Date & Time Filed: Jun 25 2007 10:58:46:176AM File Number: SES-MOD-INTR2007-01518

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: E060097 Modification

Name:	The Boeing Company	Phone Number:	866–248–1493
DBA Name:		Fax Number:	206–544–6592
Street:	Attn	E-Mail:	bob.douglass@boeing.com
	PO Box 3707		
City:	Seattle	State:	WA
Country:	USA	Zipcode:	98124 -2207

9–16. Name of Contact Representative

Name: Ron Center Phone Number: 206–544–6583

Company: The Boeing Company **Fax Number:** 206–544–6583

Street: P.O. Box 3707 E-Mail: ronald.e.center@boeing.com

City: Seattle State: WA

Country: USA **Zipcode:** 98124–2207

Attention: Frequency Manager M/C 2T–22 **Relationship:** Same

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

b 3. Amendment to a Pending Application

b4. Modification of License or Registration

b5. Assignment of License or Registration

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 applicati				
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 Noncommercial educational licensee				
Other(please explain):				
17d.				
Fee Classification CGX – Fixed Satellite 3 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:	oplication enter both fields, if this filing is a		
(a) Call sign of station:	(a) Date pending application was filed:	(b) File number:		
E060097		SESLIC2006032700510		

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
Common Carrier Non–Common Carrier	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 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 station that applies. Choose only one.	
a. Fixed Earth Station	
• b. Temporary–Fixed Earth Station	
c. 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/A	
"For Space Station applications, select 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 & countries)
j — authorization to change Points of Communication (satellites & tountries)
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

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 RADHAZ

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	•	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	0	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	•	No	0	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 •	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.	Yes Felony	O 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	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.	⊚ 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.	○ Yes	⊚ No
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issued, we coordinated or is in the process of coordinating the space station?	hat administr	ration has

This modification is a request to add/change emissions, as well as add destination points of communications.

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.	O 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.	● 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.	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	
Unincorporated Association	
Partnership	
© Corporation	
Governmental Entity	
Other (please specify)	
45. Name of Person Signing	46. Title of Person Signing
Robert B Douglass	Manager
>	
	ARE PUNISHABLE BY FINE AND / OR IMPRISONMENT EVOCATION OF ANY STATION AUTHORIZATION 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 St	ation Site					
E1: Site Identifier:	Herndon 3.8M	E5. Call Sign:	E060097			
E2: Contact Name	Douglas Cook	E6. Phone Number:	703–467–7257			
E3. Street:	460 Herndon Parkway	E7. City:	Herndon			
		E8. County:	Fairfax			
E4. State	VA	E9. Zip Code	20170			
E10. Area of Operat	ion:	Herndon, VA				
E11. Latitude:	38 °57 '32.0 "N					
E12. Longitude:	77 °22 '32.0 "W					
E13. Lat/Lon Coord	inates are:	O NAD-27	● NAD-83	O N/A		
E14. Site Elevation	(AMSL):	107.0 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 a technical analysis showing compliance with two–degree spacing policy.

E16. If the proposed antenna(s) do not operate in the Fixed Satellite Se Satellite Service (FSS) with non–geostationary satellites, do(es) the progain patterns specified in Section 25.209(a2) and (b) as demonstrated by measurements?	O Yes	O No	⊚ N/A	
E17. Is the facility operated by remote control? If YES, provide the loca point.	ntion and telephone number of the control	O Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination	ordination report as	O Yes	•	No
E19. Is coordination with another country required? If YES, attach the r 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 FAA the structure to aviation? FAILURE TO COMPLY WITH 47 CFR PARTS 17 AND 25 WILL APPLICATION.	A's study regarding the potential hazard of	O Yes	•	No
POINTS OF COMMUNICATION				
Satellite Name: PERMITTED LIST PERMITTED LIST 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: Herndon 3.8M				

E26. Common Name:	E27. Country:	United Kingdom
	1	
E25. Site Identifier: Herndon 3.8M		
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)
Herndon 3.8M	Vertex 3.8	1	Vertex RSI	3.8 DPK	3.8	51.7 dBi at 11.950
Herndon 3.8M	Vertex 3.8	1	Vertex RSI	3.8 DPK	3.8	53.0 dBi at 14.250

E28. Antenna Id	E33/34. Diameter Minor/Major (meters)	E35. Above Ground Level (meters)	` /	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
Vertex 3.8	3.8/3.8	15.2	122.2	10.0	16.0	5.2	65.04

FREQUENCY

E43/44.	E45.	E46. Antenna	E47. Emission	E48. Maximum	E49. Maximum
Frequency Bands	T/R Mode	Polarization(H,V,	Designator	EIRP per Carrier	ERIP Density per
(MHz)		L , R)		(dBW)	Carrier
					(dBW/4kHz)
	Frequency Bands	Frequency Bands T/R br>Mode	Frequency Bands T/R T/R Polarization(H,V,	Frequency Bands T/R br>Mode Polarization(H,V, Designator	Frequency Bands (MHz) T/R Brown Polarization(H,V, Designator (H)) L,R) EIRP per Carrier (dBW)

Vertex 3.8	11700 12200	R	Linear and Circular	128KG7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descripti	on does not appear in	this box, please go	to the end of the form	to view it in its
Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	1M00G7D	0.0	0.0
entirety.) Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	1M50G7D	0.0	0.0
E50. Modulation entirety.) Digital Da	,	ne complete descripti	on does not appear in	this box, please go	to the end of the form	to view it in its

Vertex 3.8	11700 12200	R	Linear and Circular	256KG7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	ne complete descripti	on does not appear in	this box, please go to	o the end of the form	to view it in its
Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	2M00G7D	0.0	0.0
entirety.) Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	32K0G7D	0.0	0.0
E50. Modulation entirety.)	,	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
Digital Da	ta Carrier					

Vertex 3.8	11700 12200	R	Linear and Circular	3M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	ne complete descripti	on does not appear in	this box, please go	to the end of the form	to view it in its
Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	4M00G7D	0.0	0.0
entirety.) Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	512KG7D	0.0	0.0
E50. Modulation entirety.) Digital Da	,	ne complete descripti	on does not appear in	this box, please go	to the end of the form	to view it in its

Vertex 3.8	11700 12200	R	Linear and Circular	5M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	ne complete descript	ion does not appear in	this box, please g	;o to the end of th	ne form to view it in its
Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	64K0G7D	0.0	0.0
Digital Da	ta Carrier					
Vertex 3.8	11700 12200	R	Linear and Circular	768KG7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	ne complete descript	ion does not appear in	this box, please g	to the end of th	ne form to view it in its
Digital Da	ta Carrier					

Vertex 3.8	11700 12200	R	Linear and Circular	8M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete description	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					
Vertex 3.8	11700 12200	R	Linear and Circular	922KG7D	0.0	0.0
entirety.) Digital Da	ta Carrier					
Vertex 3.8	14000 14500	Т	Linear and Circular	128KG7D	54.0	38.95
E50. Modulation entirety.) Digital Da	`	he complete description	on does not appear in	this box, please go t	o the end of the form	to view it in its

14000 14500	Т	Linear and Circular	1M00G7D	62.0	38.02
and Services (If	the complete de-	scription does not appear in	this box, please	go to the end of th	ne form to view it in its
ta Carrier					
14000 14500	Т	Linear and Circular	1M50G7D	64.5	38.76
ita Carrier					
14000 14500	Т	Linear and Circular	256KG7D	57.0	38.94
and Services (If	the complete de	scription does not appear in	this box, please	go to the end of th	ne form to view it in its
	14000 and Services (If 14000 14500 and Services (If 14000 14500 and Services (If	and Services (If the complete de ta Carrier 14000 T T T T T T T T T T T T T T T T T T	and Services (If the complete description does not appear in ta Carrier 14000	and Services (If the complete description does not appear in this box, please ta Carrier 14000	and Services (If the complete description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box, please go to the end of the description does not appear in this box.

Vertex 3.8	14000 14500	Т	Linear and Circular	2M00G7D	65.04	38.05
E50. Modulation entirety.)	and Services (If the complete d	escription does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ata Carrier					
Vertex 3.8	14000 14500	Т	Linear and Circular	32K0G7D	48.0	38.97
entirety.) Digital Da	ata Carrier					
Vertex 3.8	14000 14500	Т	Linear and Circular	3M00G7D	65.04	36.29
E50. Modulation entirety.) Digital Da	n and Services (If the complete d	escription does not appear in	this box, please	go to the end of th	e form to view it in its

Vertex 3.8	14000 14500	Т	Linear and Circular	4M00G7D	65.04	35.04
E50. Modulation entirety.)	and Services (If	the complete dese	cription does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					
Vertex 3.8	14000 14500	Т	Linear and Circular	512KG7D	60.0	38.93
entirety.) Digital Da	ta Carrier					
Vertex 3.8	14000 14500	Т	Linear and Circular	5M00G7D	65.04	34.07
E50. Modulation entirety.)		the complete desc	cription does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					

Vertex 3.8	14000 14500	Т	Linear and Circular	64K0G7D	51.0	38.96
E50. Modulation entirety.)	and Services (If	the complete description	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					
Vertex 3.8	14000 14500	Т	Linear and Circular	768KG7D	60.5	37.67
entirety.) Digital Da	ta Carrier					
Vertex 3.8	14000 14500	Т	Linear and Circular	8M00G7D	65.04	32.03
E50. Modulation entirety.) Digital Da		the complete description	on does not appear in	this box, please go t	o the end of the form	to view it in its

Vertex 3.8	14000 14500	Т	Linear and Circular	922KG7D	62.0	38.37		
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 Da	ta Carrier							

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type	E52/53. Frequency Limits(MHz)	E54/55. Range of Satellite Arc Eastern/West ern Limit	0	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)
Vertex 3.8	Geostationary	11700 12200	15.0/142.0	108.2	12.7	264.2	10.9	0.0
	Geostationary	14000 14500	15.0/142.0	108.2	12.7	264.2	10.9	-10.97

REMOTE CONTROL POINT LOCATION

REMOTE CONTROL FOR TECHNION	
E61. Call Sign	E66. Phone Number
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.	E64. Zip Code
		State/Country	
		/	

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