FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

Global Crossing Americas Solutions, Inc
Garrido Morales, Puerto Rico

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
October 13, 2011

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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 common carrier microwave environment, based upon the restrictions noted in the Summary of Results (Section 2).

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 most cases.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. When over-the-horizon losses and frequency separation are considered on the interfering paths, sufficient losses exist to negate harmful interference from occurring with the proposed transmit-receive earth station. Further, the transmit spectrum will be limited to frequencies 6094.0 to 6166.0 MHz and 6419.0 to 6423.0 MHz.

Company

AT&T Mobility Puerto Rico
CCPR of the Virgin Islands, Inc.

No other carriers reported potential interference cases.

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.

Expedited coordination data for this earth station was sent to the below listed carriers with a letter dated July 22, 2011. An Information-only letter reducing the transmit power was forwarded on October 6, 2011.

Company

AT&T COMMUNICATIONS OF VIRGIN ISLANDS
AT&T Mobility Puerto Rico
AT&T Mobility Virgin Islands, Inc.
Ackley Caribbean Enterprises, Inc.
Aeronet Wireless Broadband Corp.
Broadband VI, LLC
CROWN CASTLE INT CORP DE PUERTO RICO
Choice Communications, LLC
Digicel USA, Inc.
EVERTEC, INC
Iniciativa Tecnologica Centro Oriental
Interference Office, Arecibo Observatory
Neptuno Media
Orizon Wireless Corporation
PRWireless, Inc.
PUERTO RICO ELECTRIC POWER AUTHORITY
PUERTO RICO HIGHWAY AUTHORITY
Puerto Rico Commonwealth of State Police
Puerto Rico Telephone Company
Sprint PCS
Sprintcom, Inc. Puerto Rico
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:	10/13/2011
Job Number:	111006COMSGE04

Administrative Information

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

Site Information — GARRIDO MORALES, PR

Venue Name	GARRIDO MORALES
Latitude (NAD 83)	18° 19' 30.7" N
Longitude (NAD 83)	65° 39' 14.9" W
Climate Zone	B
Rain Zone	1
Ground Elevation (AMSL)	13.41 m / 44.0 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 151.6°
Corresponding Elevation Angles	58.1° / 65.8°
Antenna Centerline (AGL)	6.4 m / 21.0 ft

Antenna Information		Receive - FCC32		Transmit - FCC32	
Manufacturer		Prodelin		Prodelin	
Model		2.4 Meter		2.4 Meter	
Gain / Diameter		38.0 dBi / 2.4 m		42.0 dBi / 2.4 m	
3-dB / 15-dB Beamwidth		2.30° / 4.60°		1.50° / 3.00°	
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)	230KG7D - 2M23G7D / 3700.0 - 4200.0	230KG7D - 1M30G7D / 6094.0 - 6166.0 230KG7D - 1M30G7D / 6419.0 - 6423.0
Max Great Circle Coordination Distance	412.2 km / 256.1 mi	132.9 km / 82.6 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

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Coordination Values	**GARRIDO MORALES, PR**			
Licensee Name	Global Crossing Americas Solutions, Inc			
Latitude (NAD 83)	18° 19' 30.7" N			
Longitude (NAD 83)	65° 39' 14.9" W			
Ground Elevation (AMSL)	13.41 m / 44.0 ft			
Antenna Centerline (AGL)	6.4 m / 21.0 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)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	2.16	111.04	-10.00	193.34	-10.00	100.00
5	2.30	108.74	-10.00	188.30	-10.00	100.00
10	2.15	106.19	-10.00	193.71	-10.00	100.00
15	3.08	103.94	-10.00	162.35	-10.00	100.00
20	1.75	100.85	-10.00	211.78	-10.00	100.00
25	1.59	98.13	-10.00	220.62	-10.00	100.00
30	0.99	95.32	-10.00	255.48	-10.00	100.00
35	0.86	92.61	-10.00	270.30	-10.00	100.00
40	0.00	89.91	-10.00	412.20	-10.00	132.91
45	0.00	87.27	-10.00	412.20	-10.00	132.91
50	0.00	84.64	-10.00	412.20	-10.00	132.91
55	0.29	81.98	-10.00	382.05	-10.00	123.85
60	0.55	79.33	-10.00	313.06	-10.00	105.33
65	0.24	76.91	-10.00	397.20	-10.00	128.34
70	0.00	74.59	-10.00	412.20	-10.00	132.91
75	0.33	72.10	-10.00	368.21	-10.00	119.85
80	0.62	69.70	-10.00	303.75	-10.00	102.37
85	0.00	67.97	-10.00	412.20	-10.00	132.91
90	0.00	66.04	-10.00	412.20	-10.00	132.91
95	0.00	64.27	-10.00	412.20	-10.00	132.91
100	0.00	62.69	-10.00	412.20	-10.00	132.91
105	0.00	61.32	-10.00	412.20	-10.00	132.91
110	0.00	60.17	-10.00	412.20	-10.00	132.91
115	0.22	59.04	-10.00	403.63	-10.00	130.29
120	1.30	57.32	-10.00	236.15	-10.00	100.00
125	2.13	56.08	-10.00	194.62	-10.00	100.00
130	2.17	55.90	-10.00	193.00	-10.00	100.00
135	1.17	57.05	-10.00	243.87	-10.00	100.00
140	0.47	58.17	-10.00	329.39	-10.00	110.31
145	1.94	57.46	-10.00	202.67	-10.00	100.00
150	1.23	59.11	-10.00	240.47	-10.00	100.00
155	0.50	60.96	-10.00	321.09	-10.00	107.81
160	1.09	61.89	-10.00	248.20	-10.00	100.00
165	1.24	63.43	-10.00	239.71	-10.00	100.00
170	0.75	65.63	-10.00	284.39	-10.00	100.00
175	1.16	66.87	-10.00	244.33	-10.00	100.00
180	1.56	67.54	-10.00	222.20	-10.00	100.00
185	1.51	68.78	-10.00	224.61	-10.00	100.00

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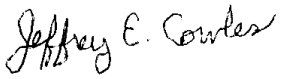
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-17.6 (dBW/4 kHz)	

			Receive 4.0 GHz		Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	1.57	70.10	-10.00	221.67	-10.00	100.00
195	1.93	71.35	-10.00	203.17	-10.00	100.00
200	2.63	72.58	-10.00	176.70	-10.00	100.00
205	2.81	74.31	-10.00	170.81	-10.00	100.00
210	2.18	76.55	-10.00	192.66	-10.00	100.00
215	1.65	78.75	-10.00	216.95	-10.00	100.00
220	1.27	80.90	-10.00	238.23	-10.00	100.00
225	0.74	83.09	-10.00	285.34	-10.00	100.00
230	1.98	84.92	-10.00	200.35	-10.00	100.00
235	2.96	87.00	-10.00	165.98	-10.00	100.00
240	3.68	89.26	-10.00	147.53	-10.00	100.00
245	3.49	91.58	-10.00	152.03	-10.00	100.00
250	3.39	93.88	-10.00	154.38	-10.00	100.00
255	3.84	96.26	-10.00	144.04	-10.00	100.00
260	4.09	98.61	-10.00	139.54	-10.00	100.00
265	3.59	100.67	-10.00	149.74	-10.00	100.00
270	3.47	102.76	-10.00	152.33	-10.00	100.00
275	3.40	104.77	-10.00	154.26	-10.00	100.00
280	5.56	107.95	-10.00	125.48	-10.00	100.00
285	5.12	109.66	-10.00	130.12	-10.00	100.00
290	4.79	111.25	-10.00	133.23	-10.00	100.00
295	3.88	112.20	-10.00	142.92	-10.00	100.00
300	2.06	112.13	-10.00	197.31	-10.00	100.00
305	1.25	112.58	-10.00	239.43	-10.00	100.00
310	2.65	114.82	-10.00	176.09	-10.00	100.00
315	3.35	116.30	-10.00	155.43	-10.00	100.00
320	4.53	118.08	-10.00	135.52	-10.00	100.00
325	4.86	118.83	-10.00	132.71	-10.00	100.00
330	4.73	118.91	-10.00	133.74	-10.00	100.00
335	3.64	117.78	-10.00	148.46	-10.00	100.00
340	1.04	114.93	-10.00	251.50	-10.00	100.00
345	0.39	113.86	-10.00	350.91	-10.00	116.91
350	0.87	113.69	-10.00	269.01	-10.00	100.00
355	0.75	112.37	-10.00	284.88	-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.



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19700 Janelia Farm Boulevard
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DATED: October 13, 2011