FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

Disney Channel
Burbank 7, California
(Call Sign: E950058)

Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Virginia 20147
September 26, 2013

TABLE OF CONTENTS

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 transmit-receive earth station.

Company

Los Angeles City Info. Technology Agency
Los Angeles County Dept. of Public Works
Los Angeles County FCC Licensing Section
Los Angeles SMSA Ltd. Partnership
Metropolitan Water District of Southern California
Nextel of California, Inc.
Southern California Edison Company
Southern California Gas Company
Southern California Regional Rail Authority

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 emailed and sent to the below listed carriers with a letter dated August 25, 2013.

Company

ABC Holding Company Inc.
ANAHEIM CITY, COMMUNICATIONS DIVISION
AT&T California
AirSites2000, LLC
American Tower, LLC
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
Fresno MSA Limited Partnership
GTE Mobilnet of California LTD Partnersh
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 SMSA Ltd. Partnership
MHO Networks
MOBILE RELAY ASSOCIATES INC
MONTEBELLO CITY CALIFORNIA
Metropolitan Water Dist of So California
New Cingular Wireless PCS - Los Angeles
New Cingular Wireless PCS LLC - N CAL
Nextel of California Inc.
Nextweb, Inc.
ORANGE, COUNTY OF, CA
PAXSON LOS ANGELES LICENSE, INC.
Regents of the University of California
Riverside, County of
San Bernardino County of California
Santa Barbara Cellular Systems, Ltd.
Santa Barbara, County of

Company (Continued)

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)
Vintage Production California LLC
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:	09/26/2013
Job Number:	130825COMSJC02

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	E950058
Licensee Code	ZDISNE
Licensee Name	Disney Channel

Site Information — BURBANK 7, CALIFORNIA

Venue Name	
Latitude (NAD 83)	34° 9' 13.0" N
Longitude (NAD 83)	118° 20' 29.3" W
Climate Zone	A
Rain Zone	4
Ground Elevation (AMSL)	164.59 m / 540.0 ft

Link Information

Satellite Type	Geostationary
Mode	TR - Transmit-Receive
Modulation	Digital
Satellite Arc	60° W to 143° West Longitude
Azimuth Range	109.1° to 219.3°
Corresponding Elevation Angles	17.4° / 42.4°
Antenna Centerline (AGL)	4.57 m / 15.0 ft

Antenna Information

	Receive	Transmit
Manufacturer	RSI	RSI
Model	700 CS	700 CS
Gain / Diameter	47.0 dBi / 7.0 m	51.1 dBi / 7.0 m
3-dB / 15-dB Beamwidth	0.70° / 1.42°	0.48° / 0.96°

				2M00G7W to 36M0G7W
Max Available RF Power	(dBW/4 kHz)			-2.7 -12.6
	(dBW/MHz)			21.3 11.4
Maximum EIRP	(dBW/4 kHz)			48.4 38.5
	(dBW/MHz)			72.4 62.5
	(dBW)			75.4 78.0
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)	2M00G7W - 36M0G7W / 3700.0 - 4200.0	2M00G7W - 36M0G7W / 5925.0 - 6425.0
Max Great Circle Coordination Distance	321.6 km / 199.8 mi	191.1 km / 118.7 mi
Precipitation Scatter Contour Radius	255.7 km / 158.9 mi	312.3 km / 194.0 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values	**BURBANK 7, CA**			
Licensee Name	Disney Channel			
Latitude (NAD 83)	34° 9' 13.0" N			
Longitude (NAD 83)	118° 20' 29.3" W			
Ground Elevation (AMSL)	164.59 m / 540.0 ft			
Antenna Centerline (AGL)	4.57 m / 15.0 ft			
Antenna Model	RSI 700 CS			
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			-2.7 (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	2.22	108.40	-10.00	189.46	-10.00	100.00
5	2.56	103.61	-10.00	181.62	-10.00	100.00
10	2.85	98.80	-10.00	174.94	-10.00	100.00
15	3.39	93.97	-10.00	160.67	-10.00	100.00
20	3.56	89.12	-10.00	156.91	-10.00	100.00
25	3.42	84.27	-10.00	159.96	-10.00	100.00
30	3.69	79.41	-10.00	154.17	-10.00	100.00
35	2.98	74.61	-10.00	172.00	-10.00	100.00
40	3.26	69.76	-10.00	163.56	-10.00	100.00
45	3.75	64.89	-10.00	152.99	-10.00	100.00
50	3.86	60.05	-10.00	150.67	-10.00	100.00
55	3.01	55.40	-10.00	171.33	-10.00	100.00
60	2.75	50.70	-10.00	177.22	-10.00	100.00
65	2.13	46.16	-9.61	193.38	-9.61	100.00
70	1.43	41.76	-8.52	214.70	-8.52	111.06
75	0.61	37.57	-7.37	258.15	-7.37	142.21
80	0.00	33.53	-6.14	311.05	-6.14	185.62
85	0.00	29.44	-4.72	321.65	-4.72	191.05
90	0.88	25.08	-2.98	269.13	-2.98	144.77
95	1.56	21.12	-1.12	253.09	-1.12	132.23
100	1.63	18.19	0.51	261.55	0.51	135.02
105	2.44	15.55	2.21	248.16	2.21	125.30
110	2.29	15.18	2.47	254.10	2.47	129.06
115	2.79	15.78	2.05	237.80	2.05	118.05
120	4.36	16.97	1.26	202.56	1.26	100.00
125	4.76	20.23	-0.65	185.83	-0.65	100.00
130	5.01	23.76	-2.39	172.10	-2.39	100.00
135	6.41	26.33	-3.51	146.81	-3.51	100.00
140	8.36	28.24	-4.27	123.95	-4.27	100.00
145	9.35	30.50	-5.11	111.85	-5.11	100.00
150	9.15	33.37	-6.08	109.56	-6.08	100.00
155	8.96	35.89	-6.87	107.88	-6.87	100.00
160	8.28	38.47	-7.63	110.77	-7.63	100.00
165	4.82	43.26	-8.90	140.59	-8.90	100.00
170	3.27	45.98	-9.56	165.66	-9.56	100.00
175	2.90	47.14	-9.83	174.60	-9.83	100.00
180	2.60	47.70	-9.96	180.86	-9.96	100.00

COMSEARCH

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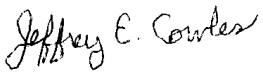
Coordination Values	**BURBANK 7, CA**			
Licensee Name	Disney Channel			
Latitude (NAD 83)	34° 9' 13.0" N			
Longitude (NAD 83)	118° 20' 29.3" W			
Ground Elevation (AMSL)	164.59 m / 540.0 ft			
Antenna Centerline (AGL)	4.57 m / 15.0 ft			
Antenna Model	RSI 700 CS			
Antenna Mode	Receive 4.0 GHz		Transmit 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			-2.7 (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)
185	2.71	47.32	-9.88	178.74	-9.88	100.00
190	3.00	46.24	-9.62	173.27	-9.62	100.00
195	3.21	44.72	-9.26	170.27	-9.26	100.00
200	2.96	43.16	-8.88	178.18	-8.88	100.00
205	3.04	41.42	-8.43	178.43	-8.43	100.00
210	2.95	40.30	-8.13	182.00	-8.13	100.00
215	3.29	39.26	-7.85	175.78	-7.85	100.00
220	4.04	38.32	-7.58	158.81	-7.58	100.00
225	3.19	39.51	-7.92	177.67	-7.92	100.00
230	2.63	40.91	-8.30	188.36	-8.30	100.00
235	1.96	42.85	-8.80	201.06	-8.80	100.00
240	2.07	44.48	-9.20	196.54	-9.20	100.00
245	1.65	46.93	-9.79	204.87	-9.79	101.53
250	1.63	49.35	-10.00	204.40	-10.00	101.34
255	1.10	52.39	-10.00	217.32	-10.00	115.12
260	0.53	55.62	-10.00	247.57	-10.00	137.67
265	0.36	58.75	-10.00	266.18	-10.00	152.56
270	0.44	61.90	-10.00	256.32	-10.00	144.46
275	0.34	65.27	-10.00	268.15	-10.00	154.22
280	0.34	68.70	-10.00	267.56	-10.00	153.71
285	0.38	72.21	-10.00	263.53	-10.00	150.35
290	0.40	75.79	-10.00	260.76	-10.00	148.07
295	0.39	79.44	-10.00	262.40	-10.00	149.42
300	0.38	83.12	-10.00	262.93	-10.00	149.86
305	0.41	86.82	-10.00	259.74	-10.00	147.24
310	0.42	90.54	-10.00	259.26	-10.00	146.84
315	0.44	94.26	-10.00	256.30	-10.00	144.45
320	0.47	97.97	-10.00	253.12	-10.00	141.91
325	0.50	101.65	-10.00	249.46	-10.00	139.13
330	0.54	105.30	-10.00	247.23	-10.00	137.40
335	0.56	108.88	-10.00	245.97	-10.00	136.44
340	0.57	112.40	-10.00	245.08	-10.00	135.76
345	0.57	115.81	-10.00	245.44	-10.00	136.04
350	0.60	117.74	-10.00	243.11	-10.00	134.26
355	1.56	113.12	-10.00	206.40	-10.00	103.22

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.



Jeffrey E. Cowles
Engineer III, Telecommunications
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, Va. 20147

DATED: September 26, 2013

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

Disney Channel
Burbank 9.2, California
(Call Sign: E950058)

Satellite Earth Station

Prepared By:
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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 transmit-receive earth station.

Company

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Los Angeles County FCC Licensing Section
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Southern California Edison Company
Southern California Gas Company
Southern California Regional Rail Authority

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American Tower, LLC
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
Fresno MSA Limited Partnership
GTE Mobilnet of California LTD Partnersh
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 SMSA Ltd. Partnership
MHO Networks
MOBILE RELAY ASSOCIATES INC
MONTEBELLO CITY CALIFORNIA
Metropolitan Water Dist of So California
New Cingular Wireless PCS - Los Angeles
New Cingular Wireless PCS LLC - N CAL
Nextel of California Inc.
Nextweb, Inc.
ORANGE, COUNTY OF, CA
PAXSON LOS ANGELES LICENSE, INC.
Regents of the University of California
Riverside, County of
San Bernardino County of California

Company (Continued)

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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)
Vintage Production California LLC
Western Technical Services

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COMSEARCH

Earth Station Data Sheet

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

Date:	09/26/2013
Job Number:	130826COMSJC01

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	E950058
Licensee Code	ZDISNE
Licensee Name	Disney Channel

Site Information — BURBANK, CALIFORNIA

Venue Name	
Latitude (NAD 83)	34° 9' 13.0" N
Longitude (NAD 83)	118° 20' 29.3" W
Climate Zone	A
Rain Zone	4
Ground Elevation (AMSL)	164.59 m / 540.0 ft

Link Information

Satellite Type	Geostationary
Mode	TR - Transmit-Receive
Modulation	Digital
Satellite Arc	60° W to 143° West Longitude
Azimuth Range	109.1° to 219.3°
Corresponding Elevation Angles	17.4° / 42.4°
Antenna Centerline (AGL)	6.1 m / 20.0 ft

Antenna Information	Receive	Transmit
Manufacturer	RSI	RSI
Model	920 CS	920 CS
Gain / Diameter	50.1 dBi / 9.2 m	53.6 dBi / 9.2 m
3-dB / 15-dB Beamwidth	0.52° / 1.06°	0.38° / 0.78°

				2M00G7W to 36M0G7W	
Max Available RF Power	(dBW/4 kHz)			-2.7	-15.1
	(dBW/MHz)			21.3	8.9
Maximum EIRP	(dBW/4 kHz)			50.9	38.5
	(dBW/MHz)			74.9	62.5
	(dBW)			77.9	78.0
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)	2M00G7W - 36M0G7W / 3700.0 - 4200.0	2M00G7W - 36M0G7W / 5925.0 - 6425.0
Max Great Circle Coordination Distance	321.6 km / 199.8 mi	191.1 km / 118.7 mi
Precipitation Scatter Contour Radius	255.7 km / 158.9 mi	251.5 km / 156.3 mi

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Longitude (NAD 83)	118° 20' 29.3" W			
Ground Elevation (AMSL)	164.59 m / 540.0 ft			
Antenna Centerline (AGL)	6.1 m / 20.0 ft			
Antenna Model	RSI 920 CS			
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			-2.7 (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	2.21	108.40	-10.00	189.71	-10.00	100.00
5	2.55	103.61	-10.00	181.88	-10.00	100.00
10	2.84	98.80	-10.00	175.20	-10.00	100.00
15	3.38	93.97	-10.00	160.92	-10.00	100.00
20	3.55	89.12	-10.00	157.15	-10.00	100.00
25	3.41	84.27	-10.00	160.20	-10.00	100.00
30	3.68	79.41	-10.00	154.40	-10.00	100.00
35	2.96	74.61	-10.00	172.28	-10.00	100.00
40	3.25	69.76	-10.00	163.82	-10.00	100.00
45	3.74	64.89	-10.00	153.22	-10.00	100.00
50	3.85	60.05	-10.00	150.90	-10.00	100.00
55	2.99	55.40	-10.00	171.60	-10.00	100.00
60	2.74	50.70	-10.00	177.48	-10.00	100.00
65	2.12	46.16	-9.61	193.63	-9.61	100.00
70	1.41	41.76	-8.52	215.03	-8.52	111.34
75	0.60	37.57	-7.37	258.87	-7.37	142.78
80	0.00	33.53	-6.14	311.05	-6.14	185.62
85	0.00	29.44	-4.72	321.65	-4.72	191.05
90	0.85	25.10	-2.99	270.78	-2.99	146.04
95	1.54	21.14	-1.13	253.87	-1.13	132.78
100	1.61	18.21	0.49	262.35	0.49	135.60
105	2.41	15.57	2.19	248.72	2.19	125.71
110	2.27	15.20	2.45	254.59	2.45	129.41
115	2.77	15.80	2.03	238.27	2.03	118.41
120	4.34	16.99	1.25	202.87	1.25	100.00
125	4.72	20.26	-0.67	186.50	-0.67	100.00
130	4.96	23.78	-2.41	172.70	-2.41	100.00
135	6.38	26.35	-3.52	147.24	-3.52	100.00
140	8.33	28.27	-4.28	124.23	-4.28	100.00
145	9.31	30.53	-5.12	112.17	-5.12	100.00
150	9.11	33.40	-6.09	109.87	-6.09	100.00
155	8.92	35.92	-6.88	108.19	-6.88	100.00
160	8.24	38.51	-7.64	111.11	-7.64	100.00
165	4.77	43.30	-8.91	141.22	-8.91	100.00
170	3.23	46.02	-9.57	166.47	-9.57	100.00
175	2.86	47.17	-9.84	175.41	-9.84	100.00
180	2.57	47.73	-9.97	181.54	-9.97	100.00

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Earth Station Data Sheet

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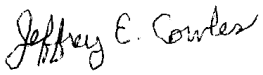
Coordination Values	**BURBANK, CA**			
Licensee Name	Disney Channel			
Latitude (NAD 83)	34° 9' 13.0" N			
Longitude (NAD 83)	118° 20' 29.3" W			
Ground Elevation (AMSL)	164.59 m / 540.0 ft			
Antenna Centerline (AGL)	6.1 m / 20.0 ft			
Antenna Model	RSI 920 CS			
Antenna Mode	Receive 4.0 GHz		Transmit 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			-2.7 (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)
185	2.66	47.37	-9.89	179.87	-9.89	100.00
190	2.98	46.26	-9.63	173.79	-9.63	100.00
195	3.19	44.74	-9.27	170.78	-9.27	100.00
200	2.93	43.18	-8.88	178.68	-8.88	100.00
205	3.02	41.45	-8.44	178.96	-8.44	100.00
210	2.93	40.33	-8.14	182.55	-8.14	100.00
215	3.27	39.28	-7.85	176.27	-7.85	100.00
220	4.02	38.34	-7.59	159.15	-7.59	100.00
225	3.17	39.53	-7.92	178.16	-7.92	100.00
230	2.62	40.93	-8.30	188.67	-8.30	100.00
235	1.95	42.86	-8.80	201.41	-8.80	100.00
240	2.06	44.49	-9.21	196.84	-9.21	100.00
245	1.64	46.94	-9.79	205.22	-9.79	101.86
250	1.62	49.35	-10.00	204.70	-10.00	101.62
255	1.08	52.40	-10.00	217.67	-10.00	115.42
260	0.52	55.62	-10.00	248.31	-10.00	138.24
265	0.27	58.80	-10.00	277.10	-10.00	161.87
270	0.39	61.92	-10.00	261.75	-10.00	148.88
275	0.29	65.29	-10.00	273.90	-10.00	159.11
280	0.30	68.71	-10.00	272.31	-10.00	157.74
285	0.34	72.22	-10.00	268.39	-10.00	154.42
290	0.38	75.80	-10.00	263.23	-10.00	150.11
295	0.37	79.44	-10.00	264.59	-10.00	151.23
300	0.36	83.12	-10.00	265.95	-10.00	152.37
305	0.40	86.83	-10.00	261.23	-10.00	148.45
310	0.40	90.54	-10.00	260.99	-10.00	148.25
315	0.43	94.26	-10.00	258.09	-10.00	145.89
320	0.46	97.97	-10.00	254.57	-10.00	143.06
325	0.49	101.65	-10.00	250.68	-10.00	139.99
330	0.53	105.29	-10.00	247.97	-10.00	137.97
335	0.55	108.88	-10.00	246.70	-10.00	137.00
340	0.56	112.39	-10.00	245.80	-10.00	136.31
345	0.56	115.81	-10.00	246.19	-10.00	136.60
350	0.59	117.74	-10.00	243.81	-10.00	134.80
355	1.55	113.12	-10.00	206.72	-10.00	103.52

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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DATED: September 26, 2013