

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Univision Radio Broadcasting Texas, LP
HOUSTON, TX
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
August 13, 2012

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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

Cingular Wireless of Texas RSA #16 LP
ENTERPRISE PRODUCTS OPERATING LLC
GTE Mobilnet of South Texas LTD Partners
New Cingular Wireless PCS LLC - S Texas
Transcontinental Gas Pipeline Corp
Verizon Wireless Texas, LLC

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 06/27/2012.

Company

American National Insurance Company
Austin Energy
BLUEBONNET ELECTRIC COOPERATIVE INC
CENTERPOINT ENERGY INC
Central Telephone Company of Texas
Cequel III Communications I, LLC
Cingular Wireless of Texas RSA #16 LP
Dallas MTA, L.P.
ENTERPRISE PRODUCTS OPERATING LLC
ERF Wireless Bundled Services, Inc.
Equistar Chemicals, LP
Franklin Group Inc.
GTE Mobilnet of South Texas LTD Partners
GTE Mobilnet of Texas RSA #17 LTD Prtnsh
Great Western Communications, LLC
Greater Harris County 911 Emergency Net
Harris County ITC
Houston, City of
International Communications Group, Inc.
LOWER COLORADO RIVER AUTHORITY
New Cingular Wireless PCS LLC - N Texas
New Cingular Wireless PCS LLC - S Texas
RAYTHEON COMPANY
SAN BERNARD ELECTRIC COOPERATIVE INC
Sam Houston Electric Cooperative
San Antonio MTA, L.P.
Sprintcom, Inc
Stratos Offshore Services Company
T-MOBILE USA, INC.
T-Mobile License LLC
TEXAS NEW MEXICO POWER COMPANY
Texas Eastern Communications, Inc.
Texas RSA 18 Limited Partnership
Transcontinental Gas Pipeline Corp.
Trunkline Gas Company, LLC
Union Pacific Railroad Company
Verizon Wireless (VAW) LLC-Central Texas
Verizon Wireless Texas LLC - Houston GC
Verizon Wireless Texas, LLC
Verizon Wireless(VAW) LLC-AZ/CO/NM/NV/UT

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: 08/13/2012
Job Number: 120627COMSTC01

Administrative Information

Licensee Name Univision Radio Broadcasting Texas, LP

Site Information

HOUSTON, TX

Latitude (NAD 83) 29° 43' 42.4" N
Longitude (NAD 83) 95° 27' 54.9" W
Climate Zone B
Rain Zone 2
Ground Elevation (AMSL) 18.56 m / 60.9 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 37.5°W to 139°West Longitude
Azimuth Range 107.2° to 242.4°
Corresponding Elevation Angles 19.2° / 31.6°
Antenna Centerline (AGL) 2.6 m / 8.5 ft

Antenna Information

Receive

Transmit

Manufacturer	Prodelin	Prodelin
Gain / Diameter	41.9 dBi / 3.8 m	45.9 dBi / 3.8 m
3-dB / 15-dB Beamwidth	1.50° / 3.00°	1.00° / 2.00°

		<u>154KG7W</u>	<u>230KG7W</u>	<u>307KG7W</u>	<u>614KG7W</u>
Max Available RF Power	(dBW/4 kHz)	-14.08	-12.83	-14.08	-14.08
	(dBW/MHz)	9.90	11.20	9.90	9.90
Maximum EIRP	(dBW/4 kHz)	31.82	33.07	31.82	31.82
	(dBW/MHz)	55.80	57.04	55.80	55.80
	(dBW)	47.60	50.67	50.37	53.68
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)	154KG7W - 614KG7W / 3700.0 - 4200.0	154KG7W - 614KG7W / 5925.0 - 5930.1
		154KG7W - 614KG7W / 6049.25 - 6108.0
		154KG7W - 614KG7W / 6138.2 - 6182.14
		154KG7W - 614KG7W / 6419.89 - 6425.0

Max Great Circle Coordination Distance	553.8 km / 344.1 mi	199.3 km / 123.8 mi
Precipitation Scatter Contour Radius	505.7 km / 314.2 mi	100.0 km / 62.1 mi

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Coordination Values

HOUSTON, TX

Licensee Name Univision Radio Broadcasting Texas, LP
Latitude (NAD 83) 29° 43' 42.4" N
Longitude (NAD 83) 95° 27' 54.9" W
Ground Elevation (AMSL) 18.56 m / 60.9 ft
Antenna Centerline (AGL) 2.6 m / 8.5 ft
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 -12.8 (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	0.00	106.25	-10.00	412.20	-10.00	150.75
5	0.00	101.55	-10.00	412.20	-10.00	150.75
10	0.00	96.84	-10.00	412.20	-10.00	150.75
15	0.00	92.12	-10.00	412.20	-10.00	150.75
20	0.00	87.39	-10.00	412.20	-10.00	150.75
25	0.00	82.68	-10.00	412.20	-10.00	150.75
30	0.00	77.96	-10.00	412.20	-10.00	150.75
35	0.00	73.26	-10.00	412.20	-10.00	150.75
40	0.00	68.57	-10.00	412.20	-10.00	150.75
45	0.00	63.91	-10.00	412.20	-10.00	150.75
50	0.00	59.27	-10.00	412.20	-10.00	150.75
55	0.37	54.58	-10.00	356.55	-10.00	130.76
60	0.79	49.90	-10.00	278.81	-10.00	106.26
65	0.22	45.57	-9.47	410.56	-9.47	149.88
70	0.37	41.11	-8.35	374.60	-8.35	136.45
75	0.00	37.00	-7.20	448.44	-7.20	162.86
80	0.00	32.91	-5.93	465.32	-5.93	168.79
85	0.00	29.07	-4.59	484.62	-4.59	175.34
90	0.00	25.60	-3.20	505.26	-3.20	182.36
95	0.00	22.66	-1.88	525.86	-1.88	189.38
100	0.00	20.49	-0.79	543.47	-0.79	195.39
105	0.00	19.34	-0.16	553.76	-0.16	199.28
110	0.00	19.41	-0.20	553.16	-0.20	199.07
115	0.21	20.47	-0.78	538.12	-0.78	193.33
120	0.00	22.93	-2.01	523.79	-2.01	188.68
125	0.34	25.69	-3.25	448.95	-3.25	160.86
130	0.00	29.45	-4.73	482.54	-4.73	174.63
135	0.00	33.29	-6.06	464.17	-6.06	168.18
140	0.00	37.07	-7.23	448.13	-7.23	162.76
145	0.00	40.67	-8.23	434.74	-8.23	158.26
150	0.00	44.05	-9.10	423.54	-9.10	154.52
155	0.00	47.14	-9.84	414.24	-9.84	151.43
160	0.25	49.69	-10.00	396.05	-10.00	144.93
165	0.00	52.16	-10.00	412.20	-10.00	150.75
170	0.00	53.88	-10.00	412.20	-10.00	150.75
175	0.00	54.97	-10.00	412.20	-10.00	150.75
180	0.00	55.34	-10.00	412.20	-10.00	150.75
185	0.00	54.97	-10.00	412.20	-10.00	150.75

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Coordination Values

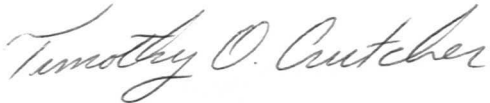
HOUSTON, TX

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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 -12.8 (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	0.00	53.88	-10.00	412.20	-10.00	150.75
195	0.00	52.16	-10.00	412.20	-10.00	150.75
200	0.00	49.88	-10.00	412.20	-10.00	150.75
205	0.00	47.15	-9.84	414.24	-9.84	151.43
210	0.00	44.05	-9.10	423.54	-9.10	154.52
215	0.00	40.91	-8.29	433.93	-8.29	157.99
220	0.00	38.08	-7.52	444.20	-7.52	161.44
225	0.00	35.67	-6.81	453.84	-6.81	164.69
230	0.29	33.47	-6.12	430.38	-6.12	155.52
235	0.00	32.39	-5.76	467.74	-5.76	169.60
240	0.00	31.70	-5.53	471.05	-5.53	170.73
245	0.00	31.71	-5.53	471.00	-5.53	170.71
250	0.00	32.42	-5.77	467.61	-5.77	169.56
255	0.00	33.78	-6.22	461.98	-6.22	167.44
260	0.00	35.72	-6.82	453.61	-6.82	164.61
265	0.00	38.15	-7.54	443.95	-7.54	161.35
270	0.00	40.98	-8.31	433.66	-8.31	157.90
275	0.00	44.14	-9.12	423.27	-9.12	154.43
280	0.00	47.54	-9.93	413.10	-9.93	151.05
285	0.00	51.16	-10.00	412.20	-10.00	150.75
290	0.00	54.93	-10.00	412.20	-10.00	150.75
295	0.00	58.82	-10.00	412.20	-10.00	150.75
300	0.00	62.82	-10.00	412.20	-10.00	150.75
305	0.00	66.90	-10.00	412.20	-10.00	150.75
310	0.00	71.03	-10.00	412.20	-10.00	150.75
315	0.00	75.22	-10.00	412.20	-10.00	150.75
320	0.00	79.43	-10.00	412.20	-10.00	150.75
325	0.00	83.67	-10.00	412.20	-10.00	150.75
330	0.00	87.93	-10.00	412.20	-10.00	150.75
335	0.00	92.18	-10.00	412.20	-10.00	150.75
340	0.00	96.44	-10.00	412.20	-10.00	150.75
345	0.00	100.67	-10.00	412.20	-10.00	150.75
350	0.00	104.89	-10.00	412.20	-10.00	150.75
355	0.00	109.07	-10.00	412.20	-10.00	150.75

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.

A handwritten signature in cursive script that reads "Timothy O. Crutcher".

Timothy O. Crutcher
Frequency Planner
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: August 13, 2012