

Exhibit D

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Intelsat License LLC
NUEVO, CA
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
May 13, 2022

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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

Southern California Edison Company

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 04/26/2022.

Company

AC BidCO LLC
AT&T Mobility Spectrum LLC - AZ
AT&T Mobility Spectrum LLC - Southern CA
AVX Networks
Alltel Comm Southwest Holdings Inc.
Anaheim City, of
Arizona Public Service Company (APS)
Arizona, State Of
BNSF Railway Company
Broadcom Corporation
California Internet Solutions, Inc.
California Internet, L.P
California Resources Corporation
California, State of
Calvary Chapel of Costa Mesa
Catalina Broadband Solutions, LLC
Cellco Partnership - N CA/NV
Cellco Partnership - Southern California
Cellco Partnership-AZ/CO/NM/NV/UT
City of Casa Grande
City of Los Angeles Dept Water & Power
City of Montebello
City of West Covina
City of Yuma
Coachella Valley Water District
Coast Community College District
Commnet Four Corners, LLC
DM Ventures, Inc. dba Warp2Biz
DRS Global Enterprise Solutions, Inc.
Entravision Holdings, LLC
Fox Television Stations, LLC
Fresno MSA Limited Partnership
Frontier California Inc.
Frontier Communications of the Southwest
Gila River Cellular General Partnership
Glendale City California
GovNET Licenses LLC
HPWREN University of California, San Die
Imperial Irrigation District
KABC Television, LLC

KMEX License Partnership GP
Kern County Superintendent of Schools
Kern Ed Telecom Consortium
Kern, County of
LDM Engineering
Lightwave Broadband LLC
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 Regional Interoperable Comm
Los Angeles SMSA Ltd. Partnership
Los Angeles Unified School District
MHO Networks
Maricopa County Ofc of Enterprise Tech
Mediacom California LLC
Metropolitan Water Dist of So California
Mobile Relay Associates Inc.
New Cingular Wireless PCS LLC - AZ
New Cingular Wireless PCS - Los Angeles
New Cingular Wireless PCS LLC -San Diego
New Cingular Wireless PCS, LLC - S/E CAL
Norris, Samuel O
Northrop Grumman Systems Corp.
Olympic Wireless, LLC
One Ring Networks, Inc.
Orange, County of, CA
Pacific Bell Tel Com dba AT&T California
Pacific Gas and Electric Company
Pacific Lightwave Inc
Phoenix, City of
Pinal, County of
Port of Los Angeles
Public Media Group of Southern Californi
Qwest Corporation
RNN National, LLC
Regional 3Cs
Riverside, County of
San Bernardino County of California
San Diego Broadband
San Diego Gas & Electric Company
San Diego, City of
San Diego, County of
Santa Monica Community College District
Skyriver Communications
Southern California Edison Company
Southern California Gas Company
Southern California Regional Rail Auth.
Spectrum Link, Inc.
Spectrum Pacific West, LLC
Sprint Spectrum LLC
Station Venture Operations, LP
T-Mobile License LLC
TV Microwaves Company
Table Top Telephone Company
Telink Networks SW, LLC

Tribune Media Company
Tucson Electric Power Company
Ultimate Internet Access, Inc
Union Pacific Railroad Company
Venture Technologies Group, LLC
Western Broadband Inc.
Wiline Spectrum Holdings LLC
Wisprenn

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: 05/13/2022
Job Number: 220426COMSGE03

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E040125
Licensee Code INTELS
Licensee Name Intelsat License LLC

Site Information

NUEVO, CA

Venue Name
Latitude (NAD 83) 33° 47' 43.4" N
Longitude (NAD 83) 117° 5' 21.1" W
Climate Zone A
Rain Zone 4 Country ESID:9414
Ground Elevation (AMSL) 570.75 m / 1872.5 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Analog and Digital
Satellite Arc 44° W to 190° West Longitude
Azimuth Range 99.6° to 260.3°
Corresponding Elevation Angles 5.3° / 5.5°
Antenna Centerline (AGL) 7.32 m / 24.0 ft

Antenna Information

Receive - FCC32

Transmit - FCC32

Manufacturer	Vertex	Vertex	
Model	11 KPC	11 KPC	
Gain / Diameter	51.8 dBi / 11.0 m	55.5 dBi / 11.0 m	
3-dB / 15-dB Beamwidth	0.44° / 0.84°	0.29° / 0.54°	
Max Available RF Power (dBW/4 kHz)	10.6	10.6	
(dBW/MHz)	34.6	34.6	
Maximum EIRP (dBW/4 kHz)	66.1	66.1	
(dBW/MHz)	90.1	90.1	
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)	300KG7D - 1M50G7D / 3700.0 - 4200.0	200KF7D - 1M50F7D / 5850.0 - 5930.0
		200KF7D - 1M50F7D / 6170.0 - 6180.0
		200KF7D - 1M50F7D / 6415.0 - 6425.0
		200KG7D - 1M50G7D / 5850.0 - 5930.0
		200KG7D - 1M50G7D / 6170.0 - 6180.0
		200KG7D - 1M50G7D / 6415.0 - 6425.0
Max Great Circle Coordination Distance	679.0 km / 421.9 mi	556.5 km / 345.8 mi
Precipitation Scatter Contour Radius	429.4 km / 266.8 mi	387.6 km / 240.8 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
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Coordination Values

NUEVO, CA

Licensee Name Intelsat License LLC
Latitude (NAD 83) 33° 47' 43.4" N
Longitude (NAD 83) 117° 5' 21.1" W
Ground Elevation (AMSL) 570.75 m / 1872.5 ft
Antenna Centerline (AGL) 7.32 m / 24.0 ft
Antenna Model Vertex 11 meter
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 10.6 (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	0.90	99.57	-10.00	225.66	-10.00	172.56
5	2.00	94.59	-10.00	194.51	-10.00	136.68
10	1.81	89.60	-10.00	199.69	-10.00	141.50
15	2.20	84.61	-10.00	190.07	-10.00	134.08
20	2.49	79.61	-10.00	183.28	-10.00	128.45
25	2.58	74.62	-10.00	181.27	-10.00	126.81
30	3.44	69.61	-10.00	159.68	-10.00	111.04
35	3.25	64.62	-10.00	163.90	-10.00	114.42
40	3.24	59.62	-10.00	164.10	-10.00	114.58
45	3.17	54.63	-10.00	165.61	-10.00	115.76
50	2.82	49.65	-10.00	175.66	-10.00	122.29
55	2.51	44.67	-9.25	186.43	-9.25	130.92
60	2.61	39.68	-7.96	190.60	-7.96	133.85
65	3.39	34.65	-6.49	180.55	-6.49	124.95
70	3.07	29.68	-4.81	195.99	-4.81	135.78
75	3.09	24.70	-2.82	205.41	-2.82	143.62
80	3.67	19.67	-0.34	206.18	-0.34	143.06
85	3.33	14.73	2.79	229.24	2.79	165.44
90	3.21	9.83	7.19	263.98	7.19	192.59
95	2.77	5.26	13.97	334.81	13.97	237.70
100	2.77	2.59	21.68	633.35	21.68	518.43
105	3.49	5.47	13.55	308.39	13.55	218.59
110	3.75	9.35	7.73	253.98	7.73	183.79
115	3.64	13.39	3.83	228.71	3.83	163.82
120	3.76	17.24	1.09	209.73	1.09	147.99
125	3.65	21.14	-1.13	202.57	-1.13	140.02
130	4.30	24.45	-2.71	182.31	-2.71	124.74
135	3.79	28.36	-4.32	183.21	-4.32	126.15
140	4.24	31.47	-5.45	166.63	-5.45	114.94
145	3.93	34.89	-6.57	166.48	-6.57	115.29
150	4.03	37.75	-7.42	159.81	-7.42	110.39
155	3.82	40.53	-8.19	160.31	-8.19	111.11
160	4.45	42.23	-8.64	147.21	-8.64	100.27
165	4.63	43.81	-9.04	142.59	-9.04	100.00
170	5.01	44.71	-9.26	136.43	-9.26	100.00
175	5.70	44.77	-9.27	130.91	-9.27	100.00
180	6.40	44.31	-9.16	124.15	-9.16	100.00
185	6.64	43.84	-9.05	122.01	-9.05	100.00

COMSEARCH

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Coordination Values

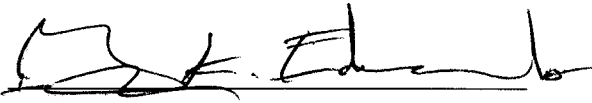
NUEVO, CA

Licensee Name Intelsat License LLC
Latitude (NAD 83) 33° 47' 43.4" N
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Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power 10.6 (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	6.58	43.19	-8.89	123.23	-8.89	100.00
195	5.82	42.72	-8.77	131.81	-8.77	100.00
200	6.05	40.83	-8.28	131.51	-8.28	100.00
205	5.55	39.12	-7.81	136.98	-7.81	100.00
210	6.31	35.99	-6.90	134.23	-6.90	100.00
215	6.64	32.89	-5.93	134.65	-5.93	100.00
220	7.43	29.21	-4.64	131.60	-4.64	100.00
225	6.64	26.43	-3.55	143.86	-3.55	100.00
230	5.63	23.58	-2.31	162.95	-2.31	110.79
235	5.81	19.77	-0.40	173.51	-0.40	116.75
240	5.64	16.08	1.84	188.57	1.84	127.38
245	5.57	12.22	4.82	206.16	4.82	138.83
250	5.33	8.40	8.89	232.68	8.89	161.67
255	4.94	4.63	15.37	288.81	15.37	205.01
260	4.42	1.10	30.96	678.99	30.96	556.52
265	4.12	4.90	14.75	301.59	14.75	212.84
270	4.42	9.76	7.26	235.88	7.26	168.37
275	4.01	14.78	2.76	214.00	2.76	150.63
280	4.42	19.73	-0.38	192.85	-0.38	132.32
285	3.67	24.77	-2.85	193.47	-2.85	133.97
290	2.84	29.81	-4.86	200.74	-4.86	140.13
295	1.28	34.93	-6.58	229.42	-6.58	174.17
300	0.61	39.95	-8.04	254.00	-8.04	196.77
305	0.00	44.97	-9.32	289.62	-9.32	223.93
310	0.00	49.93	-10.00	285.28	-10.00	220.99
315	0.00	54.89	-10.00	285.28	-10.00	220.99
320	0.00	59.86	-10.00	285.28	-10.00	220.99
325	0.00	64.83	-10.00	285.28	-10.00	220.99
330	0.00	69.80	-10.00	285.28	-10.00	220.99
335	0.00	74.78	-10.00	285.28	-10.00	220.99
340	0.00	79.75	-10.00	285.28	-10.00	220.99
345	0.00	84.73	-10.00	285.28	-10.00	220.99
350	0.00	89.71	-10.00	285.28	-10.00	220.99
355	0.00	94.68	-10.00	285.28	-10.00	220.99

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: May 13, 2022