS File NO. SAT-RPL-20051118-00233

Call Sign: S2687

Grant Date: March 3, 2006

PanAmSat Licensee Corp.'s (PanAmSat) application, SAT-RPL-20051118-00233, to construct, launch, and operate the hybrid C- and Ku-band Galaxy-16 satellite (Call Sign: S2687) at the 99° W.L. orbital location IS GRANTED. Accordingly, PanAmSat is authorized to operate the Galaxy-16 satellite at the 99° W.L. orbital location in order to provide service in the C-band frequencies of 5925–6425 MHz (Earth-to-space), 3700–4200 MHz (space-to Earth) and the Ku-band frequencies of 14000–14500 MHz (Earth-to-space) and 11700–12200 MHz (space-to Earth), in accordance with the technical specifications set forth in its application, Federal Communication Commission's (Commission) Rules, and the following conditions:

1. PanAmSat shall prepare the necessary information, as may be required, for submission to the ITU to initiate and 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).

2. In order to ensure continuity of service at the 99° W.L. orbital location, Galaxy 16 must begin providing service at the 99° W.L. orbital location in the C- and Ku-bands before the satellite it is replacing, Galaxy-4, discontinues service at the 99° W.L. orbital location.¹ Failure to meet this milestone date shall render this authorization null and void.

3. PanAmSat's request for waiver of Section 25.210(i), of the Commission's rules, 47 C.F.R. § 25.210(i), IS GRANTED as conditioned. Section 25.210(i) directs, "Space station antennas in the Fixed-Satellite Service must be designed to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the crosspolar gain of the antenna in the assigned frequency band shall be at least 30 dB within its primary coverage area." PanAmSat indicates that although the cross-polarization isolation of the Galaxy-16 satellite's antennas will comply with 30 dB minimum isolation over 90% the coverage area, the isolation of the receive antenna may be as low as 27 dB in the remaining 10% of the coverage area (typically at edge of coverage).² The shortfall will not produce a significant increase in interference, except to

¹ Among other things, a replacement satellite is one that is scheduled to be launched so that it will be brought into use no later than the existing satellite is retired. 47 C.F.R. § 25.165(e).

² See PanAmSat Licensee Corp., Application for authorization to launch and operate its GALAXY-16 satellite (Call Sign: S2687) at 99° W.L., SAT-RPL-20051118-00233, Engineering Statement at 7-8.

the applicant itself, and will not adversely affect any other operator. Further, Panamsat must accommodate future satellite networks serving the United States that are two-degree compliant. Grant of this waiver request is consistent with our precedent.³

4. PanAmSat's request for waiver of Section 25.114(d)(3) of the Commission's rules, 47 C.F.R. § 25.114(d)(3), IS GRANTED. Section 25.114(d)(3) requires predicted space station antenna gain contour(s) for each transmit and each receive antenna beam and nominal orbital location requested. These contour(s) should be plotted on an area map at 2 dB intervals down to 10 dB below the peak value of the parameter and at 5 dB intervals between 10 dB and 20 dB below the peak values, with the peak value and sense of polarization clearly specified on each plotted contour. PanAmSat's application indicates that the peak gain of the omni antenna is 5.4 dBi for Command and 5.6 dBi for Telemetry. It also indicates that the omni antenna diagrams (Exhibits 6E and 6F) were not prepared in accordance with the parameters specified in Section 25.114(d)(3) of the Commission's Rules because the satellite manufacturer did not provide contours in the required form since pointing of the omni antennas with respect to the Earth will vary during emergency situations. Under these specific circumstances, we find that Exhibits 6E and 6F, together with the descriptive characterization provided in Section 2.7.1 of the application,⁴ fulfill the requirements of Section 25.114(d)(3). Grant of this waiver request is consistent with our precedent.⁵

5. The license term for the Galaxy-16 satellite is 15 years and will begin to run on the date the licensee certifies to the Commission that the satellite has been successfully placed into orbit and its operation fully conforms to the terms and conditions of this authorization.

6. PanAmSat is afforded thirty days from the date of release of this grant and authorization to decline this authorization as conditioned. Failure to respond within this period will constitute formal acceptance of the authorization as conditioned.


7. This Grant is issued pursuant to Section 0.261 of the Commission's rules on delegated authority, 47 C.F.R. § 0.261, and 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 30 days of the date of the public notice indicating that this action was taken.

³ Star One S.A.; Petition for Declaratory Ruling to Add The Star One C1 Satellite at 65° W.L. to the Permitted Space Station List, *Order*, 19 FCC Rcd 16334 (Sat. Div. 2004) (finding that the impact on neighboring satellite systems of a 3-5 dB difference from the required cross polarization isolation ratio would be negligible).

⁴ See PanAmSat Licensee Corp. application for authorization to launch and operate its GALAXY-16 satellite (Call Sign: S2687) at 99° W.L., SAT-RPL-20051118-00233, Engineering Statement 12-13.

⁵ See SES Americom, Inc., Application for Modification of Space Station Authorization, DA 04-1581, *Order and Authorization*, 19 FCC Rcd. 20,377, 20,377-78 (paras. 4-8) (rel. May 27, 2004) (finding that the main purpose of the contour map is to allow evaluation of the potential for harmful interference with other operators and services in the frequency band).

File # SAT-RPL-20051118-00233
Call Sign S2687 Grant Date 3/3/05
(or other Identifier)
Launch Term Dates
From Operation To 15/15
Approved: [Signature]



GRANTED
International Bureau

9-16. Name of Contact Representative

Name:	Joseph A Godles, Esq.	Phone Number:	202-429-4900
Company:	Goldberg Godles Wiener & Wright	Fax Number:	202-429-4912
Street:	1229 19th Street NW	E-Mail:	jgodles@g2w2.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036 -2413
Attention:		Relationship:	Legal Counsel

CLASSIFICATION OF FILING

17. Choose the button next to the classification that applies to this filing for both questions a. and b. Choose only one for 17a and only one for 17b.

- a.
 (N/A) a1. Earth Station
 a2. Space Station

- b.
 b1. Application for License of New Station
 (N/A) b2. Application for Registration of New Domestic Receive-Only Station
 (N/A) b3. Amendment to a Pending Application
 (N/A) b4. Modification of License or Registration
 (N/A) b5. Assignment of License or Registration
 (N/A) b6. Transfer of Control of License or Registration
 (N/A) b7. Notification of Minor Modification
 (N/A) b8. Application for License of New Receive-Only Station Using Non-U.S. Licensed Satellite

 b9. Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States
 b10. Replacement Satellite Application - no new frequency bands
 b11. Replacement Satellite Application - new frequency bands (Not eligible for streamlined processing)
 b12. Petition for Declaratory Ruling to be Added to the Permitted List
 (N/A) b13. Other (Please specify)

17c. Is a fee submitted with this application?

If Yes, complete and attach FCC Form 159.

If No, indicate reason for fee exemption (see 47 C.F.R. Section 1.1114).

Governmental Entity Noncommercial educational licensee

Other (please explain):

17c. Fee Classification BNY – Space Station (Geostationary)

18. If this filing is in reference to an existing station, enter:

(a) Call sign of station:
Not Applicable

19. If this filing is an amendment to a pending application enter:

(a) Date pending application was filed:

Not Applicable

(b) File number of pending application:

Not Applicable

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or use the following type(s) of service(s): Select all that apply:

- a. Fixed Satellite
- b. Mobile Satellite
- c. Radiodetermination Satellite
- d. Earth Exploration Satellite
- e. Direct to Home Fixed Satellite
- f. Digital Audio Radio Service
- g. Other (please specify)

21. STATUS: Choose the button next to the applicable status. Choose only one.

- Common Carrier Non-Common Carrier

22. If earth station applicant, check all that apply.
Not Applicable

23. If applicant is providing INTERNATIONAL COMMON CARRIER service, see instructions regarding Sec. 214 filings. Choose one. Are these facilities:

- Connected to a Public Switched Network Not connected to a Public Switched Network N/A

24. FREQUENCY BAND(S): Place an "X" in the box(es) next to all applicable frequency band(s).

- a. C-Band (4/6 GHz) b. Ku-Band (12/14 GHz)
 c. Other (Please specify upper and lower frequencies in MHz.)

Frequency Lower: Frequency Upper: (Please specify additional frequencies in an attachment)

TYPE OF STATION

25. CLASS OF STATION: Choose the button next to the class of station that applies. Choose only one.

- (N/A) a. Fixed Earth Station
- (N/A) b. Temporary-Fixed Earth Station
- (N/A) c. 12/14 GHz VSAT Network
- (N/A) d. Mobile Earth Station
- e. Geostationary Space Station.
- f. Non-Geostationary Space Station
- g. Other (please specify)

26. TYPE OF EARTH STATION FACILITY: Not Applicable

PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an "X" in the box(es) next to all that apply.) Not Applicable

ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental impact as defined by 47 CFR 1.1307? If YES, submit the statement as required by Sections 1.1308 and 1.1311 of the Commission's rules, 47 C.F.R. §§ 1.1308 and 1.1311, as an exhibit to this application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major modifications, or major amendments.

Yes No
Debris Mitigation

ALIEN OWNERSHIP

Earth station applicants not proposing to provide broadcast, common carrier, aeronautical en route or aeronautical fixed radio station services are not required to respond to Items 30-34.

29. Is the applicant a foreign government or the representative of any foreign government? Yes No

30. Is the applicant an alien or the representative of an alien? Yes No N/A

31. Is the applicant a corporation organized under the laws of any foreign government? Yes No N/A

32. Is the applicant a corporation of which more than one-fifth of the capital stock is owned of record or voted by aliens or their representatives or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? Yes No N/A

33. Is the applicant a corporation directly or indirectly controlled by any other corporation of which more than one-fourth of the capital stock is owned of record or voted by aliens, their representatives, or by a foreign government or representative thereof or by any corporation organized under the laws of a foreign country? Yes No N/A

34. If any answer to questions 29, 30, 31, 32 and/or 33 is Yes, attach as an exhibit an identification of the aliens or foreign entities, their nationality, their relationship to the applicant, and the percentage of stock they own or vote.

BASIC QUALIFICATIONS

35. Does the Applicant request any waivers or exemptions from any of the Commission's Rules?
If Yes, attach as an exhibit, copies of the requests for waivers or exceptions with supporting documents.

Yes No

36. Has the applicant or any party to this application or amendment had any FCC station authorization or license revoked or had any application for an initial, modification or renewal of FCC station authorization, license, or construction permit denied by the Commission? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

Ques 36

37. Has the applicant, or any party to this application or amendment, or any party directly or indirectly controlling the applicant ever been convicted of a felony by any state or federal court? If Yes, attach as an exhibit, an explanation of circumstances.

Yes No

38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement or any other means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances

Yes No

39. Is the applicant, or any person directly or indirectly controlling the applicant, currently a party in any pending matter referred to in the preceding two items? If yes, attach as an exhibit, an explanation of the circumstances.

Yes No

40. If the applicant is a corporation and is applying for a space station license, attach as an exhibit the names, address, and citizenship of those stockholders owning a record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries. Also list the names and addresses of the officers and directors of the Filer. Ques 40

41. By checking Yes, the undersigned certifies, that neither applicant nor any other party to the application is subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Act of 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the meaning of "party to the application"; for these purposes. Yes No

42a. Does the applicant intend to use a non-U.S. licensed satellite to provide service in the United States? If Yes, answer 42b and attach an exhibit providing the information specified in 47 C.F.R. 25.137, as appropriate. If No, proceed to question 43. Yes No

42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, what administration has coordinated or is in the process of coordinating the space station?

43. Description. (Summarize the nature of the application and the services to be provided). (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Applicant seeks herein new space station authority to launch and operate a C-/Ku-band hybrid satellite known as Galaxy 16 as a replacement for Galaxy 4R at 99 WL.

Engineering

CERTIFICATION

The Applicant waives any claim to the use of any particular frequency or of the electromagnetic spectrum as against the regulatory power of the United States because of the previous use of the same, whether by license or otherwise, and requests an authorization in accordance with this application. The applicant certifies that grant of this application would not cause the applicant to be in violation of the spectrum aggregation limit in 47 CFR Part 20. All statements made in exhibits are a material part hereof and are incorporated herein as if set out in full in this application. The undersigned, individually and for the applicant, hereby certifies that all statements made in this application and in all attached exhibits are true, complete and correct to the best of his or her knowledge and belief, and are made in good faith.

44. Applicant is a (an): (Choose the button next to applicable response.)

- Individual
- Unincorporated Association
- Partnership
- Corporation
- Governmental Entity
- Other (please specify)

45. Name of Person Signing
Kalpak S. Gude

46. Title of Person Signing
V.P. & Assoc General Counsel

47. Please supply any need attachments.

1:

2:

3:

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT
(U.S. Code, Title 18, Section 1001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION
(U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

Completed Schedule S

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