Date & Time Filed: Jul 6 2007 5:10:19:450PM File Number: SES-LIC-INTR2007-01621

Callsign/Satellite ID:

#### APPLICATION FOR EARTH STATION AUTHORIZATIONS

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:

#### 3.7M Kent, WA

1	<b>-8.</b> ∶	Legal	Name	of App	olicant
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Name: The Boeing Company Phone Number: 866–248–1493

**DBA Fax Number:** 206–544–6592

Name:

Street: Attn E-Mail: bob.douglass@boeing.com

PO Box 3707

City: Seattle State: WA

**Country:** USA **Zipcode:** 98124 –2207

**Attention:** 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

**Country:** USA **Zipcode:** 98124–2207

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

## **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.			
	(N/A) b3. Amendment to a Pending Application (N/A) b4. Modification of License or Registration		
(NI/A) 1.5 Assistant of Liverna and Designation			
a1. Earth Station	(N/A) b6. Transfer of Control of License or Registration		
(N/A) a2. Space Station	(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  h 10. Other (Please specify)		
	o b10. 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.		
	(N/A) b13. Amendment to a Pending Database Entry Application		
	(N/A) b14. Modifiction of Database Entry		
17c. Is a fee submitted with this applicati	on?		
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 Noncomme	ercial educational licensee		
Other(please explain):			
17d.			
Fee Classification BAX – Fixed Satellite T	ransmit/Receive Earth		
Station			

18. If this filing is in reference to an existing station, enter:  (a) Call sign of station:  Not Applicable	19. If this filing is an amendment to a pendin (a) Date pending application was filed: Not Applicable	ng application enter:  (b) File number of pending application:  Not Applicable
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TYPE OF SERVICE	
20. NATURE OF SERVICE: This filing is for an authorization to provide	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)	
	22. If earth station applicant, check all that apply.  Using U.S. licensed satellites  Using Non–U.S. licensed satellites
23. If applicant is providing INTERNATIONAL COMMON CARRIER set facilities:  Connected to a Public Switched Network  Not connected to	rvice, see instructions regarding Sec. 214 filings. Choose one. Are these of a Public Switched Network N/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
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
(N/A) e. Geostationary Space Station
(N/A) f. Non-Geostationary Space Station
g. Other (please specify)
26. TYPE OF EARTH STATION FACILITY: Choose only one.
Transmit/Receive Transmit-Only Receive-Only 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.)
Not Applicable

#### **ENVIRONMENTAL POLICY**

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

environmental impact as defined by 47 CFR 1.1307? If YES, submit the

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

have a significant

statement as required by Sections

O Yes

No

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 ● N	To 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.	<b>○</b> 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.	<b>○</b> 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 Stateme	ent
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	<b>O</b> 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.	<b>O</b> 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 1988, 21 U.S.C. Section 862, because of a conviction for possession or distribution of a controlled substance. Se 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.	` 16 AT
42b. What administration has licensed or is in the process of licensing the space station? If no license will be issue coordinated or is in the process of coordinating the space station?	ued, what administration has
43. Description. (Summarize the nature of the application and the services to be provided). (If not appear in this box, please go to the end of the form to view it in its entirety.)	f the complete description doe
This application is for the licensing of a 3.7M satellite earth station.	

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>●</b> 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.

O Individual				
Unincorporated Association				
O Partnership				
© Corporation				
Governmental Entity				
Other (please specify)				
45. Name of Person Signing Robert B Dougalss		46. Title of Person Sign Manager, Spectrum Ma	•	
47. Please supply any need attachme	ents.			
Attachment 1:	Attachment 2:		Attachment 3:	
(U.S. Code,	TEMENTS MADE ON THIS FO Title 18, Section 1001), AND/OI tle 47, Section 312(a)(1)), AND/	R REVOCATION OF ANY S		

### 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: 3.7M Kent E5. Call Sign:

E2: Contact Name Margaret Mead E6. Phone 253–773–4175

Number:

E3. Street: 20403 68th Ave S E7. City: Kent

E8. County: King

E4. State WA E9. Zip Code 98032

E10. Area of Operation: Kent, WA

E11. Latitude: 47 ° 25 '7.5 "N

E12. Longitude: 122 °15 '11.2 "W

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

E14. Site Elevation (AMSL): 8.23 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.	● Y	es	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 Y	es	O No	● N/A
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	0 7	Yes	•	No
E18. Is frequency coordination required? If YES, attach a frequency coordination report as	0 7	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.		Yes	•	No
POINTS OF COMMUNICATION				
Satellite Name: PERMITTED LIST   PERMITTED LIST   If you selected OTHER, please enter the following	<u>;:</u>			

E21. Common Name:	E22. ITU Name:
E23. Orbit Location:	E24. Country:
POINTS OF COMMUNICATION (Destination Points)	

E25. Site Identifier: 3.7M Kent	
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 atGHz)
3.7M Kent	3.7M KENT	1	Andrews	ESA37AAP-1	3.7	51.6 dBi at 11.950
						53.1 dBi at 14.250

Id	E33/34. Diameter Minor/Major (meters)		(meters)	Height Above Ground Level 	Input Power at antenna flange (Watts)	Maximum Antenna Height	E40. Total EIRP for al carriers  (dBW)
3.7M KENT	3.7/3.7	5.02	13.25	0.0	25.0	0.0	67.08

# FREQUENCY

E28. Antenna Id	E43/44.	E45. T/R Mode	E46. Antenna	E47. Emission	E48. Maximum	E49. Maximum
	Frequency Bands		Polarization(H,V,	Designator	EIRP per Carrier	ERIP Density per
	(MHz)		<b>L</b> , <b>R</b> )		(dBW)	Carrier
						(dBW/4kHz)

3.7M KENT	11700 12200	R	Linear and Circular	11M9G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	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					
3.7M KENT	11700 12200	R	Linear and Circular	128KG7D	0.0	0.0
Digital Da	ta Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	1M00G7D	0.0	0.0
E50. Modulation entirety.)  Digital Da	and Services (If the tall Carrier	he complete descri	ption does not appear in	this box, please	go to the end of t	he form to view it in its

3.7M KENT	11700 12200	R	Linear and Circular	1M50G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete descrip	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					
3.7M KENT	11700 12200	R	Linear and Circular	20M0G7D	0.0	0.0
entirety.)  Digital Da	ta Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	24M3G7D	0.0	0.0
E50. Modulation entirety.)  Digital Da	and Services (If the standard Carrier	he complete descrip	otion does not appear in	this box, please	go to the end of t	the form to view it in its

3.7M KENT	11700 12200	R	Linear and Circular	256KG7D	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	ata Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	29M5G7D	0.0	0.0
Digital Da	ata Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	2M00G7D	0.0	0.0
E50. Modulation entirety.)  Digital Da	n and Services (If	the complete do	escription does not appear in	this box, please	go to the end of t	the form to view it in its

3.7M KENT	11700 12200	R	Linear and Circular	32K0G7D	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	ata Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	32M4G7D	0.0	0.0
entirety.)  Digital Da	ata Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	3M00G7D	0.0	0.0
E50. Modulation entirety.)  Digital Da	and Services (If the late Carrier	he complete description	I on does not appear in	this box, please go t	o the end of the form	to view it in its

3.7M KENT	11700 12200	R	Linear and Circular	4M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descript	tion does not appear in	this box, please	go to the end of t	he form to view it in its
Digital Da	ta Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	512KG7D	0.0	0.0
entirety.)  Digital Da	ta Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	5M00G7D	0.0	0.0
E50. Modulation entirety.)  Digital Da	and Services (If the standard Carrier	ne complete descript	tion does not appear in	this box, please	go to the end of t	he form to view it in its

3.7M KENT	11700 12200	R	Linear and Circular	64K0G7D	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	he form to view it in its
Digital Da	ata Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	6M75G7D	0.0	0.0
entirety.)  Digital Da	ata Carrier					
3.7M KENT	11700 12200	R	Linear and Circular	768KG7D	0.0	0.0
E50. Modulation entirety.)  Digital Da	and Services (If	the complete de	escription does not appear in	this box, please	go to the end of t	he form to view it in its

3.7M KENT	14000 14500	Т	Linear and Circular	11M9G7D	67.08	32.35
E50. Modulation entirety.)	and Services (If	the complete de	escription does not appear in	this box, please	go to the end of th	e form to view it in its
Digital Da	ta Carrier					
3.7M KENT	14000 14500	Т	Linear and Circular	128KG7D	54.1	39.05
Digital Da	ta Carrier					
3.7M KENT	14000 14500	Т	Linear and Circular	1M00G7D	62.6	38.62
E50. Modulation entirety.)  Digital Da	and Services (If	the complete de	escription does not appear in	this box, please	go to the end of th	e form to view it in its

3.7M KENT	14000 14500	Т	Linear and Circular	1M50G7D	64.6	38.86
E50. Modulation entirety.)	and Services (If the	he 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					
3.7M KENT	14000 14500	Т	Linear and Circular	20M0G7D	67.08	30.09
entirety.)  Digital Da	ta Carrier					
3.7M KENT	14000 14500	Т	Linear and Circular	24M3G7D	67.08	29.25
E50. Modulation entirety.)  Digital Da	and Services (If the late of t	he complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its

3.7M KENT	14000 14500	Т	Linear and Circular	256KG7D	57.1	39.04
E50. Modulation entirety.)	and Services (If	the complete des	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					
3.7M KENT	14000 14500	Т	Linear and Circular	29M5G7D	67.08	28.4
Digital Da	ta Carrier					
3.7M KENT	14000 14500	Т	Linear and Circular	2M00G7D	65.14	38.15
E50. Modulation entirety.)  Digital Da	and Services (If	the complete des	cription does not appear in	this box, please	go to the end of th	e form to view it in its

3.7M KENT	14000 14500	Т	Linear and Circular	32K0G7D	48.1	39.07
E50. Modulation entirety.)	and Services (If	the complete de	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					
3.7M KENT	14000 14500	Т	Linear and Circular	32M4G7D	67.08	28.0
Digital Da	ata Carrier					
3.7M KENT	14000 14500	Т	Linear and Circular	3M00G7D	67.08	38.33
E50. Modulation entirety.)  Digital Da	and Services (If	the complete do	escription does not appear in	this box, please	go to the end of th	e form to view it in its

14000 14500	Т	Linear and Circular	4M00G7D	67.08	37.08
n and Services (I	f the complete d	escription does not appear in	this box, please	go to the end of th	ne form to view it in its
ata Carrier					
14000 14500	Т	Linear and Circular	512KG7D	60.1	39.03
ata Carrier					
14000 14500	Т	Linear and Circular	5M00G7D	67.08	36.11
n and Services (I	f the complete d	escription does not appear in	this box, please	go to the end of th	ne form to view it in its
	14000 14000 14500 n and Services (Indianal Carrier  14000 14500 n and Services (Indianal Carrier  14000 14500 n and Services (Indianal Carrier)	14500  and Services (If the complete decomplete decompl	14000 T Linear and Circular and Carrier  14000 T Linear and Circular and Circular and Carrier  14000 T Linear and Circular and	14500   T   Linear and Circular   512KG7D   and Services (If the complete description does not appear in this box, please   14000	14000 T Linear and Circular S12KG7D 60.1  14000 T Linear and Circular state Carrier  14000 T Linear and Circular state carrier  14000 T Linear and Circular state state carrier  14000 T Linear and Circular state state state state state state carrier  14000 T Linear and Circular state stat

3.7M KENT	14000 14500	Т	Linear and Circular	64K0G7D	51.1	39.06
E50. Modulation entirety.)	on and Services	(If the complete of	lescription does not appear in	this box, please	go to the end of the	ne form to view it in its
Digital I	Data Carrier					
3.7M KENT	14000 14500	Т	Linear and Circular	6M75G7D	67.08	34.81
Digital I	Data Carrier					
3.7M KENT	14000 14500	Т	Linear and Circular	768KG7D	61.6	38.77
E50. Modulation entirety.)	on and Services	(If the complete of	lescription does not appear in	this box, please	go to the end of the	ne form to view it in its
Digital I	Data Carrier					

FREQUENCY COORDINATION

E28. Antenna Id	E51. Satellite Orbit Type		E54/55. Range of Satellite Arc E/W Limit	Station Azimuth Angle	E57. Antenna Elevation Angle Eastern Limit	Station Azimuth Angle	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
3.7M KENT	Geostationary	11700 12200	53.0/ 180.0	105.6	5.2	245.1	12.7	0.0
	Geostationary	14000 14500	53.0/ 180.0	105.6	5.2	245.1	12.7	-2.93

## 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

#### 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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