Date & Time Filed: Jul 16 2007 1:58:12:963PM File Number: SES–LIC–INTR2007–01687 Callsign/Satellite ID:

	APPLICATION FOR EART	H STATION AUTHORIZATIONS	FCC Use Only
	FCC 312 MAIN FORM	4 FOR OFFICIAL USE ONLY	
APPLICANT IN	FORMATION		
-	on of this application to ider	ntify it on the main menu:	
Raytheon VSAT	Rhode Island		
1–8. Legal Name	of Applicant		
Name	Raytheon Company	Phone Number:	978-440-4022
	• Raymeon Company		
DBA Name	:	Fax Number:	978-440-3332
Street	Raytheon Company	E-Mail:	Karen_I_Dyberg@raytheon.com
	528 Boston Post Road	M/S	
City:	Sudbury	State:	MA
Count	ry: USA	Zipcode:	01776 –
Attent	tion: Karen I Dyberg		

Name:	Arthur Larson	Phone Number:	214-231-3402
Company:	ND SatCom, Inc.	Fax Number:	214-231-3399
Street:	3801 E. Plano Parkway	E-Mail:	arthur.larson@ndsatcom.com
	Suite 200		
City:	Plano	State:	TX
Country:	USA	Zipcode:	75074-
Attention:		Relationship:	Engineer

CLASSIFICATION OF FILING

17. Choose the button next to the	b.
classification that applies to this filing for	b1. Application for License of New Station
both questions a. and b. Choose only one	b2. Application for Registration of New Domestic Receive–Only Station
for 17a and only one for 17b. a. a. a1. Earth Station (N/A) a2. Space 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 (N/A) b9. Letter of Intent to Use Non–U.S. Licensed Satellite to Provide Service in the United States
	b 10. Other (Please specify)
	• 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. b12. Application for Database Entry
	(N/A) b13. Amendment to a Pending Database Entry Application (N/A) b14. Modifiction 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).
O Governmental Entity O Noncomme	ercial educational licensee
• Other(please explain):	
17d.	
Fee Classification BGV – Fixed Satellite V	/SAT System

18. If this filing is in reference to an	19. If this filing is an amendment to a pending ap	oplication enter:
existing station, enter:	(a) Date pending application was filed:	(b) File number of pending application:
(a) Call sign of station:		
Not Applicable	Not Applicable	Not Applicable

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)	
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
	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER s facilities:	ervice, see instructions regarding Sec. 214 filings. Choose one. Are these
• Connected to a Public Switched Network • Not connected	to a Public Switched Network ON/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:

TYPE OF STATION

a. Fixed Earth Station	1		
b. Temporary–Fixed	Earth Station		
• c. 12/14 GHz VSAT	Network		
d. Mobile Earth Stati	on		
N/A) e. Geostationary S	pace Station		
N/A) f. Non–Geostation	ary Space Station		
g. Other (please spec	ify)		
PE OF EARTH STATI	ON FACILITY: Choose only	one.	

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.

0	Yes	۲	No	

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?	O Yes	● No
30. Is the applicant an alien or the representative of an alien?	O Yes	● No ● N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	O 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?	O 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?

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.	O 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 No ■

• Yes • No • N/A

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.	• Yes	No
38. Has any court finally adjudged the applicant, or any person directly or indirectly controlling the applicant, guilty of unlawfully monopolizing or attemptiing 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	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	● 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.

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 request a new Authorizations for a VSAT network consisting of one 3.8 meter Hub and ten 1.8 meter remote VSAT antennas operation in the Ku-Band, in CONUS on approved list satellites.

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 butt	on next to applicable respon	se.)			
O Individual					
O Unincorporated Association					
• Partnership					
• Corporation					
• Governmental Entity					
Other (please specify)					
-					
45. Name of Person Signing		46. Title of Perso	n Signing		
Thomas Parker		Program Manager			
47. Please supply any need attachments.					
Attachment 1:	Attachment 2:		Attachment 3:		
WILLFUL FALSE STATEM	IENTS MADE ON THIS FO	ORM ARE PUNISHAE	BLE BY FINE AND / OR IMPRISO	NMENT	
-			ANY STATION AUTHORIZATION		
(U.S. Code, 1itie 4	7, Section 312(a)(1)), AND/	UK FUKFEITURE (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 St	ation Site					
E1: Site Identifier:	HUB1	E5. Call Sign:				
E2: Contact Name	Joseph Cordeiro	E6. Phone Number:	401-842-5938			
E3. Street:	1847 West Main Road	E7. City:	Portsmouth			
		E8. County:	U.S.A.			
E4. State	RI	E9. Zip Code	02871			
E10. Area of Operat	tion:	CONUS				
E11. Latitude:	41 °20 '39.1 "N					
E12. Longitude:	71 °10 '11.6 "W					
E13. Lat/Lon Coord	linates are:	ONAD-27	NAD-83	O ^{N/A}		
E14. Site Elevation (AMSL):		62.0 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 asProdelin_3_8_Patterna technical analysis showing compliance with two–degree spacing policy.	• Yes	O [№]	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	○ ^{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	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	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.	۲	Yes	O 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:

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: HUB1						
E26. Common Name:	E27. Country:USA					
POINTS OF COMMUNICATION (Destination Points)	·					

E25. Site Identifier: HUB1	
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 GainTransmint and/or Recieve (dBi at GHz)
HUB1	Hub38	1	Prodelin	Series 1383	3.8	53.2 dBi at 14.5
						51.7 dBi at 11.85
	0	0	0	0	0.0	0.0 dBi at 0
						0.0 dBi at 0

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)		Height Above Ground Level 	Input Power at antenna flange 	Maximum Antenna Height	E40. Total EIRP for al carriers (dBW)
Hub38	3.8/3.9	65.0	127.0	66.9	20.0	0.0	66.2
0	0.0/0.0	0.0	0.0	0.0	0.0	0.0	0.0

FREQUENCY

E28. Antenna Id	E43/44. Frequency Bands (MHz)	E45. T/R Mode	E46. Antenna Polarization(H,V, L,R)	E47. Emission Designator	E48. Maximum EIRP per Carrier (dBW)	E49. Maximum ERIP Density per Carrier (dBW/4kHz)
Hub38	14000 14500	Т	Horizontal and Vertical	7M0G7D	66.2	33.8
E50. Modulation entirety.) Digital Da			on does not appear in		to the end of the form	to view it in its

	-					
Hub38	11700	R	Horizontal and	7M0G7D	0.0	0.0
	12200		Vertical			

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 Data Carrier QPSK IP Voice/ Data and Frame Relay

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc E/W 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)
Hub38	Geostationary	11700 12200	7.0/ 129.0	107.7	10.5	247.4	15.2	0.0
	Geostationary	14000 14500	7.0/ 129.0	107.7	10.5	247.4	15.2	-15.4

REMOTE CONTROL POINT LOCATION

E61. Call Sign		E65. Phone Number		
NOTE: Please enter the callsign of the contro callsign for which this application is being filed.				
E62. Street Address				
E63. City	E67. County		E64/68. State/Country /	E66. Zip Code

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: Remotes	E5. Call Sign:		
E2: Contact Name Joseph Cordeiro	E6. Phone Number:	401-842-5938	
E3. Street:	E7. City:		
	E8. County:		
E4. State	E9. Zip Code		
E10. Area of Operation:	CONUS		
E11. Latitude: 0 °0 '0.0 "			
E12. Longitude: 0 °0 '0.0 "			
E13. Lat/Lon Coordinates are:	ONAD-27	O NAD-83	● N/A
E14. Site Elevation (AMSL):	0.0 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 Vertex Patterns 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	○ ^{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	● 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	● 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.	۲	Yes	O 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: Remotes	
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 GainTransmint and/or Recieve (dBi at GHz)
Remotes	Flyaway18	10	VertexRSI	1189 1.8m QD KuBand	1.8	44.0 dBi at 11.85
						45.3 dBi at 14.125

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	(meters)	0	Input Power at antenna flange 	Maximum Antenna Height	E40. Total EIRP for al carriers (dBW)
Flyaway18	1.8/1.8	2.4	0.0	0.0	20.0	0.0	65.3

FREQUENCY

 E43/44. Frequency Bands	E45. T/R Mode			E48. Maximum EIRP per Carrier	E49. Maximum ERIP Density per
(MHz)		L,R)	_	(dBW)	Carrier
					(dBW/4kHz)

Flyaway18	11700 12200	R	Horizontal and Vertical	7M0G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	ne complete descripti	on does not appear in	this box, please go t	o the end of the form	to view it in its
Digital Da	ta Carrier QPS	K IP Data/Voic	ce and Frame Re	elay		
Flyaway18	14000 14500	Т	Horizontal and Vertical	7M0G7D	58.3	25.9
E50. Modulation entirety.) Digital Da	`		on does not appear in		o the end of the form	to view it in its

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	Frequency	E54/55. Range of Satellite Arc E/W Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	Antenna Elevation Angle Western	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
Flyaway18	Geostationary	11700 12200	7.0/ 177.0	107.0	15.1	252.0	10.0	0.0

Geostationary	14000 14400	7.0/ 177.0	107.0	15.1	252.0	10.0	-10.1
NTROL POIN	T LOCATIC	N	I				
gn				E65. Phone	Number		
			not the				
		E67. Cour	nty			ry	E66. Zip Code
	NTROL POIN gn se enter the calls ch this application	14400 NTROL POINT LOCATIC gn se enter the callsign of the cor ch this application is being fil	gn se enter the callsign of the controlling station, r ch this application is being filed.	gn se enter the callsign of the controlling station, not the ch this application is being filed.	14400 NTROL POINT LOCATION gn E65. Phone se enter the callsign of the controlling station, not the ch this application is being filed. Address	14400 E65. Phone Number gn E65. Phone Number se enter the callsign of the controlling station, not the ch this application is being filed. E65. Phone Number Address E67. County E64/68.	14400 NTROL POINT LOCATION gn se enter the callsign of the controlling station, not the ch this application is being filed.

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 jboley@fcc.gov. PLEASE DO NOT SEND COMPLETED FORMS TO THIS ADDRESS.

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