

Eleanor Lott

From: Edwards, Gary <gedwards@comsearch.com>
Sent: Wednesday, May 18, 2016 5:16 AM
To: Eleanor Lott; nancy.mccarty@level3.com
Cc: Alexander, Nick
Subject: RE: Global Crossing Application: SES-MOD-20150921-00630, E080118
Attachments: fajardo.E080118.FinalReport.pdf

Hi Eleanor,

Here is another copy of the Frequency Coordination report.

Please let me know if you need anything else.

Regards,

Gary Edwards
Comsearch
703 726-5662
gedwards@comsearch.com

From: Eleanor Lott [mailto:Eleanor.Lott@fcc.gov]
Sent: Tuesday, May 17, 2016 3:45 PM
To: nancy.mccarty@level3.com; Edwards, Gary
Cc: Eleanor Lott
Subject: Global Crossing Application: SES-MOD-20150921-00630, E080118

Hi Nancy,

For the application Mod pending above did you for get to submit the Frequency coordination data sheet from Comsearch technical data in order to grant or further processed this application?? Please respond back soon to let me know what you plan to do about this one, because the others were Granted back in April 29, 2016.

Thank you
Eleanor Lott

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

**Prepared for
Global Crossing Americas Solutions, Inc
FAJARDO, PR
(E080118)
Satellite Earth Station**

**Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
January 16, 2016**

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	6
5. CERTIFICATION.....	10

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 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 01/12/2016.

Company

AT&T Mobility Puerto Rico
AT&T Mobility Virgin Islands, Inc.
Aeronet Wireless Broadband Corp.
Broadband Telecommunications Network
Broadband VI, LLC
Choice Communications, LLC (VI)
Critical Hub Networks, Inc.
EVERTEC, INC
Iniciativa Tecnologica Centro Oriental
Neptuno Media
Osnet Wireless Corporation
PR Wireless, Inc.
PREPA Networks, LLC.
Puerto Rico Commonwealth
Puerto Rico Commonwealth of State Police
Puerto Rico Electric Power Authority
Puerto Rico Telephone Company, Inc.
Sprintcom, Inc
Sprintcom, Inc. Puerto Rico
Surge Communications LLC
System Development Integration, LLC
T-Mobile Puerto Rico LLC
UNIVERSITY OF THE VIRGIN ISLANDS
Virgin Islands Telephone Corporation

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.

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 01/16/2016
Job Number: 160112COMSGE03

Administrative Information

Status: ENGINEER PROPOSAL
Call Sign: E080118
Licensee Code: GLOAME
Licensee Name: Global Crossing Americas Solutions, Inc

Site Information

FAJARDO, PR

Venue Name
Latitude (NAD 83): 18° 20' 14.0" N
Longitude (NAD 83): 65° 40' 47.0" W
Climate Zone: C
Rain Zone: 1
Ground Elevation (AMSL): 64.92 m / 213.0 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 45° W to 56° West Longitude
Azimuth Range: 129.8° to 151.5°
Corresponding Elevation Angles: 58.0° / 65.8°
Antenna Centerline (AGL): 11.28 m / 37.0 ft

Antenna Information

Receive - FCC32

Transmit - FCC32

Manufacturer	Prodelin	Prodelin	
Model	1251	1251	
Gain / Diameter	38.0 dBi / 2.4 m	42.0 dBi / 2.4 m	
3-dB / 15-dB Beamwidth	0.57° / 1.15°	0.38° / 0.75°	
Max Available RF Power (dBW/4 kHz)		-17.6	
(dBW/MHz)		6.4	
Maximum EIRP (dBW/4 kHz)		24.4	
(dBW/MHz)		48.4	
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%	-154.0 dBW/4 kHz 20%
	Short Term	-146.0 dBW/MHz 0.01%	-131.0 dBW/4 kHz 0.0025%

Frequency Information

Receive 4.0 GHz

Transmit 6.1 GHz

Emission / Frequency Range (MHz)	115KG7D - 8M45G7D / 3700.0 - 4200.0	115KG7D - 750KG7D / 5925.0 - 6425.0
Max Great Circle Coordination Distance	710.9 km / 441.7 mi	200.9 km / 124.8 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147

(703)726-5500 <http://www.comsearch.com>

Coordination Values

FAJARDO, PR

Licensee Name Global Crossing Americas Solutions, Inc

Latitude (NAD 83) 18° 20' 14.0" N

Longitude (NAD 83) 65° 40' 47.0" W

Ground Elevation (AMSL) 64.92 m / 213.0 ft

Antenna Centerline (AGL) 11.28 m / 37.0 ft

Antenna Model Prodelin 2.4 meter

Antenna Mode Receive 4.0 GHz

Interference Objectives: Long Term	-156.0 dBW/MHz	20%	Transmit 6.1 GHz	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz		0.0025%

Max Available RF Power			-17.6 (dBW/4 kHz)		
------------------------	--	--	-------------------	--	--

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	3.32	111.71	-10.00	199.78	-10.00	100.00
5	1.91	108.55	-10.00	291.54	-10.00	100.00
10	2.35	106.27	-10.00	256.59	-10.00	100.00
15	2.53	103.75	-10.00	243.77	-10.00	100.00
20	1.34	100.72	-10.00	347.70	-10.00	100.00
25	0.61	97.91	-10.00	487.14	-10.00	121.59
30	0.45	95.24	-10.00	551.61	-10.00	145.04
35	0.00	92.55	-10.00	710.92	-10.00	200.95
40	0.00	89.90	-10.00	710.92	-10.00	200.95
45	1.13	87.17	-10.00	371.51	-10.00	100.00
50	0.79	84.51	-10.00	436.25	-10.00	102.42
55	0.00	82.03	-10.00	710.92	-10.00	200.95
60	0.26	79.40	-10.00	672.36	-10.00	187.82
65	0.33	76.86	-10.00	623.43	-10.00	170.83
70	0.41	74.38	-10.00	571.06	-10.00	152.00
75	0.84	71.81	-10.00	427.54	-10.00	100.00
80	0.00	70.03	-10.00	710.92	-10.00	200.95
85	0.00	67.94	-10.00	710.92	-10.00	200.95
90	0.00	66.01	-10.00	710.92	-10.00	200.95
95	0.68	63.72	-10.00	466.26	-10.00	113.85
100	1.74	61.22	-10.00	307.52	-10.00	100.00
105	3.96	57.83	-10.00	174.65	-10.00	100.00
110	5.10	55.46	-10.00	158.52	-10.00	100.00
115	4.73	54.71	-10.00	164.27	-10.00	100.00
120	6.82	51.90	-10.00	128.79	-10.00	100.00
125	5.08	53.11	-10.00	159.00	-10.00	100.00
130	6.24	51.80	-10.00	135.09	-10.00	100.00
135	4.32	53.89	-10.00	169.11	-10.00	100.00
140	2.16	56.49	-10.00	270.88	-10.00	100.00
145	0.93	58.39	-10.00	403.37	-10.00	100.00
150	0.43	59.82	-10.00	563.12	-10.00	149.16
155	0.50	60.94	-10.00	521.96	-10.00	134.33
160	2.29	60.89	-10.00	261.15	-10.00	100.00
165	2.47	62.48	-10.00	247.85	-10.00	100.00
170	2.71	64.21	-10.00	232.13	-10.00	100.00
175	3.70	64.57	-10.00	184.74	-10.00	100.00
180	6.32	63.47	-10.00	134.18	-10.00	100.00
185	6.26	64.97	-10.00	134.82	-10.00	100.00

COMSEARCH

Earth Station Data Sheet

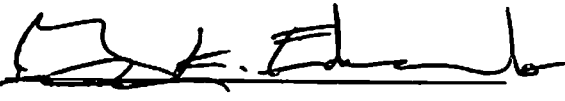
19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Coordination Values	FAJARDO, PR		
Licensee Name	Global Crossing Americas Solutions, Inc		
Latitude (NAD 83)	18° 20' 14.0" N		
Longitude (NAD 83)	65° 40' 47.0" W		
Ground Elevation (AMSL)	64.92 m / 213.0 ft		
Antenna Centerline (AGL)	11.28 m / 37.0 ft		
Antenna Model	Prodelin 2.4 meter		
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%	-154.0 dBW/4 kHz 20%
	Short Term	-146.0 dBW/MHz 0.01%	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power			-17.6 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	6.27	66.60	-10.00	134.81	-10.00	100.00
195	10.71	65.45	-10.00	100.00	-10.00	100.00
200	10.71	67.69	-10.00	100.00	-10.00	100.00
205	15.06	67.86	-10.00	100.00	-10.00	100.00
210	14.42	70.94	-10.00	100.00	-10.00	100.00
215	14.42	73.80	-10.00	100.00	-10.00	100.00
220	17.16	75.96	-10.00	100.00	-10.00	100.00
225	17.16	79.16	-10.00	100.00	-10.00	100.00
230	11.80	83.25	-10.00	100.00	-10.00	100.00
235	11.80	86.16	-10.00	100.00	-10.00	100.00
240	16.64	88.99	-10.00	100.00	-10.00	100.00
245	15.10	92.19	-10.00	100.00	-10.00	100.00
250	15.10	95.35	-10.00	100.00	-10.00	100.00
255	15.10	98.48	-10.00	100.00	-10.00	100.00
260	14.07	101.32	-10.00	100.00	-10.00	100.00
265	14.07	104.28	-10.00	100.00	-10.00	100.00
270	14.07	107.17	-10.00	100.00	-10.00	100.00
275	13.69	109.80	-10.00	100.00	-10.00	100.00
280	13.69	112.46	-10.00	100.00	-10.00	100.00
285	13.85	115.09	-10.00	100.00	-10.00	100.00
290	13.84	117.48	-10.00	100.00	-10.00	100.00
295	13.85	119.69	-10.00	100.00	-10.00	100.00
300	14.87	122.50	-10.00	100.00	-10.00	100.00
305	9.80	120.03	-10.00	100.00	-10.00	100.00
310	9.80	121.36	-10.00	100.00	-10.00	100.00
315	11.41	123.94	-10.00	100.00	-10.00	100.00
320	11.41	124.80	-10.00	100.00	-10.00	100.00
325	6.14	120.14	-10.00	136.16	-10.00	100.00
330	6.14	120.34	-10.00	136.15	-10.00	100.00
335	9.57	123.71	-10.00	100.00	-10.00	100.00
340	5.82	119.67	-10.00	141.74	-10.00	100.00
345	5.82	119.13	-10.00	141.76	-10.00	100.00
350	3.32	116.01	-10.00	199.77	-10.00	100.00
355	3.32	114.02	-10.00	199.78	-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 16, 2016