

INTERFERENCE ANALYSIS REPORT

Prepared for
O3b Networks USA, LLC.
BRISTOW, VA
(0.85, 1.2 and 2.4 meter)
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
January 02, 2015

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1. CONCLUSIONS

An interference study considering all existing, proposed and prior coordinated microwave facilities within the coordination contours of the proposed earth station demonstrates that this site will operate satisfactorily with the 18 GHz common carrier microwave environment. Further, there will be no restrictions of its operation due to interference considerations.

2. SUMMARY OF RESULTS

A number of great circle interference cases were identified during the interference study of the proposed earth station. Each of the cases, which exceeded the interference objective on a line-of-sight basis, was profiled and the propagation losses estimated using NBS TN101 (Revised) techniques. The losses were found to be sufficient to reduce the signal levels to acceptable magnitudes in every case.

3. SUPPLEMENTAL SHOWING

Pursuant to Part 25.203(c) of the FCC Rules and Regulations, the satellite earth station proposed in this application was coordinated by Comsearch using computer techniques and in accordance with Part 25 of the FCC Rules and Regulations.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 11/26/2014.

Company

APC Realty and Equipment CO LLC
Airband Communications Inc
Arlington County Emergency Comm Ctr
B.F. SAUL COMPANY
Believe Wireless, LLC
Blaze Broadband
Blue Ridge Carriers
CBS Broadcasting Inc
CBS Communication Services Inc
Calvert, County of
Clearwire Spectrum Holdings III, LLC
ECW Wireless, LLC
Enoch Pratt Free Library
George Washington University
Loudoun Wireless LLC
Loudoun, County of
Maryland Port Administration
Maryland, State Of - MDOT - MTA
NBC Telemundo License LLC
New Cingular Wireless PCS LLC - VA
Old Dominion LLC
PEG Bandwidth, LLC
Prince William, County of
Radio One Inc
RapidDSL & Wireless, Inc.
Red Zebra Broadcasting Licensee, LLC
Shenandoah Personal Communications, LLC
Sprint Spectrum L.P.
Telecom Transport Management, Inc
Telegia Communications Inc.
Virginia Cellular LLC
Virginia Everywhere, LLC
WASHINGTON CABLE SYSTEMS INC
WKYSFM, INC
Washington Metro Area Transit Police Dep
World Class Wireless, LLC

4. EARTH STATION COORDINATION DATA

This section presents the data pertinent to frequency coordination of the proposed earth station that was circulated to all carriers within its coordination contours.

Date: 11/26/2014
Job Number: <PCNJobCode>

Administrative Information

Status ENGINEER PROPOSAL
Call Sign <PCNCallSign>
Licensee Code O3BNET
Licensee Name O3b Networks USA, LLC.

Site Information**BRISTOW, VA**

Venue Name
Latitude (NAD 83) 38° 46' 59.9" N
Longitude (NAD 83) 77° 34' 25.3" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 86.32 m / 283.2 ft

Link Information

Satellite Type Medium Earth Orbit
Mode TR - Transmit-Receive
Modulation Digital
Minimum Elevation Angle 14.0°
Azimuth Range 0.0° to 360°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information**Receive - FCC32****Transmit - FCC32**

Manufacturer	AVL	AVL
Model	0.85 Meter	0.85 Meter
Gain / Diameter	42.6 dBi / 0.85 m	46.0 dBi / 0.85 m
3-dB / 15-dB Beamwidth	1.30° / 3.20°	0.90° / 2.10°
Max Available RF Power (dBW/4 kHz)		-34.6
	(dBW/MHz)	-10.6
Maximum EIRP (dBW/4 kHz)		11.4
	(dBW/MHz)	35.4
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%
	Short Term	-146.0 dBW/MHz 0.01%
		-151.0 dBW/4 kHz 20%
		-128.0 dBW/4 kHz 0.0025%

Frequency Information**Receive 18.0 GHz****Transmit 28.0 GHz**

Emission / Frequency Range (MHz)	216MG7D / 17800.0 - 18300.0	216MG7D / 27600.0 - 28350.0
Max Great Circle Coordination Distance	152.8 km / 95.0 mi	100.0 km / 62.1 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

Coordination Values		BRISTOW, VA			
Licensee Name		O3b Networks USA, LLC.			
Latitude (NAD 83)		38° 46' 59.9" N			
Longitude (NAD 83)		77° 34' 25.3" W			
Ground Elevation (AMSL)		86.32 m / 283.2 ft			
Antenna Centerline (AGL)		2.74 m / 9.0 ft			
Antenna Model		AVL 0.85 Meter			
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz	
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%
Max Available RF Power		-28.7 (dBW/4 kHz)			

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	97.86	-10.00	102.69	-10.00	100.00
5	0.00	92.86	-10.00	100.00	-10.00	100.00
10	0.00	87.86	-10.00	100.00	-10.00	100.00
15	0.00	82.86	-10.00	100.00	-10.00	100.00
20	0.00	77.86	-10.00	100.00	-10.00	100.00
25	0.00	72.86	-10.00	101.29	-10.00	100.00
30	0.00	67.86	-10.00	102.77	-10.00	100.00
35	0.00	62.86	-10.00	111.38	-10.00	100.00
40	0.00	57.87	-10.00	111.30	-10.00	100.00
45	0.00	52.87	-10.00	107.85	-10.00	100.00
50	0.00	47.87	-10.00	117.19	-10.00	100.00
55	0.00	42.87	-10.00	119.46	-10.00	100.00
60	0.00	37.87	-10.00	136.18	-10.00	100.00
65	0.00	32.87	-9.61	137.25	-9.61	100.00
70	0.00	27.88	-8.45	140.51	-8.45	100.00
75	0.00	22.88	-7.17	144.23	-7.17	100.00
80	0.00	17.89	-5.76	148.51	-5.76	100.00
85	0.00	12.90	-4.11	135.89	-4.11	100.00
90	0.00	7.92	-2.26	125.73	-2.26	100.00
95	0.00	3.02	-0.26	126.08	-0.26	100.00
100	0.00	2.34	1.84	124.84	1.84	100.00
105	0.00	7.20	3.58	127.73	3.58	100.00
110	0.00	12.18	4.14	129.58	4.14	100.00
115	0.00	17.17	3.35	124.78	3.35	100.00
120	0.00	22.16	1.55	117.39	1.55	100.00
125	0.00	27.15	-0.48	109.90	-0.48	100.00
130	0.00	32.15	-2.17	102.60	-2.17	100.00
135	0.00	37.15	-3.59	100.00	-3.59	100.00
140	0.00	42.15	-4.79	100.00	-4.79	100.00
145	0.00	47.15	-5.85	100.00	-5.85	100.00
150	0.00	52.15	-6.86	107.53	-6.86	100.00
155	0.00	57.14	-7.56	105.36	-7.56	100.00
160	0.00	62.14	-8.17	110.40	-8.17	100.00
165	0.00	67.14	-8.62	110.33	-8.62	100.00
170	0.00	72.14	-8.94	110.66	-8.94	100.00
175	0.00	77.14	-9.12	107.56	-9.12	100.00
180	0.00	82.14	-9.24	120.19	-9.24	100.00
185	0.00	87.14	-9.14	110.69	-9.14	100.00

Coordination Values		BRISTOW, VA			
Licensee Name		O3b Networks USA, LLC.			
Latitude (NAD 83)		38° 46' 59.9" N			
Longitude (NAD 83)		77° 34' 25.3" W			
Ground Elevation (AMSL)		86.32 m / 283.2 ft			
Antenna Centerline (AGL)		2.74 m / 9.0 ft			
Antenna Model		AVL 0.85 Meter			
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz	
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%
Max Available RF Power			-28.7 (dBW/4 kHz)		

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	92.14	-8.92	106.93	-8.92	100.00
195	0.00	97.14	-8.68	122.08	-8.68	100.00
200	0.00	102.14	-8.34	140.85	-8.34	100.00
205	0.00	107.14	-7.77	142.50	-7.77	100.00
210	0.00	112.14	-7.01	143.99	-7.01	100.00
215	0.00	117.14	-6.15	140.73	-6.15	100.00
220	0.00	122.13	-5.14	140.35	-5.14	100.00
225	0.00	127.13	-3.95	143.55	-3.95	100.00
230	0.00	132.13	-2.56	150.70	-2.56	100.00
235	0.00	137.13	-0.83	146.44	-0.83	100.00
240	0.00	142.13	1.14	145.14	1.14	100.00
245	0.00	147.13	2.82	149.31	2.82	100.00
250	0.00	152.12	3.58	152.84	3.58	100.00
255	0.00	157.12	3.03	150.09	3.03	100.00
260	0.00	162.11	1.47	144.59	1.47	100.00
265	0.00	167.10	-0.44	135.38	-0.44	100.00
270	0.00	172.08	-2.35	128.54	-2.35	100.00
275	0.00	176.98	-4.12	123.33	-4.12	100.00
280	0.00	177.66	-5.73	121.00	-5.73	100.00
285	0.00	172.80	-7.16	117.96	-7.16	100.00
290	0.00	167.82	-8.43	106.79	-8.43	100.00
295	0.00	162.83	-9.60	101.06	-9.60	100.00
300	0.00	157.84	-10.00	100.00	-10.00	100.00
305	0.00	152.85	-10.00	100.00	-10.00	100.00
310	0.00	147.85	-10.00	100.00	-10.00	100.00
315	0.00	142.85	-10.00	100.00	-10.00	100.00
320	0.00	137.85	-10.00	100.07	-10.00	100.00
325	0.00	132.85	-10.00	100.00	-10.00	100.00
330	0.00	127.85	-10.00	100.00	-10.00	100.00
335	0.00	122.86	-10.00	100.00	-10.00	100.00
340	0.00	117.86	-10.00	100.00	-10.00	100.00
345	0.00	112.86	-10.00	100.00	-10.00	100.00
350	0.00	107.86	-10.00	100.00	-10.00	100.00
355	0.00	102.86	-10.00	103.63	-10.00	100.00

Date: 11/26/2014
Job Number: <PCNJobCode>

Administrative Information

Status ENGINEER PROPOSAL
Call Sign <PCNCallSign>
Licensee Code O3BNET
Licensee Name O3b Networks USA, LLC.

Site Information**BRISTOW, VA**

Venue Name
Latitude (NAD 83) 38° 46' 59.9" N
Longitude (NAD 83) 77° 34' 25.3" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 86.32 m / 283.2 ft

Link Information

Satellite Type Medium Earth Orbit
Mode TR - Transmit-Receive
Modulation Digital
Minimum Elevation Angle 10.0°
Azimuth Range 0.0° to 360°
Antenna Centerline (AGL) 2.74 m / 9.0 ft

Antenna Information**Receive - FCC32****Transmit - FCC32**

Manufacturer	Orbit	Orbit
Model	1.2 Meter	1.2 Meter
Gain / Diameter	45.0 dBi / 1.2 m	48.0 dBi / 1.2 m
3-dB / 15-dB Beamwidth	0.90° / 2.10°	0.60° / 1.40°
Max Available RF Power (dBW/4 kHz)		-28.7
	(dBW/MHz)	-4.7
Maximum EIRP (dBW/4 kHz)		19.3
	(dBW/MHz)	43.3
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%
	Short Term	-146.0 dBW/MHz 0.01%
		-151.0 dBW/4 kHz 20%
		-128.0 dBW/4 kHz 0.0025%

Frequency Information**Receive 18.0 GHz****Transmit 28.0 GHz**

Emission / Frequency Range (MHz) 54M0G7D - 216MG7D / 17800.0 - 18300.0 54M0G7D - 216MG7D / 27600.0 - 28350.0

Max Great Circle Coordination Distance 169.4 km / 105.2 mi 100.0 km / 62.1 mi
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi 100.0 km / 62.1 mi

Coordination Values		BRISTOW, VA			
Licensee Name		O3b Networks USA, LLC.			
Latitude (NAD 83)		38° 46' 59.9" N			
Longitude (NAD 83)		77° 34' 25.3" W			
Ground Elevation (AMSL)		86.32 m / 283.2 ft			
Antenna Centerline (AGL)		2.74 m / 9.0 ft			
Antenna Model		Orbit 1.2 Meter			
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz	
Interference Objectives: Long Term		-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
Short Term		-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%
Max Available RF Power		-28.7 (dBW/4 kHz)			

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	97.86	-10.00	102.69	-10.00	100.00
5	0.00	92.86	-10.00	100.00	-10.00	100.00
10	0.00	87.86	-10.00	100.00	-10.00	100.00
15	0.00	82.86	-10.00	100.00	-10.00	100.00
20	0.00	77.86	-10.00	100.00	-10.00	100.00
25	0.00	72.86	-10.00	101.29	-10.00	100.00
30	0.00	67.86	-10.00	102.77	-10.00	100.00
35	0.00	62.86	-10.00	111.38	-10.00	100.00
40	0.00	57.87	-10.00	111.30	-10.00	100.00
45	0.00	52.87	-10.00	107.85	-10.00	100.00
50	0.00	47.87	-10.00	117.19	-10.00	100.00
55	0.00	42.87	-10.00	119.46	-10.00	100.00
60	0.00	37.87	-9.75	136.88	-10.00	100.00
65	0.00	32.87	-8.56	140.20	-9.75	100.00
70	0.00	27.88	-7.24	144.03	-8.56	100.00
75	0.00	22.88	-5.76	148.51	-7.24	100.00
80	0.00	17.89	-4.06	153.83	-5.76	100.00
85	0.00	12.90	-2.04	142.04	-4.06	100.00
90	0.00	7.92	0.34	132.30	-2.04	100.00
95	0.00	3.02	3.08	135.20	0.34	100.00
100	0.00	2.34	6.03	137.49	3.08	100.00
105	0.00	7.20	7.93	151.88	6.03	100.00
110	0.00	12.18	6.95	139.00	7.93	100.00
115	0.00	17.17	4.31	127.80	6.95	100.00
120	0.00	22.16	1.63	117.62	4.31	100.00
125	0.00	27.15	-0.48	109.90	1.63	100.00
130	0.00	32.15	-2.17	102.60	-0.48	100.00
135	0.00	37.15	-3.59	100.00	-2.17	100.00
140	0.00	42.15	-4.79	100.00	-3.59	100.00
145	0.00	47.15	-5.85	100.00	-4.79	100.00
150	0.00	52.15	-6.86	107.53	-5.85	100.00
155	0.00	57.14	-7.56	105.36	-6.86	100.00
160	0.00	62.14	-8.17	110.40	-7.56	100.00
165	0.00	67.14	-8.62	110.33	-8.17	100.00
170	0.00	72.14	-8.94	110.66	-8.62	100.00
175	0.00	77.14	-9.12	107.56	-8.94	100.00
180	0.00	82.14	-9.24	120.19	-9.12	100.00
185	0.00	87.14	-9.14	110.69	-9.24	100.00

Coordination Values		BRISTOW, VA			
Licensee Name		O3b Networks USA, LLC.			
Latitude (NAD 83)		38° 46' 59.9" N			
Longitude (NAD 83)		77° 34' 25.3" W			
Ground Elevation (AMSL)		86.32 m / 283.2 ft			
Antenna Centerline (AGL)		2.74 m / 9.0 ft			
Antenna Model		Orbit 1.2 Meter			
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz	
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%
Max Available RF Power		-28.7 (dBW/4 kHz)			

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	92.14	-8.92	106.93	-9.14	100.00
195	0.00	97.14	-8.68	122.08	-8.92	100.00
200	0.00	102.14	-8.34	140.85	-8.68	100.00
205	0.00	107.14	-7.77	142.50	-8.34	100.00
210	0.00	112.14	-7.01	143.99	-7.77	100.00
215	0.00	117.14	-6.15	140.73	-7.01	100.00
220	0.00	122.13	-5.14	140.35	-6.15	100.00
225	0.00	127.13	-3.95	143.55	-5.14	100.00
230	0.00	132.13	-2.56	150.70	-3.95	100.00
235	0.00	137.13	-0.83	146.44	-2.56	100.00
240	0.00	142.13	1.28	145.60	-0.83	100.00
245	0.00	147.13	3.89	153.10	1.28	100.00
250	0.00	152.12	6.33	163.46	3.89	100.00
255	0.00	157.12	7.11	169.39	6.33	100.00
260	0.00	162.11	2.84	159.20	7.11	100.00
265	0.00	167.10	0.24	145.74	5.48	100.00
270	0.00	172.08	-2.06	135.17	2.84	100.00
275	0.00	176.98	-4.04	128.96	0.24	100.00
280	0.00	177.66	-5.75	125.53	-2.06	100.00
285	0.00	172.80	-7.23	121.70	-4.04	100.00
290	0.00	167.82	-8.55	109.89	-5.75	100.00
295	0.00	162.83	-9.74	103.64	-7.23	100.00
300	0.00	157.84	-10.00	100.00	-8.55	100.00
305	0.00	152.85	-10.00	100.00	-9.74	100.00
310	0.00	147.85	-10.00	100.00	-10.00	100.00
315	0.00	142.85	-10.00	100.00	-10.00	100.00
320	0.00	137.85	-10.00	100.07	-10.00	100.00
325	0.00	132.85	-10.00	100.00	-10.00	100.00
330	0.00	127.85	-10.00	100.00	-10.00	100.00
335	0.00	122.86	-10.00	100.00	-10.00	100.00
340	0.00	117.86	-10.00	100.00	-10.00	100.00
345	0.00	112.86	-10.00	100.00	-10.00	100.00
350	0.00	107.86	-10.00	100.00	-10.00	100.00
355	0.00	102.86	-10.00	103.63	-10.00	100.00

Date: 11/26/2014

Job Number: <PCNJobCode>

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	<PCNCallSign>
Licensee Code	O3BNET
Licensee Name	O3b Networks USA, LLC.

Site Information**BRISTOW, VA**

Venue Name	
Latitude (NAD 83)	38° 46' 59.9" N
Longitude (NAD 83)	77° 34' 25.3" W
Climate Zone	A
Rain Zone	2
Ground Elevation (AMSL)	86.32 m / 283.2 ft

Link Information

Satellite Type	Medium Earth Orbit
Mode	TR - Transmit-Receive
Modulation	Digital
Minimum Elevation Angle	14.0°
Azimuth Range	0.0° to 360°
Antenna Centerline (AGL)	2.74 m / 9.0 ft

Antenna Information**Receive - FCC32****Transmit - FCC32**

Manufacturer	AVL	AVL
Model	2.4 Meter	2.4 Meter
Gain / Diameter	51.3 dBi / 2.4 m	54.7 dBi / 2.4 m
3-dB / 15-dB Beamwidth	0.23° / 0.60°	0.14° / 0.32°
Max Available RF Power (dBW/4 kHz)		-31.5
		-7.5
Maximum EIRP (dBW/4 kHz)		23.2
		47.2
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%
	Short Term	-146.0 dBW/MHz 0.01%
		-151.0 dBW/4 kHz 20%
		-128.0 dBW/4 kHz 0.0025%

Frequency Information**Receive 18.0 GHz****Transmit 28.0 GHz**

Emission / Frequency Range (MHz)	216MG7D / 17800.0 - 18300.0	216MG7D / 27600.0 - 28350.0
Max Great Circle Coordination Distance	152.8 km / 95.0 mi	100.0 km / 62.1 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

Coordination Values		BRISTOW, VA			
Licensee Name		O3b Networks USA, LLC.			
Latitude (NAD 83)		38° 46' 59.9" N			
Longitude (NAD 83)		77° 34' 25.3" W			
Ground Elevation (AMSL)		86.32 m / 283.2 ft			
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Antenna Model		AVL 2.4 Meter			
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz	
Interference Objectives: Long Term		-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
Short Term		-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%
Max Available RF Power		-31.5 (dBW/4 kHz)			

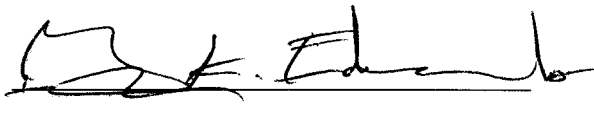
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	97.86	-10.00	102.69	-10.00	100.00
5	0.00	92.86	-10.00	100.00	-10.00	100.00
10	0.00	87.86	-10.00	100.00	-10.00	100.00
15	0.00	82.86	-10.00	100.00	-10.00	100.00
20	0.00	77.86	-10.00	100.00	-10.00	100.00
25	0.00	72.86	-10.00	101.29	-10.00	100.00
30	0.00	67.86	-10.00	102.77	-10.00	100.00
35	0.00	62.86	-10.00	111.38	-10.00	100.00
40	0.00	57.87	-10.00	111.30	-10.00	100.00
45	0.00	52.87	-10.00	107.85	-10.00	100.00
50	0.00	47.87	-10.00	117.19	-10.00	100.00
55	0.00	42.87	-10.00	119.46	-10.00	100.00
60	0.00	37.87	-10.00	136.18	-10.00	100.00
65	0.00	32.87	-9.61	137.25	-9.61	100.00
70	0.00	27.88	-8.45	140.51	-8.45	100.00
75	0.00	22.88	-7.17	144.23	-7.17	100.00
80	0.00	17.89	-5.76	148.51	-5.76	100.00
85	0.00	12.90	-4.11	135.89	-4.11	100.00
90	0.00	7.92	-2.26	125.73	-2.26	100.00
95	0.00	3.02	-0.26	126.08	-0.26	100.00
100	0.00	2.34	1.84	124.84	1.84	100.00
105	0.00	7.20	3.58	127.73	3.58	100.00
110	0.00	12.18	4.14	129.58	4.14	100.00
115	0.00	17.17	3.35	124.78	3.35	100.00
120	0.00	22.16	1.55	117.39	1.55	100.00
125	0.00	27.15	-0.48	109.90	-0.48	100.00
130	0.00	32.15	-2.17	102.60	-2.17	100.00
135	0.00	37.15	-3.59	100.00	-3.59	100.00
140	0.00	42.15	-4.79	100.00	-4.79	100.00
145	0.00	47.15	-5.85	100.00	-5.85	100.00
150	0.00	52.15	-6.86	107.53	-6.86	100.00
155	0.00	57.14	-7.56	105.36	-7.56	100.00
160	0.00	62.14	-8.17	110.40	-8.17	100.00
165	0.00	67.14	-8.62	110.33	-8.62	100.00
170	0.00	72.14	-8.94	110.66	-8.94	100.00
175	0.00	77.14	-9.12	107.56	-9.12	100.00
180	0.00	82.14	-9.24	120.19	-9.24	100.00
185	0.00	87.14	-9.14	110.69	-9.14	100.00

Coordination Values		BRISTOW, VA			
Licensee Name		O3b Networks USA, LLC.			
Latitude (NAD 83)		38° 46' 59.9" N			
Longitude (NAD 83)		77° 34' 25.3" W			
Ground Elevation (AMSL)		86.32 m / 283.2 ft			
Antenna Centerline (AGL)		2.74 m / 9.0 ft			
Antenna Model		AVL 2.4 Meter			
Antenna Mode		Receive 18.0 GHz		Transmit 28.0 GHz	
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%
Max Available RF Power		-31.5 (dBW/4 kHz)			

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 18.0 GHz		Transmit 28.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	92.14	-8.92	106.93	-8.92	100.00
195	0.00	97.14	-8.68	122.08	-8.68	100.00
200	0.00	102.14	-8.34	140.85	-8.34	100.00
205	0.00	107.14	-7.77	142.50	-7.77	100.00
210	0.00	112.14	-7.01	143.99	-7.01	100.00
215	0.00	117.14	-6.15	140.73	-6.15	100.00
220	0.00	122.13	-5.14	140.35	-5.14	100.00
225	0.00	127.13	-3.95	143.55	-3.95	100.00
230	0.00	132.13	-2.56	150.70	-2.56	100.00
235	0.00	137.13	-0.83	146.44	-0.83	100.00
240	0.00	142.13	1.14	145.14	1.14	100.00
245	0.00	147.13	2.82	149.31	2.82	100.00
250	0.00	152.12	3.58	152.84	3.58	100.00
255	0.00	157.12	3.03	150.09	3.03	100.00
260	0.00	162.11	1.47	144.59	1.47	100.00
265	0.00	167.10	-0.44	135.38	-0.44	100.00
270	0.00	172.08	-2.35	128.54	-2.35	100.00
275	0.00	176.98	-4.12	123.33	-4.12	100.00
280	0.00	177.66	-5.73	121.00	-5.73	100.00
285	0.00	172.80	-7.16	117.96	-7.16	100.00
290	0.00	167.82	-8.43	106.79	-8.43	100.00
295	0.00	162.83	-9.60	101.06	-9.60	100.00
300	0.00	157.84	-10.00	100.00	-10.00	100.00
305	0.00	152.85	-10.00	100.00	-10.00	100.00
310	0.00	147.85	-10.00	100.00	-10.00	100.00
315	0.00	142.85	-10.00	100.00	-10.00	100.00
320	0.00	137.85	-10.00	100.07	-10.00	100.00
325	0.00	132.85	-10.00	100.00	-10.00	100.00
330	0.00	127.85	-10.00	100.00	-10.00	100.00
335	0.00	122.86	-10.00	100.00	-10.00	100.00
340	0.00	117.86	-10.00	100.00	-10.00	100.00
345	0.00	112.86	-10.00	100.00	-10.00	100.00
350	0.00	107.86	-10.00	100.00	-10.00	100.00
355	0.00	102.86	-10.00	103.63	-10.00	100.00

5. CERTIFICATION

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION, THAT I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS, THAT I HAVE EITHER PREPARED OR REVIEWED THE FREQUENCY COORDINATION DATA SUBMITTED WITH THIS APPLICATION, AND THAT IT IS COMPLETE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: January 02, 2015