Date & Time Filed: Feb 29 2012 7:32:36:286PM File Number: SES-MOD-INTR2012-00692

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:

Hub4/5 Modification

3. Legal Name of A	pplicant			
Name:	VSAT Systems, LLC	Phone Number:	330-785-2100	
DBA Name:		Fax Number:	419-818-1978	
Street:	1520 South Arlington Street	E–Mail:		
City:	Akron	State:	ОН	
Country:	USA	Zipcode:	44306 –	
Attention	: Michael Kister			

9–16. Name of Contact Representative

Name: Donna Balaguer Phone Number: 202–626–7719

**Company:** Fish & Richardson P.C. **Fax Number:** 202–783–2331

Street: 1425 K Street, N.W. E-Mail: balaguer@fr.com

Suite 1100

City: Washington State: DC

Country: USA Zipcode: 20005–

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.

a1. Earth Station

a2. Space Station

(N/A) b1. Application for License of New Station

(N/A) b2. Application for Registration of New Domestic Receive-Only Station

**o** b3. Amendment to a Pending Application

**b**4. Modification of License or Registration

b5. Assignment of License or Registration

b6. Transfer of Control of License or Registration

**b**7. 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 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):					
17d.					
Fee Classification CGV – Fixed Satellite VSAT System					
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:	application enter both fields, if this filing is a			
(a) Call sign of station:	(a) Date pending application was filed:	(b) File number:			
E090086		SESMOD2010051800609			

## TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provide	e 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)	
<del>_</del>	
21. STATUS: Choose the button next to the applicable status. Choose	22. 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 s facilities:	service, see instructions regarding Sec. 214 filings. Choose one. Are these
O 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 a	pplicable 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 addition	nal frequencies in an attachment)

## TYPE OF STATION

25. CLASS OF STATION: Choose the button	next to the class of sta	tion that applies. Choose only	one.	
a. Fixed Earth Station				
o b. Temporary–Fixed Earth Station				
o. 12/14 GHz VSAT Network				
d. Mobile Earth Station				
e. Geostationary Space Station				
f. Non–Geostationary Space Station				
g. Other (please specify)				
26. TYPE OF EARTH STATION FACILITY:  Transmit/Receive  Transmit_Only	♣ Receive_Only	- N/Δ		
Transmit/Receive Transmit-Only "For Space Station applications, select N/A."	O Receive—Only	O N/A		

## PURPOSE OF MODIFICATION

27. The purpose of this proposed modification is to: (Place an 'X' in the box(es) next to all that apply.)
a — authorization to add new emission designator and related service
b — authorization to change emission designator and related service
c — authorization to increase EIRP and EIRP density
d — authorization to replace antenna
e — authorization to add antenna
f — authorization to relocate fixed station
g — authorization to change frequency(ies)
h — authorization to add frequency
i — authorization to add Points of Communication (satellites & Double
j — authorization to change Points of Communication (satellites & Double of Communication)
k — authorization for facilities for which environmental assessment and
radiation hazard reporting is required
1 — authorization to change orbit location
m — authorization to perform fleet management
n — authorization to extend milestones
o — Other (Please specify)

## **ENVIRONMENTAL POLICY**

under the laws of a foreign country?

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.						
ALIEN OWNERSHIP Earth station applicants not proposing to provide broadcast, common carrier, aerona aeronautical fixed radio station services are not required to respond to Items 30–34.	autic	al er	ı roı	ıte o	r	
29. Is the applicant a foreign government or the representative of any foreign government?	٥	Yes	•	, No	)	
30. Is the applicant an alien or the representative of an alien?	0	Yes	•	. No	0	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	•	, No	· o	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	0	Yes	•	. No	· o	N/A

O Yes No

28. Would a Commission grant of any proposal in this application or amendment have a significant environmental

	<del></del>	
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 •	No O 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 explination of circumstances.	O Yes	No

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	<b>⊚</b> 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	O Yes	<b>⊚</b> 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 exhinit, an explanation of the circumstances.	O Yes	<b>⊘</b> 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.		

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	O 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.	<b>O</b> Yes	<b>⊚</b> No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, wh coordinated or is in the process of coordinating the space station?	at administr	ation has
43. Description. (Summarize the nature of the application and the services to be provided). (If the complete descriptio box, please go to the end of the form to view it in its entirety.)	n does not ap	opear in this
Provide business-class Internet service with the addition of two hub sites.		

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.	<b>●</b> 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.	O B
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.	<b>o</b> 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 appli	cable response.)
O Individual	
Unincorporated Association	
Partnership	
Corporation	
Governmental Entity	
Other (please specify)	
45. Name of Person Signing	46. Title of Person Signing
Michael Kister	President
>	
(U.S. Code, Title 18, Section 10	ON THIS FORM ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT 001), AND/OR REVOCATION OF ANY STATION AUTHORIZATION (a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

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

Location of Earth Station Site

E1: Site Identifier: HUB4 E5. Call Sign: E090086

E2: Contact Name Mario Tomaselli E6. Phone 330–785–2100

Number:

E3. Street: 1520 S. Arlington E7. City: Akron

E8. County: Summit

E4. State OH E9. Zip Code 44306

E10. Area of Operation: CONUS, Alaska, Hawaii, Bahamas, Caribbean, Guatemala, Panama, Costa Rica

E11. Latitude: 41 °1 '50.8 "N

E12. Longitude: 81 °29 '34.2 "W

E13. Lat/Lon Coordinates are: NAD-27 NAD-83 N/A

E14. Site Elevation (AMSL): 349.5 meters

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.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Set Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	oposed antenna(s) comply with the antenna	O Yes	O No	● N/A
E17. Is the facility operated by remote control? If YES, provide the loc point.	ation and telephone number of the control	Yes	0	No
E18. Is frequency coordination required? If YES, attach a frequency co	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the coordination contours as	name of the country(ies) and plot of	O Yes	•	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.1 have you attached a copy of a completed FCC Form 854 and/or the FA. the structure to aviation? HUB4 Form 854 FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	● Yes	0	No
POINTS OF COMMUNICATION		<u> </u>		
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: HUB4				

E26. Common Name:	E27. Country: USA

## ANTENNA

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	E32. Antenna Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
HUB4	HUB4	1	Harris/Vertex	5349	8.1	58.0 dBi at 11.725
HUB4	HUB4	1	Harris/Vertex	5349	8.1	59.7 dBi at 14.125

Id	Diameter		, ,	Height Above	Input Power at antenna flange	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
HUB4	0.0/0.0	8.1	357.6	0.0	100.0	0.0	79.7

## FREQUENCY

	E43/44. Frequency Bands (MHz)			Designator	EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
HUB4	14000 14500	Т	Vertical	9M1G7W	79.7	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Digital Audio and Data, 8PSK DBS2

HUB4	11700	R	Horizontal	1M5G7W	0.0	0.0
	12200					

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Digital Audio and Data, 8PSK DBS2

## FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	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)
HUB4	Geostationary	11700 12200	37.0/124.0	123.8	24.7	244.0	26.0	0.0
	Geostationary	14000 14500	37.0/124.0	123.8	24.7	244.0	26.0	-30.7

REMOTE CONTROL POINT LOCATION

E61. Call Sign  NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.		E66. Phone Number 440–238–7356		
E62. Street Address 12947 Webster Rd.				
E63. City Strongsville	E68. County Cuyahoga		E67/68. State/Country OH/ USA	E64. Zip Code 44136

## SATELLITE EARTH STATION AUTHORIZATIONS

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

Location of Earth Station Site			
E1: Site Identifier:	E5. Call Sign:		
E2: Contact Name	E6. Phone Number:		
E3. Street:	E7. City:		
	E8. County:		
E4. State	E9. Zip Code		
E10. Area of Operation:			
E11. Latitude:			
E12. Longitude: °' '"			
E13. Lat/Lon Coordinates are:	O NAD-27	O NAD-83	O N/A
E14. Site Elevation (AMSL):	meters		

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.	<b>●</b> 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	<b>⊗</b> N/A

E17. Is the facility operated by remote control? If YES, provide the locat point.	ion and telephone number of the control	• Yes	O No
E18. Is frequency coordination required? If YES, attach a frequency coordination	rdination report as	O Yes	<b>⊚</b> No
E19. Is coordination with another country required? If YES, attach the na coordination contours as	ame of the country(ies) and plot of	O Yes	No
E20. FAA Notification – (See 47 CFR Part 17 and 47 CFR part 25.11 have you attached a copy of a completed FCC Form 854 and/or the FAA the structure to aviation? HUB5 Form 854 FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL RAPPLICATION.	Yes	O No	
POINTS OF COMMUNICATION		!	
Satellite Name: ALSAT   ALL AUTHORIZED U.S.   ALSAT   If you se	elected OTHER, please enter the following:		
E21. Common Name:	E22. ITU Name:		
E23. Orbit Location:	E24. Country:		
POINTS OF COMMUNICATION (Destination Points)			· · · · · · · · · · · · · · · · · · ·
E25. Site Identifier: HUB5			
E26. Common Name: ANTENNA	E27. Country: USA		

Site ID	E28. Antenna Id	E29. Quantity	E30. Manufacturer	E31. Model	Size <meters></meters>	E41/42. Antenna Gain Transmint and/or Recieve (dBi atGHz)
HUB5	HUB5	1	Harris/Vertex	5349	8.1	58.0 dBi at 11.725
HUB5	HUB5	1	Harris/Vertex	5349	8.1	59.7 dBi at 14.125

E28. Antenna Id			` ′	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
HUB5	0.0/0.0	8.1	357.6	0.0	100.0	0.0	79.7

# FREQUENCY

	E43/44. Frequency Bands (MHz)				EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
HUB5	14000 14500	Т	Vertical	9M1G7W	79.7	0.0

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Digital Audio and Data, 8PSK DBS2

HUB5	11700	R	Horizontal	1M5G7W	0.0	0.0
	12200					

E50. Modulation and Services (If the complete description does not appear in this box, please go to the end of the form to view it in its entirety.)

Digital Audio and Data, 8PSK DBS2

## FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	Station Azimuth Angle	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)
HUB5	Geostationary	11700 12200	37.0/124.0	123.8	24.7	244.0	26.0	0.0
	Geostationary	14000 14500	37.0/124.0	123.8	24.7	244.0	26.0	-30.7

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E61. Call Sign  NOTE: Please enter the callsign of the controcallsign for which this application is being filed.	E66. Phone Number 440–238–7356			
E62. Street Address 12947 Webster Road				
E63. City Strongsville	E68. County Cuyahoga		E67/68. State/Country OH/ USA	E64. Zip Code 44136

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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.