Approved by OMB 3060–0678

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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:

O3b Earth Station Application – Virginia

1–8. Legal	Name of App	plicant		
	Name:	O3b Limited	Phone Number:	202 478 7183
	DBA Name:		Fax Number:	
	Street:	1129 20th St., NW, Suite 1000	E-Mail:	joslyn.read@o3bnetworks.com
	City:	Washington	State:	
	<b>Country:</b>	USA	Zipcode:	-
	Attention:	Ms Joslyn Read		

Name:	Joseph A. Godles	Phone Number:	202-429-4900
Company:	Goldberg Godles Wiener & Wright LLP	Fax Number:	202–429–4912
Street:	1229 19th Street, NW	E–Mail:	jgodles@g2w2.com
City:	Washington	State:	DC
Country:	USA	Zipcode:	20036-2413
Attention:		<b>Relationship:</b>	Legal Counsel

## 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	<b>b</b> 2. Application for Registration of New Domestic Receive–Only Station
for 17a and only one for 17b.	(N/A) b3. Amendment to a Pending Application
a.	(N/A) b4. Modification of License or Registration
a1. Earth Station	(N/A) b5. Assignment of License or Registration
(N/A) a2. Space Station	(N/A) b6. Transfer of Control of License or Registration
(IVA) 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
	<b>b</b> 10. Other (Please specify)
	o 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	ion?
• 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	

18. If this filing is in reference to an	19. If this filing is an amendment to a pending application 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
O Common Carrier	Using Non–U.S. licensed satellites
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

2	4. 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)
X	c.Other (Please specify upper and lower frequencies in MHz.)
	Frequency Lower: 17800 Frequency Upper: 29100

### 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 have a significant Yes 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 Narrative and Tech application. A Radiation Hazard Study must accompany all applications for new transmitting facilities, major or major amendments. modifications,

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.

le No

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	O No ⊚ N/A
31. Is the applicant a corporation organized under the laws of any foreign government?	O Yes	○ No ③ 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	O 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?	OYes ONo ⊗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.	Rad Haz Report

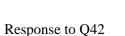
# BASIC QUALIFICATIONS

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
	18 GHz Analysis
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.	⊖ Yes 💿 No
	28 GHz Freq Coord

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

• Yes

O No

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?United Kingdom

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.)

O3b Limited seeks FCC authority to operate an earth station in Bristow, Virginia, with a U.K.-licensed non-geostationary Ka-band satellite system.

Engineering Cert

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.	<b>О</b> <sup>В</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>●</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 th	e button next to applicable respon	se.)			
• Individual					
• Unincorporated Association					
• Partnership					
Corporation					
O Governmental Entity					
Other (please specify)					
45. Name of Person Signing		46. Title of Person S	Signing		
Joslyn Read		Vice President, Regulatory Affairs			
47. Please supply any need attachn	nents.				
Attachment 1:	Attachment 2:		Attachment 3:		
WILLFUL FALSE STA	TEMENTS MADE ON THIS FC	RM ARE PUNISHABLE	E BY FINE AND / OR IMPRISONN	MENT	
	, Title 18, Section 1001), AND/Ol				
(U.S. Code, 7	Title 47, Section 312(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 S	tation Site					
E1: Site Identifier:	O3B1.WMP	E5. Call Sign:				
E2: Contact Name	Randy Taylor	E6. Phone Number:	720-838-3189			
E3. Street:	8000 Gainsford Court	E7. City:	Bristow			
		E8. County:	Prince William			
E4. State	VA	E9. Zip Code	20136			
E10. Area of Opera	tion:	Fixed				
E11. Latitude:	38 °47 '0.0 "N					
E12. Longitude:	77 °34 '25.8 "W					
E13. Lat/Lon Coord	dinates are:	O NAD-27	NAD-83	O <sup>N/A</sup>		
E14. Site Elevation	(AMSL):	86.56 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.	O Yes	O <sup>No</sup>	● 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?	• Yes	O <sup>No</sup>	O <sup>N/A</sup>
E17. Is the facility operated by remote control? If YES, provide the location and telephone number of the control point.	• Yes	0	No

E18. Is frequency coordination required? If YES, attach a frequency coordination report as	۲	Yes	O 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.	0	Yes	No	

POINTS OF COMMUNICATION

Satellite Name:O3B-A | O3B-A | Eq. NGSO 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:	
E26. Common Name:	E27. Country:

# 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)
O3B1.WMP	Ant 1–2	2	General Dynamics Satcom	GDST 2.4M	2.4	51.4 dBi at 18.5615
						55.2 dBi at 28.3615

Id	E33/34. Diameter Minor/Major (meters)		E36. Above Sea Level  (meters)	E37. Building Height Above Ground Level  (meters)	Input Power at antenna flange 	Maximum Antenna Height	E40. Total EIRP for al carriers  (dBW)
Ant 1–2	0.0/0.0	2.7	89.26	0.0	35.9	0.0	70.75

# FREQUENCY

 E43/44. Frequency Bands		E48. Maximum EIRP per Carrier	E49. Maximum ERIP Density per
(MHz)	L,R)		Carrier (dBW/4kHz)
			( <b>UD W/4KHZ</b> )

Ant 1–2	17852 18068	R	Left and Right Circular	1M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If t	he complete descrij	ption does not appear	in this box, please	go to the end of t	the form to view it in its
QPSK, 8PSF	K, 16PSK, 32PSI	८ and Interne	t			
Ant 1–2	17852 18068	R	Left and Right Circular	216MG7D	0.0	0.0
entirety.)	K, 16PSK, 32PSI	and Interne	t			
Ant 1–2	18112 18328	R	Left and Right Circular	1M00G7D	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	the form to view it in its
QPSK, 8PSF	K, 16PSK, 32PSI	( and Interne	t			

Ant 1–2	18112 18328	R	Left and Right Circular	216MG7D	0.0	0.0
E50. Modulation entirety.)	n and Services (I	f the complete de	escription does not appear	in this box, please	go to the end of	the form to view it in its
QPSK, 8PS	K, 16PSK, 32P	SK and Inte	rnet			
Ant 1–2	18372 18588	R	Left and Right Circular	1M00G7D	0.0	0.0
entirety.)	K, 16PSK, 32P	SK and Inte	rnet			
Ant 1–2	18372 18588	R	Left and Right Circular	216MG7D	0.0	0.0
E50. Modulation entirety.)	n and Services (I	f the complete d	escription does not appear	in this box, please	go to the end of	the form to view it in its
QPSK, 8PS	K, 16PSK, 32P	SK and Inte	rnet			

Ant 1–2	18801 19017	R	Left and Right Circular	1M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descripti	ion does not appear	in this box, please	go to the end of the	he form to view it in its
QPSK, 8PSK	, 16PSK, 32PSK	Cand Internet				
Ant 1–2	18801 19017	R	Left and Right Circular	216MG7D	0.0	0.0
E50. Modulation entirety.)	, 16PSK, 32PSK					he form to view it in its
Ant 1–2	19055 19271	R	Left and Right Circular	1M00G7D	0.0	0.0
E50. Modulation entirety.)	and Services (If the	he complete descripti	ion does not appear	in this box, please	go to the end of the	he form to view it in its
QPSK, 8PSK	, 16PSK, 32PSK	Cand Internet				

Ant 1–2	19055 19271	R	Left and Right Circular	216MG7D	0.0	0.0
E50. Modulatio entirety.)	n and Services ()	If the complete de	escription does not appear	in this box, please	go to the end of th	he form to view it in its
QPSK, 8PS	K, 16PSK, 32F	SK and Inte	rnet			
Ant 1–2	27652 27868	Т	Left and Right Circular	1M00G7D	48.6	24.6
QPSK, 8PS	K, 16PSK, 32F	'SK and Inte	rnet			
Ant 1–2	27652 27868	Т	Left and Right Circular	216MG7D	70.75	23.4
E50. Modulatio entirety.)	n and Services ()	If the complete de	escription does not appear	in this box, please	go to the end of th	he form to view it in its
QPSK, 8PS	K, 16PSK, 32P	'SK and Inte	rnet			

Ant 1–2	27912 28128	Т	Left and Right Circular	1M00G7D	48.6	24.6
E50. Modulati entirety.)	on and Services	(If the complete de	escription does not appear	in this box, please	go to the end of th	ne form to view it in its
QPSK, 8P	SK, 16PSK, 32	PSK and Inte	rnet			
Ant 1–2	27912 28128	Т	Left and Right Circular	216MG7D	70.75	23.4
QPSK, 8P	SK, 16PSK, 32	PSK and Inte	rnet			
Ant 1–2	28172 28388	Т	Left and Right Circular	1M00G7D	48.6	24.6
E50. Modulati entirety.)	on and Services	(If the complete de	escription does not appear	in this box, please	go to the end of th	ne form to view it in its
QPSK, 8P	SK, 16PSK, 32	PSK and Inte	rnet			

Ant 1–2	28172 28388	Т	Left and Right Circular	216MG7D	70.75	23.4
E50. Modulation entirety.)	n 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
QPSK, 8PS	K, 16PSK, 32P	3K and Inte:	rnet			
Ant 1–2	28601 28817	Т	Left and Right Circular	1M00G7D	48.6	24.6
entirety.)	K, 16PSK, 32P:	SK and Inte:	rnet			
Ant 1–2	28601 28817	Т	Left and Right Circular	216MG7D	70.75	23.4
E50. Modulation entirety.)	n 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
QPSK, 8PS	K, 16PSK, 32P:	3K and Inte:	rnet			

Ant 1–2	28855 29071	Т	Left and Right Circular	1M00G7D	48.6	24.6
E50. Modulation entirety.)	and Services (If th	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
QPSK, 8PSK	, 16PSK, 32PSK	and Internet				
Ant 1–2	28855 29071	Т	Left and Right Circular	216MG7D	70.75	23.4
E50. Modulation entirety.)	and Services (If th	ne complete description	on does not appear in	this box, please go to	o the end of the form	to view it in its
QPSK, 8PSK	, 16PSK, 32PSK	and Internet				

# 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	E58. Earth Station Azimuth Angle Western Limit	E59. Antenna Elevation Angle Western Limit	E60. Maximum EIRP Density toward the Horizon (dBW/4kHz)
Ant 1–2	Non– Geostationary	17800 18600	0.0/ 0.0	122.22	7.6	238.54	7.0	0.0

	Non– Geostationary	18800 19300	0.0/ 0.0	122.22	7.6	238.54	7.0	0.0
	Non– Geostationary	27600 28400	0.0/ 0.0	122.22	7.6	238.54	7.0	-21.9
	Non– Geostationary	28600 29100	0.0/ 0.0	122.22	7.6	238.54	7.0	-21.9
REMOTE C	I ONTROL POIN	T LOCATI	ON					
	Sign ease enter the calls hich this applicati	U U	•	not the	E65. Phone Nu 202–478–7134			
E62. Street 8000 Gains	t Address sford Court			I				
E63. City Bristow			E67. Cou Prince W	•		E64/68. State/Count VA/ U	-	E66. Zip Code 20136

E61. Call Sign NOTE: Please enter the callsign of the controlling station, not the callsign for which this application is being filed.	E65. Phone Number +352 710 725 82
E62. Street Address L–6815 Chateau de Betzdorf	

E63. City	E67. County	E64/68.	E66. Zip Code
Betzdorf	Grevenmacher	State/Country	
		/ Luxembourg	

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