

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Fox Broadcasting Company
GILBERT, AZ
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
August 07, 2019

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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

GovNET Licenses LLC
Maricopa County Wireless Systems
Qwest Corporation
Telink Networks SW, 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 04/03/2019.

Company

AT&T Mobility Spectrum LLC - Arizona
Alltel Comm Southwest Holdings Inc.
Arizona Public Service Company (APS)
Arizona Telephone Company
Arizona, State Of
CC Licenses, LLC
Calvary Chapel of Casa Grande / KVNG
Central Arizona Water Conservation Distr
City of Casa Grande
Consolidated Smart Broadband Systems, LL
Gila River Cellular General Partnership
Global Telecom & Technology Americas, In
GovNET Licenses LLC
Gutierrez-Palmenberg, Inc.
Harquahala Holdco, LLC
KPHO Broadcasting Corporation
Maricopa County Wireless Systems
Mesa, City of
New Cingular Wireless PCS LLC - AZ
Phoenix, City of
Pinal, County of
Qwest Corporation
SES Americom, Inc.
Salt River Project AI & PD
Scottsdale, City of
Southern California Edison Company
Sparkplug Southwest, LLC
Sprint Spectrum L.P.
T-Mobile License LLC
Table Top Telephone Company
Telink Networks SW, LLC
Transworld Network Corp
Tucson Electric Power Company
Univision Radio Stations Group, Inc.
Verizon Wireless - Arizona, Nevada
Verizon Wireless(VAW) LLC-AZ/CO/NM/NV/UT
Xiber, LLC

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: 08/07/2019
Job Number: 190403COMSGE03

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code FOXBRO
Licensee Name Fox Broadcasting Company

Site Information GILBERT, AZ

Venue Name
Latitude (NAD 83) 33° 22' 28.9" N
Longitude (NAD 83) 111° 48' 45.2" W
Climate Zone A
Rain Zone 5
Ground Elevation (AMSL) 372.19 m / 1221.1 ft

Link Information

Satellite Type Geostationary
Mode Transmit-
Modulation Digital
Satellite Arc 87° W to 135° West Longitude
Azimuth Range 140.0° to 217.9°
Corresponding Elevation Angles 42.9° / 43.9°
Antenna Centerline (AGL) 5.49 m / 18.0 ft

Antenna Information Transmit - FCC32

Manufacturer General Dynamics
Model Satcom
Gain / Diameter 53.7 dBi / 9.0 m
3-dB / 15-dB Beamwidth 0.40° / 0.80°

Max Available RF Power (dBW/4 kHz) -23.9
(dBW/MHz) 0.1

Maximum EIRP (dBW/4 kHz) 29.8
(dBW/MHz) 53.8

Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
Short Term -131.0 dBW/4 kHz 0.0025%

Frequency Information Transmit 6.1 GHz

Emission / Frequency Range (MHz) 36M0G7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance 110.2 km / 68.4 mi
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

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Coordination Values

GILBERT, AZ

Licensee Name Fox Broadcasting Company
Latitude (NAD 83) 33° 22' 28.9" N
Longitude (NAD 83) 111° 48' 45.2" W
Ground Elevation (AMSL) 372.19 m / 1221.1 ft
Antenna Centerline (AGL) 5.49 m / 18.0 ft
Antenna Model General Dynamics 9 meter
Antenna Mode Transmit 6.1 GHz
Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
Short Term -131.0 dBW/4 kHz 0.0025%
Max Available RF Power -23.9 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Transmit 6.1 GHz	
					Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	124.09	-10.00	285.28	-10.00	107.20
5	0.00	121.15	-10.00	285.28	-10.00	107.20
10	0.00	118.05	-10.00	285.28	-10.00	107.20
15	0.00	114.80	-10.00	285.28	-10.00	107.20
20	0.00	111.45	-10.00	285.28	-10.00	107.20
25	0.00	108.00	-10.00	285.28	-10.00	107.20
30	0.00	104.47	-10.00	285.28	-10.00	107.20
35	0.00	100.89	-10.00	285.28	-10.00	107.20
40	0.00	97.27	-10.00	285.28	-10.00	107.20
45	0.00	93.63	-10.00	285.28	-10.00	107.20
50	0.00	89.97	-10.00	285.28	-10.00	107.20
55	0.00	86.31	-10.00	285.28	-10.00	107.20
60	0.00	82.66	-10.00	285.28	-10.00	107.20
65	0.00	79.05	-10.00	285.28	-10.00	107.20
70	0.00	75.47	-10.00	285.28	-10.00	107.20
75	0.00	71.95	-10.00	285.28	-10.00	107.20
80	0.00	68.50	-10.00	285.28	-10.00	107.20
85	0.00	65.14	-10.00	285.28	-10.00	107.20
90	0.00	61.90	-10.00	285.28	-10.00	107.20
95	0.00	58.80	-10.00	285.28	-10.00	107.20
100	0.00	55.86	-10.00	285.28	-10.00	107.20
105	0.00	53.13	-10.00	285.28	-10.00	107.20
110	0.00	50.63	-10.00	285.28	-10.00	107.20
115	0.00	48.41	-10.00	285.28	-10.00	107.20
120	0.00	46.51	-9.69	287.26	-9.69	107.97
125	0.00	44.98	-9.33	289.61	-9.33	108.88
130	0.00	43.85	-9.05	291.40	-9.05	109.57
135	0.00	43.16	-8.88	292.52	-8.88	110.01
140	0.00	42.93	-8.82	292.90	-8.82	110.15
145	0.00	43.17	-8.88	292.51	-8.88	110.00
150	0.00	43.87	-9.05	291.37	-9.05	109.56
155	0.00	45.00	-9.33	289.57	-9.33	108.87
160	0.00	46.54	-9.70	287.22	-9.70	107.96
165	0.00	48.40	-10.00	285.28	-10.00	107.20
170	0.00	49.92	-10.00	285.28	-10.00	107.20
175	0.00	50.87	-10.00	285.28	-10.00	107.20
180	0.00	51.19	-10.00	285.28	-10.00	107.20
185	0.00	50.87	-10.00	285.28	-10.00	107.20

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Coordination Values

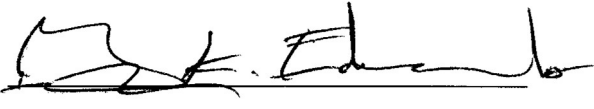
GILBERT, AZ

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Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Transmit 6.1 GHz	
					Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	49.92	-10.00	285.28	-10.00	107.20
195	0.00	48.40	-10.00	285.28	-10.00	107.20
200	0.00	46.70	-9.73	286.99	-9.73	107.86
205	0.00	45.37	-9.42	289.00	-9.42	108.65
210	0.00	44.45	-9.20	290.44	-9.20	109.21
215	0.00	43.96	-9.08	291.22	-9.08	109.51
220	0.00	43.93	-9.07	291.28	-9.07	109.53
225	0.00	44.34	-9.17	290.62	-9.17	109.27
230	0.00	45.19	-9.38	289.28	-9.38	108.75
235	0.00	46.46	-9.68	287.35	-9.68	108.00
240	0.00	48.10	-10.00	285.28	-10.00	107.20
245	0.00	50.09	-10.00	285.28	-10.00	107.20
250	0.00	52.37	-10.00	285.28	-10.00	107.20
255	0.00	54.91	-10.00	285.28	-10.00	107.20
260	0.00	57.67	-10.00	285.28	-10.00	107.20
265	0.00	60.62	-10.00	285.28	-10.00	107.20
270	0.00	63.72	-10.00	285.28	-10.00	107.20
275	0.00	66.95	-10.00	285.28	-10.00	107.20
280	0.00	70.29	-10.00	285.28	-10.00	107.20
285	0.00	73.71	-10.00	285.28	-10.00	107.20
290	0.00	77.20	-10.00	285.28	-10.00	107.20
295	0.00	80.74	-10.00	285.28	-10.00	107.20
300	0.00	84.31	-10.00	285.28	-10.00	107.20
305	0.00	87.91	-10.00	285.28	-10.00	107.20
310	0.00	91.51	-10.00	285.28	-10.00	107.20
315	0.00	95.11	-10.00	285.28	-10.00	107.20
320	0.00	98.69	-10.00	285.28	-10.00	107.20
325	0.00	102.23	-10.00	285.28	-10.00	107.20
330	0.00	105.73	-10.00	285.28	-10.00	107.20
335	0.00	109.16	-10.00	285.28	-10.00	107.20
340	0.00	112.52	-10.00	285.28	-10.00	107.20
345	0.00	115.77	-10.00	285.28	-10.00	107.20
350	0.00	118.89	-10.00	285.28	-10.00	107.20
355	0.00	121.87	-10.00	285.28	-10.00	107.20

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: August 07, 2019