Approved by OMB 3060–0678

Date & Time Filed: Mar 5 2013 4:41:09:153PM File Number: SES–MOD–INTR2013–00519

FCC APPLICATION FOR SPACE AND EARTH STATION:MOD OR AMD – MAIN FORM	FCC Use Only
FCC 312 MAIN FORM FOR OFFICIAL USE ONLY	

APPLICANT INFORMATION Enter a description of this application to identify it on the main menu: Add Intellian v100GX and SeaTel 4012 to ESV authorization – KA399 (Jan 2013)

1–8. Legal Name of Applicant **Phone Number:** Telesat Network Services, Inc. 908-470-4890 Name: DBA **Fax Number:** 908-719-0226 Name: Street: 135 Routes 202/206 E-Mail: gwazeter@telesat.com City: Bedminster State: NJ USA Zipcode: -1538**Country:** 07921 Attention: Mr George Wazeter

9–16. Name	e of Contact	Representative				
	Name:	Joseph A. Godles		Phone Number:	202-429-4900	
	Company:	Goldberg Godles W	iener & Wright	Fax Number:	202-429-4912	
	Street:	1229 19th Street, N	W	E–Mail:	jgodles@g2w2.com	
	City:	Washington		State:	DC	
	Country:	USA		Zipcode:	20036-2413	
	Attention:			Relationship:	Legal Counsel	
CLASSIFI	CATION O	F FILING				
classification both question	 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. (N/A) b1. Application for License of New Station (N/A) b2. Application for Registration of New Domestic Receive–Only Station b3. Amendment to a Pending Application b4. Modification of License or Registration 					
a1. Earth Station			- -	t of License or Registra		

classification that applies to this filing for	(N/A) b1. Application for License of New Station
both questions a. and b. Choose only one	(N/A) b2. Application for Registration of New Domestic Receive–Only Station
for 17a and only one for 17b.	• b3. Amendment to a Pending Application
al. Earth Station	b4. Modification of License or Registration
× ·	b5. Assignment of License or Registration
• a2. Space Station	b6. Transfer of Control of License or Registration
	• b7. Notification of Minor Modification
	(N/A) b8. Application for License of New Receive–Only Station Using Non–U.S. Licensed Satellite
	(N/A) b9. Letter of Intent to Use Non–U.S. Licensed Satellite to Provide Service in the United States
	(N/A) b10. Other (Please specify)
	(N/A) b11. Application for Earth Station to Access a Non–U.S.satellite Not Currently Authorized
	to Provide the Proposed Service in the Proposed Frequencies in the United States
	(N/A) b12. Application for Database Entry
	• b13. Amendment to a Pending Database Entry Application
	• b14. Modification of Database Entry

17c. Is a fee submitted with this applicate				
● If Yes, complete and attach FCC Form 159. If No, indicate reason for fee exemption (see 47 C.F.R.Section 1.1114).				
O Governmental Entity O Noncomme	Governmental Entity O Noncommercial educational licensee			
• Other(please explain):				
17d.				
Fee Classification CGX – Fixed Satellite 7 Station	Transmit/Receive Earth			
18. If this filing is in reference to an existing station, enter:	19. If this filing is an amendment to a pending a modification please enter only the file number:			
(a) Call sign of station:	(a) Date pending application was filed:	(b) File number:		
KA399		SESMOD2012030800248		

TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide or	r 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) Earth Stations on Vessels (ESV)	
21. STATUS: Choose the button next to the applicable status. Choose 22	2. If earth station applicant, check all that apply.
only one.	Using U.S. licensed satellites
Common Carrier Non–Common Carrier	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER servi facilities:	vice, see instructions regarding Sec. 214 filings. Choose one. Are these
• Connected to a Public Switched Network • Not connected to a Public Switched Network	blic Switched Network 💿 N/A
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all appl	icable frequency band(s).
a. C–Band (4/6 GHz) k. 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.
• a. Fixed Earth Station
• b. Temporary–Fixed Earth Station
• c. 12/14 GHz VSAT Network
O d. Mobile Earth Station
• e. Geostationary Space Station
• f. Non–Geostationary Space Station
• g. Other (please specify) ESV
26. TYPE OF EARTH STATION FACILITY:
Transmit/Receive Transmit-Only Receive-Only N/A
"For Space Station applications, select N/A."

PURPOSE OF MODIFICATION



ENVIRONMENTAL POLICY

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental	🔿 Yes 🍙 No
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	4012GX- Ex
must accompany all applications for new transmitting facilities, major modifications, or major amendments.	

012GX-Exhibit 1

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?	0	Yes	۲	No		
30. Is the applicant an alien or the representative of an alien?	0	Yes	0	No	۲	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	0	No	۲	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?	0	Yes	0	No	۲	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?	O Yes O 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.	4012GX– Exhibit 2

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.	O Yes ● No
	4012GX– Exhibit 3
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 explination of circumstances.	● Yes ● No
	v110GX– Exhibit 1

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 explination of circumstances.	O Yes	🔵 No
	v110GX– Exhi	bit 2
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	O Yes	le No
means or unfair methods of competition? If Yes, attach as an exhibit, an explanation of circumstances	v110GX– Exhi	bit 3
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 exhinit, an explanation of the circumstances.	O 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.		

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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.

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

O 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 to add two antenna types -- (1) the Intellian v100GX; (2) the SeaTel 4012 -- to its existing ESV operations. Separately, Applicant seeks data correction on its current license of the entry marked as frequency band 8 under Part B, Particulars of Operation. At the time of the grant of a previous modification, that band

43a. Geographic Service Rule Certification By selecting A, the undersigned certifies that the applicant is not subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25.	● A
By selecting B, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will comply with such requirements.	О ^В
By selecting C, the undersigned certifies that the applicant is subject to the geographic service or geographic coverage requirements specified in 47 C.F.R. Part 25 and will not comply with such requirements because it is not feasible as a technical matter to do so, or that, while technically feasible, such services would require so many compromises in satellite design and operation as to make it economically unreasonable. A narrative description and technical analysis demonstrating this claim are attached.	O C

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.)	
O Individual	
O Unincorporated Association	
• Partnership	
• Corporation	
o Governmental Entity	
Other (please specify)	
	46. Title of Person Signing
George Wazeter I	Director, Regulatory Affairs
>	
WILLFUL FALSE STATEMENTS MADE ON THIS FORM A (U.S. Code, Title 18, Section 1001), AND/OR REV (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FO	VOCATION OF ANY STATION AUTHORIZATION

SATELLITE EARTH STATION AUTHORIZATIONS FCC Form 312 – Schedule B:(Technical and Operational Description) FOR OFFICIAL USE ONLY

Location of Earth S	tation Site				
E1: Site Identifier:	Mt. Jackson	E5. Call Sign:	KA399		
E2: Contact Name	John Liebl	E6. Phone Number:	540-477-5550		
E3. Street:	1305 Industrial Park Road	E7. City:	Mount Jackson		
		E8. County:	Shenandoah		
E4. State	VA	E9. Zip Code	22842		
E10. Area of Opera	tion:	North Atlantic Ocea	an and U.S. waters		
E11. Latitude:	38 °43 '42.0 "N				
E12. Longitude:	78 °39 '25.0 "W				
E13. Lat/Lon Coord	linates are:	NAD-27	O ^{NAD-83}	O N/A	
E14. Site Elevation	(AMSL):	295.9 meters			

ł	E15. If the proposed antenna(s) operate in the Fixed Satellite Service (FSS) with geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a) and (b) as demonstrated by the manufacturer's qualification measurement? If NO, provide as a technical analysis showing compliance with two–degree spacing policy.	• Yes	O ^{No}	O ^{N/A}

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Service (FSS), or if they operate in the Fixed Satellite Service (FSS) with non–geostationary satellites, do(es) the proposed antenna(s) comply with the antenna gain patterns specified in Section 25.209(a2) and (b) as demonstrated by the manufacturer's qualification measurements?	O ^{Yes}	O ^{No}	● ^{N/A}
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	O Yes	۲	No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0	Yes	۲	No
E19. Is coordination with another country required? If YES, attach the name of the country(ies) and plot of coordination contours as	0	Yes	۲	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.113(c)) Where FAA notification is required, have you attached a copy of a completed FCC Form 854 and/or the FAA's study regarding the potential hazard of the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RESULT IN THE RETURN OF THIS APPLICATION.	0	Yes	۲	No

POINTS OF COMMUNICATION

Satellite Name: ALSAT ALL AUTHORIZED U.S. ALSAT If you selected OTHER, please enter the following:							
E21. Common Name:	E22. ITU Name:						
E23. Orbit Location:	E24. Country:						
POINTS OF COMMUNICATION (Destination Points)							
E25. Site Identifier:							

E26. Common N	ame:					
ANTENNA				•		
Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer		E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi at

						and/or Recieve (dBi at GHz)
Mt. Jackson	v100GX 4W	500	Intellian	v100GX	1.0	39.8 dBi at 11.75
Mt. Jackson	v100GX 4W	500	Intellian	v100GX	1.0	41.3 dBi at 14.25
Mt. Jackson	v100GX 8W	500	Intellian	v100GX	1.0	39.8 dBi at 11.75
Mt. Jackson	v100GX 8W	500	Intellian	v100GX	1.0	41.3 dBi at 14.25
Mt. Jackson	4012GX 4W	500	SeaTel	4012 GX	1.06	39.8 dBi at 12.5
Mt. Jackson	4012GX 4W	500	SeaTel	4012 GX	1.06	40.8 dBi at 14.25
Mt. Jackson	4012GX 8W	500	SeaTel	4012 GX	1.06	39.8 dBi at 12.5
Mt. Jackson	4012GX 8W	500	SeaTel	4012 GX	1.06	40.8 dBi at 14.25

E28. A	Antenna	E33/34.	E35. Above	E36. Above Sea	E37. Building	E38. Total	E39. Maximum	E40. Total
Id		Diameter	Ground Level	Level(meters)	Height Above	Input Power at	Antenna Height	EIRP for al
		Minor/Major	(meters)		Ground Level	antenna flange	Above Rooftop	carriers(dBW)
		(meters)			(meters)	(Watts)	(meters)	

v100GX 4W	0.0/0.0	4.0		0.0		0.0		4.0		0.0	47.3
v100GX 8W	0.0/0.0	4.0		0.0		0.0		8.0		0.0	50.3
4012GX 4W	0.0/0.0	4.0		0.0		0.0		4.0		0.0	47.3
4012GX 8W	0.0/0.0	4.0		0.0		0.0		8.0		0.0	50.3
FREQUENCY											
E28. Antenna Id	E43/44. Frequency Ba (MHz)	nds	E45. T/R Mo	ode	E46. Ante Polarizati L,R)		E47. Ei Designa	mission ator		. Maximum P per Carrier W)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
v100GX 4W	10950 11200		R		Horizonta Vertical	l and	943KG	7W	0.0		0.0
NULL											
v100GX 4W	11450 11700		R		Horizonta Vertical	l and	943KG	7W	0.0		0.0
E50. Modulati entirety.)	ion and Services	(If th	ie complete d	escripti	on does not	t appear in	this box	t, please go t	to the e	end of the form	to view it in its

v100GX 4W	11700 12200	R	Right Hand Circular	943KG7W	0.0	0.0
E50. Modulati entirety.)	ion and Services (If	f the complete d	escription does not appear	in this box, please	go to the end of t	he form to view it in its
NULL						
v100GX 4W	12500 12750	R	Horizontal and Vertical	943KG7W	0.0	0.0
entirety.)						
v100GX 4W	14000 14500	Т	Horizontal and Vertical	943KG7W	47.3	23.6
E50. Modulati entirety.)	ion and Services (If	f the complete d	escription does not appear	in this box, please	go to the end of t	he form to view it in its
1037 kbp	os, QPSK, 33/50	FEC				

v100GX 8W	10950 11200	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulati entirety.)	ion and Services (If	the complete d	escription does not appear	in this box, please	go to the end of	the form to view it in its
NULL						
v100GX 8W	11450 11700	R	Horizontal and Vertical	943KG7W	0.0	0.0
entirety.)			escription does not appear			
v100GX 8W	11700 12200	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulati entirety.)	ion and Services (If	the complete d	escription does not appear	in this box, please	go to the end of t	the form to view it in its
NULL						

v100GX 8W	12500 12750	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulation entirety.)	on and Services (If	f the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its
NULL						
v100GX 8W	14000 14500	Т	Horizontal and Vertical	943KG7W	50.3	26.6
entirety.)	on and Services (If	-	escription does not appear	· · ·		
4012GX 4W	10950 11200	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulation entirety.)	on and Services (If	f the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its
NULL						

4012GX 4W	11450 11700	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulati entirety.)	ion and Services (If	the complete d	escription does not appear	in this box, please	go to the end of t	the form to view it in its
NULL						
4012GX 4W	11700 12200	R	Horizontal and Vertical	943KG7W	0.0	0.0
entirety.)	ion and Services (If	the complete d	escription does not appear	in this box, please	go to the end of t	the form to view it in its
4012GX 4W	12500 12750	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulati entirety.)	ion and Services (If	the complete d	escription does not appear	in this box, please	go to the end of t	the form to view it in its
NULL						

4012GX 4W	14000 14500	Т	Horizontal and Vertical	943KG7W	47.3	23.6
E50. Modulation entirety.)	on and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its
1037 kbp:	s, QPSK, 33/50	FEC				
4012GX 8W	10950 11200	R	Horizontal and Vertical	943KG7W	0.0	0.0
entirety.)						
4012GX 8W	11450 11700	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulation entirety.)	on and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of t	he form to view it in its
NULL						

4012GX 8W	11700 12200	R	Horizontal and Vertical	943KG7W	0.0	0.0
E50. Modulati entirety.)	ion and Services (1	If the complete d	escription does not appear	in this box, please	go to the end of t	he form to view it in its
NULL						
4012GX 8W	12500 12750	R	Horizontal and Vertical	943KG7W	0.0	0.0
NULL						
4012GX 8W	14000 14500	Т	Horizontal and Vertical	943KG7W	50.3	26.6
entirety.)	ion and Services (1		escription does not appear	in this box, please	go to the end of t	he form to view it in its

FREQUENCY COORDINATION

Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	E56. Earth Station Azimuth Angle Eastern Limit	E57. Antenna Elevation Angle Eastern Limit	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
v100GX 4W	Geostationary	10950 12200	37.55/37.55	90.0	5.0	263.0	5.0	0.0
	Geostationary	14000 14500	37.55/37.55	90.0	5.0	263.0	5.0	-6.2
v100GX 8W	Geostationary	10950 12200	37.55/37.55	90.0	5.0	263.0	5.0	0.0
	Geostationary	14000 14500	37.55/37.55	90.0	5.0	263.0	5.0	-3.2
4012GX 4W	Geostationary	10950 12200	37.55/37.55	90.0	5.0	263.0	5.0	0.0
	Geostationary	14000 14500	37.55/37.55	90.0	5.0	263.0	5.0	-6.2
4012GX 8W	Geostationary	10950 12200	37.55/37.55	90.0	5.0	263.0	5.0	0.0
	Geostationary	14000 14500	37.55/37.55	90.0	5.0	263.0	5.0	-3.2

NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.

E62. Street Address			
E63. City	E68. County	E67/68. State/Country /	E64. Zip Code

FCC NOTICE REQUIRED BY THE PAPERWORK REDUCTION ACT

The public reporting for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the required data, and completing and reviewing the collection of information. If you have any comments on this burden estimate, or how we can improve the collection and reduce the burden it causes you, please write to the Federal Communications Commission, AMD–PERM, Paperwork Reduction Project (3060–0678), Washington, DC 20554. We will also accept your comments regarding the Paperwork Reduction Act aspects of this collection via the Internet if you send them to PRA@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

Remember – You are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060–0678.

THE FOREGOING NOTICE IS REQUIRED BY THE PAPERWORK REDUCTION ACT OF 1995, PUBLIC LAW 104–13, OCTOBER 1, 1995, 44 U.S.C. SECTION 3507.

43. Description. (Summarize the nature of the application and the services to be provided).

Applicant seeks herein to add two antenna types -- (1) the Intellian v100GX; (2) the SeaTel 4012 -- to its existing ESV operations. Separately, Applicant seeks data correction on its current license of the entry marked as frequency band 8 under Part B, Particulars of Operation. At the time of the grant of a previous modification, that band was entered mistakenly; the correct values should reflect 14000.5-14499.5 MHz.