Approved by OMB 3060–0678

Date & Time Filed: Jun 25 2007 11:01:53:273AM File Number: SES–MOD–INTR2007–01520

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: E990098 Modification

1–8. Legal Name of Applicant **Phone Number:** Name: The Boeing Company 866-248-1493 DBA Fax Number: 206-544-6592 Name: Street: E-Mail: bob.douglass@boeing.com Attn PO Box 3707 City: Seattle State: WA **Country:** USA Zipcode: 98124 -2207Attention: Mr Robert B Douglass

9–16. Name of Contact Representative					
	Name:	Ron Center	Phone Number:	206-544-6583	
	Company:	The Boeing Company	Fax Number:	206-544-6592	
	Street:	P.O. Box 3707	E-Mail:	ronald.e.center@boeing.com	
	City:	Seattle	State:	WA	
	<b>Country:</b>	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.	<ul> <li>(N/A) b1. Application for License of New Station</li> <li>(N/A) b2. Application for Registration of New Domestic Receive–Only Station</li> <li>b3. Amendment to a Pending Application</li> </ul>
<ul> <li>a1. Earth Station</li> <li>a2. Space Station</li> </ul>	<ul> <li>b4. Modification of License or Registration</li> <li>b5. Assignment of License or Registration</li> <li>b6. Transfer of Control of License or Registration</li> <li>b7. Notification of Minor Modification</li> <li>(N/A) b8. Application for License of New Receive–Only Station Using Non–U.S. Licensed Satellite</li> <li>(N/A) b9. Letter of Intent to Use Non–U.S. Licensed Satellite to Provide Service in the United States</li> <li>(N/A) b10. Other (Please specify)</li> </ul>
	<ul> <li>(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</li> <li>b13. Amendment to a Pending Database Entry Application</li> <li>b14. Modification of Database Entry</li> </ul>

17c. Is a fee submitted with this application		
If Yes, complete and attach FCC Form	159. If No, indicate reason for fee exemption (s	ee 47 C.F.R.Section 1.1114).
O Governmental Entity O Noncomme	ercial educational licensee	
• Other(please explain):		
17d.		
Fee Classification CGX – Fixed Satellite 7 Station	Fransmit/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:	pplication enter both fields, if this filing is a
(a) Call sign of station: E990098	(a) Date pending application was filed:	(b) File number:
L770070		SESMOD2000081001411

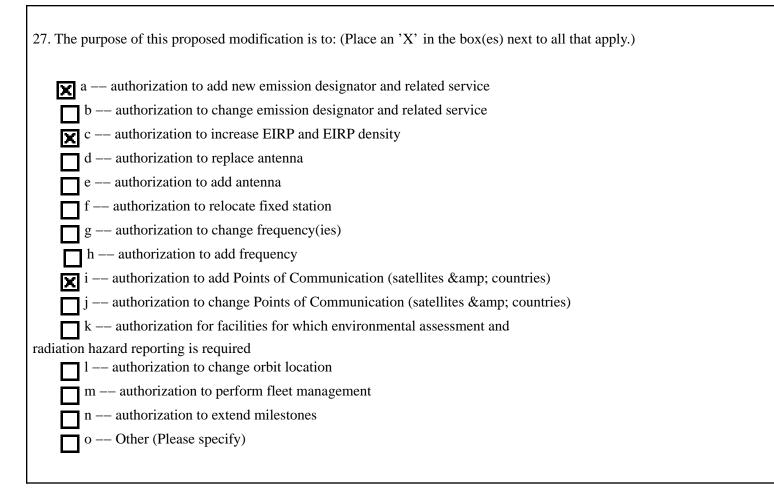
## TYPE OF SERVICE

20. NATURE OF SERVICE: This filing is for an authorization to provid	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.	Substantial Station approximation and the approximation of the station of the sta
Common Carrier 💿 Non–Common Carrier	Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER facilities:	service, see instructions regarding Sec. 214 filings. Choose one. Are these
• Connected to a Public Switched Network • Not connected to a	Public Switched Network O N/A
24. FREQUENCY BAND(S): Place an 'X' in the box(es) next to all a	applicable 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 addition	onal 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
o c. 12/14 GHz VSAT Network
O 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



#### 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 Radh	-	No		
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 en	rou	te or	,	
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	۲	No	0	N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	0	Yes	۲	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	۲	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?

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	le 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	O No
	Felony	
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     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.



O No

Yes

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.)

This application is a request to add/change emissions and 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.	<b>O</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.	● <sup>B</sup>
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 applicable response.)	
O Individual	
O 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 S	tation Site					
E1: Site Identifier:	Herndon	E5. Call Sign:	E990098			
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 Opera	tion:	Herndon, VA				
E11. Latitude:	38 ° 57 ' 32.0 "N					
E12. Longitude:	77 °22 '32.0 "W					
E13. Lat/Lon Coord	dinates are:	ONAD-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.	• Yes	O <sup>No</sup>	O <sup>N/A</sup>
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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 <sup>No</sup>	● 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: PERMITTED LIST   PERMITTED LIST   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: Herndon					

E26. Common Name:	E27. Country: United Kingdom
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E25. Site Identifier: Herndon	
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 at GHz)
Herndon	3.8MPROD	1	Prodelin	1383	3.8	51.7 dBi at 11.950
Herndon	3.8MPROD	1	Prodelin	1383	3.8	53.2 dBi at 14.250

Id			· · · · · ·	Height Above	Input Power at	E39. Maximum Antenna Height Above Rooftop (meters)	EIRP for al
3.8MPROD	3.8/3.8	14.3	121.3	10.0	16.0	4.3	65.24

FREQUENCY

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

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

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

3.8MPROD	11700 12200	R	Linear and Circular	38K4G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete descri	ption does not appear in	this box, please	go to the end of t	he form to view it in its
Digital Da	ta Carrier					
3.8MPROD	11700 12200	R	Linear and Circular	3M00G7D	0.0	0.0
entirety.) Digital Da	ta Carrier					
3.8MPROD	11700 12200	R	Linear and Circular	4M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete descri	ption does not appear in	this box, please	go to the end of t	he form to view it in its
Digital Da	ta Carrier					

3.8MPROD	11700 12200	R	Linear and Circular	512KG7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete des	cription does not appear in	this box, please	go to the end of t	the form to view it in its
Digital Da	ta Carrier					
3.8MPROD	11700 12200	R	Linear and Circular	5M00G7D	0.0	0.0
entirety.) Digital Da	ta Carrier					
3.8MPROD	11700 12200	R	Linear and Circular	64K0G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete des	cription does not appear in	this box, please	go to the end of t	the form to view it in its
Digital Da	ta Carrier					

3.8MPROD	11700 12200	R	Linear and Circular	768KG7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete de	escription does not appear in	this box, please	go to the end of t	the form to view it in its
Digital Da	ta Carrier					
3.8MPROD	11700 12200	R	Linear and Circular	8M00G7D	0.0	0.0
entirety.) Digital Da	ta Carrier					
3.8MPROD	11700 12200	R	Linear and Circular	922KG7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete de	escription does not appear in	this box, please	go to the end of t	the form to view it in its
Digital Da	ta Carrier					

3.8MPROD	14000 14500	Т	Linear and Circular	128KG7D	54.2	39.15
E50. Modulation entirety.)	and Services (If t	the complete de	escription does not appear in	this box, please	go to the end of t	he form to view it in its
Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	1M00G7D	62.2	38.22
entirety.) Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	1M50G7D	64.7	38.96
E50. Modulation entirety.)	and Services (If t	the complete de	escription does not appear in	this box, please	go to the end of t	he form to view it in its
Digital Da	ta Carrier					

3.8MPROD	14000 14500	Т	Linear and Circular	256KG7D	57.2	39.14
E50. Modulation entirety.)	and Services (If t	he complete descrip	tion does not appear in	this box, please	go to the end of th	ne form to view it in its
Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	2M00G7D	65.24	38.25
entirety.) Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	32K0G7D	48.2	39.17
E50. Modulation entirety.)	and Services (If t	he complete descrip	tion does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					

3.8MPROD	14000 14500	Т	Linear and Circular	38K4G7D	48.7	38.88
E50. Modulation entirety.)	and Services (If t	he complete de	scription does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	3M00G7D	65.24	36.49
entirety.) Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	4M00G7D	65.24	35.24
E50. Modulation entirety.)	and Services (If t	he complete de	scription does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					

3.8MPROD	14000 14500	Т	Linear and Circular	512KG7D	60.2	39.13
E50. Modulation entirety.)	and Services (If t	he complete descript	tion does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	5M00G7D	65.24	34.27
entirety.) Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	64K0G7D	51.2	39.16
E50. Modulation entirety.)	and Services (If t	he complete descript	tion does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					

3.8MPROD	14000 14500	Т	Linear and Circular	768KG7D	60.7	37.87
E50. Modulation entirety.)	and Services (If the services of the services	ne complete description	on does not appear in	this box, please go	to the end of the form	to view it in its
Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	8M00G7D	65.24	32.23
entirety.) Digital Da	ta Carrier					
3.8MPROD	14000 14500	Т	Linear and Circular	922KG7D	62.2	38.57
E50. Modulation entirety.) Digital Da		ne complete description	on does not appear in	this box, please go	to the end of the form	to view it in its

# FREQUENCY COORDINATION

E28. 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)
3.8MPROD	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 CO	NTROL POIN	T LOCATION						L .
	ign ase enter the calls ich this applicati	•	÷		. Phone Number			
E62. Street	Address							
E63. City			E68. County	7		E67/68. State/Country /		E64. Zip Code

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