FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
GlobeCast North America Incorporated
CULVER CITY, CA
(KA452)
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
April 6, 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 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.

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 are considered on the interfering paths, sufficient blockage exists to negate harmful interference from occurring with the proposed transmit-receive earth station.

Company

Los Angeles City Info Technology Agency
Los Angeles County FCC Licensing Section
Los Angeles County Metro Transit Auth
Los Angeles SMSA Ltd. Partnership
Southern California Gas Company
Southern California Regional Rail Auth.

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.

Coordination data for this earth station was sent to the below listed carriers with a letter dated 05/05/2014.

Company
ABC Holding Company Inc.
ANAHEIM CITY, COMMUNICATIONS DIVISION
AT&T California
AirSites2000, LLC
American Tower, LLC
BNSF Railway Company
CCO SoCal I, LLC
CNG Communications, Inc.
COAST COMMUNITY COLLEGE DISTRICT
California, State of
Calvary Chapel of Costa Mesa
City of Los Angeles Dept Water & Power
Entravision Holdings, LLC
Exxon Communications Company
Fresno MSA Limited Partnership
Fundamental Broadcasting LLC
GTE Mobilnet of Santa Barbara LTD Ptnsh
Glendale, City of
ION Media Los Angeles License, Inc.
KTLA, LLC
Kern, County of
LOS ANGELES UNIFIED SCHOOL DISTRICT
Los Angeles City Info Technology Agency
Los Angeles County Dept of Public Works
Los Angeles County FCC Licensing Section
Los Angeles County Metro Transit Auth
Los Angeles SMSA Ltd. Partnership
MHO Networks
MOBILE RELAY ASSOCIATES INC
MONTEBELLO CITY CALIFORNIA
Metropolitan Water Dist of So California
New Cingular Wireless PCS - Los Angeles
Nextel of California Inc.
Nextweb, Inc
ORANGE, COUNTY OF, CA
Regents of the University of California
Riverside, County of
San Bernardino County of California
San Diego Gas & Electric Company
Santa Barbara Cellular Systems, Ltd.
Santa Barbara, County of

SkyRiver Communications
Southern California Edison Company
Southern California Gas Company
Southern California Regional Rail Auth.
T-Mobile License LLC
TV MICROWAVES CO
Turn Wireless, LLC
Ultimate Internet Access, Inc.
Ventura, County of
Verizon California Inc.
Verizon Wireless (VAW) LLC (CA)
Western Technical Services

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:	06/10/2014
Job Number:	140505COMSGE01

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	KA452
Licensee Code	P4775
Licensee Name	GlobeCast North America Incorporated

Site Information — CULVER CITY, CA

Venue Name	
Latitude (NAD 83)	34° 1' 6.0" N
Longitude (NAD 83)	118° 24' 16.3" W
Climate Zone	A
Rain Zone	4
Ground Elevation (AMSL)	24.38 m / 80.0 ft

Link Information

Satellite Type	Geostationary
Mode	TR - Transmit-Receive
Modulation	Digital
Satellite Arc	177° W to 194° West Longitude
Azimuth Range	251.1° to 261.8°
Corresponding Elevation Angles	17.3° / 3.2°
Antenna Centerline (AGL)	5.49 m / 18.0 ft

Antenna Information		Receive - FCC32		Transmit - FCC32	
Manufacturer		Satcom		Satcom	
Model		920CS		920CS	
Gain / Diameter		50.1 dBi / 9.2 m		53.0 dBi / 9.2 m	
3-dB / 15-dB Beamwidth		0.52° / 1.06°		0.38° / 0.78°	
Max Available RF Power	(dBW/4 kHz)			-3.0	
	(dBW/MHz)			21.0	
Maximum EIRP	(dBW/4 kHz)			50.0	
	(dBW/MHz)			74.0	
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)	200KF3E - 36M0G7F / 3700.0 - 4200.0	200KF3E - 36M0G7F / 5925.0 - 6425.0
Max Great Circle Coordination Distance	643.9 km / 400.0 mi	372.4 km / 231.4 mi
Precipitation Scatter Contour Radius	476.9 km / 296.3 mi	100.0 km / 62.1 mi

COMSEARCH

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Coordination Values	**CULVER CITY, CA**			
Licensee Name	GlobeCast North America Incorporated			
Latitude (NAD 83)	34° 1' 6.0" N			
Longitude (NAD 83)	118° 24' 16.3" W			
Ground Elevation (AMSL)	24.38 m / 80.0 ft			
Antenna Centerline (AGL)	5.49 m / 18.0 ft			
Antenna Model	Satcom 920CS			
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			-3.0 (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	1.10	98.17	-10.00	217.25	-10.00	114.16
5	1.22	103.17	-10.00	213.72	-10.00	111.13
10	1.17	108.17	-10.00	215.21	-10.00	112.42
15	0.92	113.16	-10.00	224.44	-10.00	120.15
20	0.85	118.15	-10.00	228.60	-10.00	123.49
25	0.64	123.14	-10.00	241.05	-10.00	133.08
30	0.30	128.12	-10.00	272.43	-10.00	156.74
35	0.38	133.11	-10.00	263.34	-10.00	149.14
40	0.25	138.09	-10.00	278.65	-10.00	162.07
45	0.23	143.08	-10.00	281.33	-10.00	164.40
50	0.24	148.06	-10.00	280.12	-10.00	163.35
55	0.00	153.00	-10.00	285.28	-10.00	169.49
60	0.00	157.96	-10.00	285.28	-10.00	169.49
65	0.00	161.69	-10.00	285.28	-10.00	169.49
70	0.00	162.68	-10.00	285.28	-10.00	169.49
75	0.22	162.51	-10.00	283.00	-10.00	165.86
80	0.00	160.64	-10.00	285.28	-10.00	169.49
85	0.40	158.29	-10.00	260.48	-10.00	146.80
90	2.02	155.91	-10.00	193.99	-10.00	100.00
95	2.50	152.16	-10.00	183.14	-10.00	100.00
100	2.22	147.75	-10.00	189.54	-10.00	100.00
105	2.02	143.23	-10.00	194.13	-10.00	100.00
110	2.24	138.76	-10.00	189.14	-10.00	100.00
115	1.85	134.03	-10.00	198.47	-10.00	100.00
120	1.86	129.36	-10.00	198.28	-10.00	100.00
125	1.57	124.59	-10.00	206.04	-10.00	101.99
130	1.55	119.85	-10.00	206.60	-10.00	102.51
135	1.38	115.07	-10.00	208.83	-10.00	106.77
140	1.03	110.26	-10.00	219.39	-10.00	115.97
145	0.59	105.44	-10.00	243.96	-10.00	134.00
150	0.33	100.65	-10.00	268.82	-10.00	153.69
155	0.00	95.86	-10.00	285.28	-10.00	169.49
160	0.00	91.09	-10.00	285.28	-10.00	169.49
165	0.00	86.31	-10.00	285.28	-10.00	169.49
170	0.00	81.54	-10.00	285.28	-10.00	169.49
175	0.26	76.76	-10.00	277.82	-10.00	161.35
180	0.23	72.00	-10.00	281.72	-10.00	164.75
185	0.00	67.28	-10.00	285.28	-10.00	169.49

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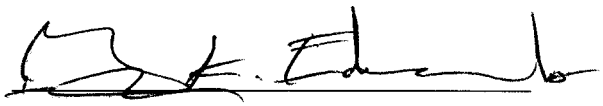
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz	
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%
Max Available RF Power			-3.0 (dBW/4 kHz)	

			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	0.00	62.56	-10.00	285.28	-10.00	169.49
195	0.00	57.86	-10.00	285.28	-10.00	169.49
200	0.00	53.20	-10.00	285.28	-10.00	169.49
205	0.00	48.58	-10.00	285.28	-10.00	169.49
210	0.00	44.02	-9.09	291.13	-9.09	173.02
215	0.00	39.55	-7.93	298.80	-7.93	177.54
220	0.00	35.19	-6.66	307.41	-6.66	182.44
225	0.00	31.00	-5.28	317.67	-5.28	187.75
230	0.00	27.05	-3.81	328.25	-3.81	193.42
235	0.00	23.28	-2.17	340.21	-2.17	199.66
240	0.00	19.42	-0.21	355.03	-0.21	205.54
245	0.00	15.47	2.26	374.19	2.26	215.35
250	0.26	11.33	5.65	393.50	5.65	224.21
255	0.48	7.15	10.64	408.49	10.64	225.70
260	0.51	3.26	19.18	643.87	19.18	372.37
265	0.52	4.17	16.50	459.88	16.50	252.06
270	0.43	8.64	8.59	396.31	8.59	220.58
275	0.42	13.47	3.77	357.05	3.77	202.13
280	0.55	18.37	0.40	317.06	0.40	177.82
285	0.54	23.32	-2.20	297.52	-2.20	165.14
290	0.54	28.30	-4.29	282.81	-4.29	156.29
295	0.58	33.27	-6.05	269.03	-6.05	147.80
300	0.58	38.26	-7.57	259.13	-7.57	142.25
305	0.91	43.23	-8.89	230.91	-8.89	123.95
310	1.07	48.22	-10.00	218.02	-10.00	114.82
315	1.15	53.21	-10.00	215.70	-10.00	112.83
320	1.20	58.20	-10.00	214.18	-10.00	111.52
325	1.01	63.20	-10.00	219.97	-10.00	116.46
330	0.95	68.20	-10.00	223.00	-10.00	118.97
335	0.97	73.19	-10.00	221.90	-10.00	118.07
340	1.05	78.19	-10.00	218.75	-10.00	115.44
345	1.10	83.18	-10.00	217.30	-10.00	114.21
350	1.11	88.18	-10.00	216.99	-10.00	113.95
355	1.13	93.18	-10.00	216.20	-10.00	113.26

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: June 10, 2014