

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Trinity Broadcasting Network Inc
FORT WORTH, TX
Satellite Earth Station

Prepared By:
COMSEARCH
21515 Ridgetop Circle, Suite 300
Sterling, VA 20166
June 22, 2022

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	7
5. CERTIFICATION.....	11

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-only earth station.

Company

BelWave Communications

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 05/20/2022.

Company

AMG Technology Investment Group LLC
AT&T Mobility Spectrum LLC - NM, N TX
AT&T Mobility Spectrum LLC - North Texas
AT&T Services, Inc.
Access MLP Operating LLC
Air Canopy Internet Services, Inc.
Alltel Communications LLC - C TX/N LA/AR
BNSF Railway Company
BelWave Communications
BorderCOMM Partners LP
Brazos Electric Power Cooperative Inc
Buchanan Wireless LLC
Carrollton City of Texas/ACS
Cellco Partnership-C TX/LA/AR/OK
Cellular Network Partnership, An OK LP
Central Telephone Company of Texas
City of Arlington
City of Azle Police Department
City of Dallas
City of Lewisville
City of McKinney
City of Plano
City of Stephenville
City of University Park
Colt Midstream, LLC
Community Internet Providers LLC
Dallas MTA, L.P. - Central Texas
Denton County
Ellis, County of
EnLink Midstream Operating, LP
Entercom License, LLC
Enterprise Products Operating, LLC
Erath County
FiberFly, LLC
Fort Worth, City of
Garland, City of
Global Telecom & Technology Americas
Grand Prairie, City of
HILCO Electric Cooperative, Inc.
KPLX Lico, Inc.

Kaufman County Sheriff Department
Legacy ISP, LLC
Linux Internet, LLC
Mesquite, City of
Midcoast Pipelines (Texas Gathering) L.P
New Cingular Wireless PCS LLC - N Texas
North Central Texas Council of Govt
North Texas Public Broadcasting Inc.
Oklahoma RSA 9 Limited Partnership
Olympic Wireless, LLC
Oncor License Holdings Company, LLC
One Ring Networks, Inc.
Parker County
Radio License Holding SRC LLC
Radio One Inc
Rayburn Country Electric Cooperative Inc
Rhino Communications, Inc
Sky City Holdings, LLC
Speed of Light Broadband
Station Venture Operations, LP
T-Mobile License LLC
TMN, Inc.
Targa Midstream Services LLC
Tarrant Regional Water District
Texahoma Cellular Limited Partnership
Texas RSA 6 Limited Partnership
Texas RSA 7B1 Limited Partnership
Texas RSA 9B1 Limited Partnership
Texoma Communications, LLC
USCOC of Greater Oklahoma, LLC
USEF-Rooh Communications
Union Pacific Railroad Company
United Cooperative Services
United Electric Cooperative Services Inc
Uniti Fiber LLC
Univision Radio San Francisco, Inc.
Waxahachie, City of
West Central Wireless LP
Yeehaw Wireless 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: 06/22/2022
Job Number: 220520COMSGE01

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code TBN
Licensee Name Trinity Broadcasting Network Inc

Site Information FORT WORTH, TX

Venue Name
Latitude (NAD 83) 32° 59' 15.6" N
Longitude (NAD 83) 97° 14' 39.9" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 204.14 m / 669.8 ft

Link Information

Satellite Type Geostationary
Mode TO - Transmit-Only
Modulation Digital
Satellite Arc 70° W to 127° West Longitude
Azimuth Range 136.6° to 226.4°
Corresponding Elevation Angles 41.7° / 40.1°
Antenna Centerline (AGL) 3.66 m / 12.0 ft

Antenna Information Transmit - FCC32

Manufacturer CPI
Model 7.3 meter
Gain / Diameter 51.8 dBi / 7.3 m
3-dB / 15-dB Beamwidth 0.48° / 1.20°

Max Available RF Power (dBW/4 kHz) -16.5
(dBW/MHz) 7.5

Maximum EIRP (dBW/4 kHz) 35.3
(dBW/MHz) 59.3

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 130.4 km / 81.0 mi
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

FORT WORTH, TX

Licensee Name Trinity Broadcasting Network Inc
Latitude (NAD 83) 32° 59' 15.6" N
Longitude (NAD 83) 97° 14' 39.9" W
Ground Elevation (AMSL) 204.14 m / 669.8 ft
Antenna Centerline (AGL) 3.66 m / 12.0 ft
Antenna Model CPI 7.3 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 -16.5 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	121.84	-10.00	126.18
5	0.00	119.69	-10.00	126.18
10	0.00	116.41	-10.00	126.18
15	0.00	113.01	-10.00	126.18
20	0.00	109.52	-10.00	126.18
25	0.00	105.94	-10.00	126.18
30	0.00	102.31	-10.00	126.18
35	0.00	98.63	-10.00	126.18
40	0.00	94.92	-10.00	126.18
45	0.00	91.19	-10.00	126.18
50	0.00	87.46	-10.00	126.18
55	0.00	83.74	-10.00	126.18
60	0.00	80.04	-10.00	126.18
65	0.00	76.38	-10.00	126.18
70	0.00	72.76	-10.00	126.18
75	0.00	69.21	-10.00	126.18
80	0.00	65.75	-10.00	126.18
85	0.00	62.39	-10.00	126.18
90	0.00	59.16	-10.00	126.18
95	0.00	56.09	-10.00	126.18
100	0.00	53.20	-10.00	126.18
105	0.28	50.34	-10.00	119.61
110	0.40	47.84	-9.99	110.39
115	0.62	45.54	-9.46	100.00
120	0.44	43.95	-9.07	109.15
125	0.46	42.60	-8.74	108.84
130	0.45	41.72	-8.51	109.77
135	0.63	41.14	-8.36	100.42
140	0.72	41.14	-8.36	100.00
145	0.50	41.94	-8.57	106.24
150	0.52	42.98	-8.83	104.57
155	0.42	44.55	-9.22	110.52
160	0.31	46.52	-9.69	118.00
165	0.33	48.51	-10.00	115.39
170	0.23	50.13	-10.00	123.83
175	0.37	50.94	-10.00	112.34
180	0.60	51.03	-10.00	100.00
185	0.45	50.86	-10.00	106.32

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

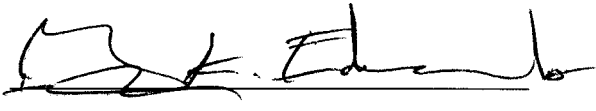
FORT WORTH, TX

Licensee Name Trinity Broadcasting Network Inc
Latitude (NAD 83) 32° 59' 15.6" N
Longitude (NAD 83) 97° 14' 39.9" W
Ground Elevation (AMSL) 204.14 m / 669.8 ft
Antenna Centerline (AGL) 3.66 m / 12.0 ft
Antenna Model CPI 7.3 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 -16.5 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.45	49.92	-10.00	105.90
195	0.26	48.57	-10.00	120.86
200	0.38	46.44	-9.67	112.34
205	0.30	44.33	-9.17	120.46
210	0.31	42.51	-8.71	120.89
215	0.35	41.08	-8.34	117.96
220	0.38	40.14	-8.09	116.99
225	0.21	39.90	-8.02	130.45
230	0.37	39.86	-8.01	117.99
235	0.30	40.56	-8.20	122.52
240	0.30	41.68	-8.50	121.91
245	0.36	43.21	-8.89	115.93
250	0.50	45.08	-9.35	103.88
255	0.65	47.31	-9.87	100.00
260	0.79	49.87	-10.00	100.00
265	1.12	52.59	-10.00	100.00
270	1.16	55.72	-10.00	100.00
275	0.92	59.16	-10.00	100.00
280	0.76	62.68	-10.00	100.00
285	0.66	66.27	-10.00	100.00
290	0.62	69.93	-10.00	100.00
295	0.55	73.66	-10.00	100.07
300	0.41	77.46	-10.00	109.58
305	0.37	81.26	-10.00	112.47
310	0.37	85.09	-10.00	112.24
315	0.38	88.93	-10.00	111.90
320	0.37	92.77	-10.00	112.24
325	0.37	96.61	-10.00	112.58
330	0.34	100.42	-10.00	114.54
335	0.32	104.19	-10.00	116.73
340	0.30	107.92	-10.00	117.78
345	0.26	111.57	-10.00	121.41
350	0.21	115.13	-10.00	125.55
355	0.00	118.51	-10.00	126.18

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
21515 Ridgetop Circle, Suite 300
Sterling, VA 20166

DATED: June 22, 2022