

Exhibit C

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Intelsat License LLC
NAPA, CA
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
December 06, 2021

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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

Union Pacific Railroad Company
Pacific Gas and Electric Company
New Cingular Wireless PCS LLC - N CAL
Sacramento Valley Limited Partnership
Pacific Bell Tel Com dba AT&T California
California, State of

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 10/07/2021.

Company

101Netlink
AC BidCO LLC
AT&T Mobility Spectrum LLC - N CA
Alameda County Water District
Alameda County of California
Broadcom Corporation
CBS Broadcasting Inc
CBS Communications Services Inc
California Internet, L.P
California Oregon Broadcasting Inc.
California Resources Corporation
California Rural Service Area #1, Inc.
California, State of
Cellco Partnership - N CA/NV
Cellco Partnership - Southern California
Citizens Telecommunications of CA Inc.
City & County of San Francisco PUC
Contra Costa, County of
County of San Mateo
Crystal Smr Inc.
DigitalPath, Inc
East Bay Municipal Utility District
Encore Business Systems Inc.
Etheric Networks, Inc.
FCL Tech, Inc.
Field, David J
Frontier California Inc.
GTE Mobilnet of California LTD Partnersh
Higher Ground LLC
ION Television License, LLC
KDTV License Partnership, G.P.
KGO Television, Inc.
KVIE, Inc.
M.U.T. Licensing, LLC
MHO Networks
Marin, County of
Mendocino County of
Modesto Irrigation District
Mountain Tower Network Company, LLC
Napa, County of

New Cingular Wireless PCS LLC - N CAL
North Coast Internet
Olympic Wireless, LLC
Pacific Bell Tel Com dba AT&T California
Pacific Gas and Electric Company
Peninsula Corridor Joint Powers Board
Radio License Holding CBC, LLC
Radio License Holding SRC LLC
Redding MSA Limited Partnership
Ricketts, Curtis W
Ridge Wireless
Round Valley Indian Tribe
Sacramento County
Sacramento Municipal Utility District
Sacramento Valley Limited Partnership
Sail Internet
San Francisco, City and County of
San Joaquin County
San Jose, City of (ECOMM)
San Mateo County Transit Dist - PCJPB
Santa Clara, County of
Santa Clara, County of (SVRIA)
Solano, County of
Sonoma, County of CA
T-Mobile License LLC
The Internet Store, Inc.
Ukiah Wireless LLC
Union Pacific Railroad Company
Wiline Spectrum Holdings LLC
Yolo Emergency Communications Agency
Yolo, County of
Your Town Online, Inc
Yuba County Water Agency

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: 12/06/2021
Job Number: 211007COMSGE04

Administrative Information

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

Site Information

NAPA, CA

Venue Name:
Latitude (NAD 83): 38° 14' 41.9" N
Longitude (NAD 83): 122° 16' 43.8" W
Climate Zone: B
Rain Zone: 3
Ground Elevation (AMSL): 10.0 m / 32.8 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 69° W to 150° West Longitude
Azimuth Range: 114.8° to 220.3°
Corresponding Elevation Angles: 19.8° / 37.1°
Antenna Centerline (AGL): 5.49 m / 18.0 ft

Antenna Information

Receive - FCC32

Transmit - FCC32

Manufacturer	CPI Sat	CPI Sat
Model	9KXC	9KXC
Gain / Diameter	50.1 dBi / 9.0 m	53.6 dBi / 9.0 m
3-dB / 15-dB Beamwidth	0.55° / 1.20°	0.40° / 0.80°
Max Available RF Power (dBW/4 kHz)		7.5
	(dBW/MHz)	31.5
Maximum EIRP (dBW/4 kHz)		61.1
	(dBW/MHz)	85.1
Interference Objectives:	Long Term	-156.0 dBW/MHz 20%
	Short Term	-146.0 dBW/MHz 0.01%
		-154.0 dBW/4 kHz 20%
		-131.0 dBW/4 kHz 0.0025%

Frequency Information

Receive 4.0 GHz

Transmit 6.1 GHz

Emission / Frequency Range (MHz)	64K0G7W, 500KG7D/ 4000.0 - 4200.0 1M00F7D, 1M50F7D, 72M0G7W	N0N, 64K0G7W/ 5925.0 - 6425.0 1M00F7D, 1M50F7D, 72M0G7W
Max Great Circle Coordination Distance	412.2 km / 256.1 mi	264.1 km / 164.1 mi
Precipitation Scatter Contour Radius	368.9 km / 229.2 mi	260.8 km / 162.0 mi

COMSEARCH

Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
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Coordination Values

NAPA, CA

Licensee Name Intelsat License LLC
Latitude (NAD 83) 38° 14' 41.9" N
Longitude (NAD 83) 122° 16' 43.8" W
Ground Elevation (AMSL) 10.0 m / 32.8 ft
Antenna Centerline (AGL) 5.49 m / 18.0 ft
Antenna Model CPI Sat 9 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 7.5 (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	113.23	-10.00	412.20	-10.00	264.12
5	0.00	108.57	-10.00	412.20	-10.00	264.12
10	0.92	103.97	-10.00	262.58	-10.00	167.20
15	0.59	99.24	-10.00	308.43	-10.00	198.61
20	0.52	94.52	-10.00	318.63	-10.00	205.44
25	0.56	89.80	-10.00	312.50	-10.00	201.34
30	1.83	85.04	-10.00	207.70	-10.00	131.14
35	2.21	80.27	-10.00	191.50	-10.00	121.83
40	2.31	75.51	-10.00	187.83	-10.00	119.81
45	3.00	70.69	-10.00	164.63	-10.00	109.08
50	2.94	65.95	-10.00	166.62	-10.00	110.22
55	3.73	61.09	-10.00	146.49	-10.00	100.00
60	3.86	56.33	-10.00	143.58	-10.00	100.00
65	4.69	51.45	-10.00	134.14	-10.00	100.00
70	4.70	46.75	-9.75	134.97	-9.75	100.00
75	4.54	42.17	-8.62	140.93	-8.62	100.00
80	4.27	37.70	-7.41	148.65	-7.41	100.00
85	4.16	33.32	-6.07	155.68	-6.07	103.55
90	3.91	29.19	-4.63	166.98	-4.63	110.14
95	3.09	25.70	-3.25	199.46	-3.25	125.74
100	3.53	21.87	-1.50	196.01	-1.50	123.62
105	3.23	19.20	-0.08	214.83	-0.08	134.46
110	3.80	16.71	1.43	204.69	1.43	128.60
115	4.52	15.31	2.38	196.48	2.38	124.02
120	5.23	15.49	2.25	185.30	2.25	117.96
125	6.02	17.11	1.17	166.80	1.17	109.90
130	6.68	19.88	-0.46	156.56	-0.46	103.75
135	7.08	22.82	-1.96	148.63	-1.96	100.00
140	6.88	26.01	-3.38	143.11	-3.38	100.00
145	6.84	28.85	-4.50	138.57	-4.50	100.00
150	7.13	31.14	-5.33	134.44	-5.33	100.00
155	6.99	33.48	-6.12	131.86	-6.12	100.00
160	6.92	35.40	-6.73	129.83	-6.73	100.00
165	6.62	37.16	-7.25	128.75	-7.25	100.00
170	6.51	38.32	-7.59	127.83	-7.59	100.00
175	6.45	39.03	-7.78	127.30	-7.78	100.00
180	6.63	39.07	-7.80	126.80	-7.80	100.00
185	6.63	38.85	-7.74	127.01	-7.74	100.00

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Coordination Values

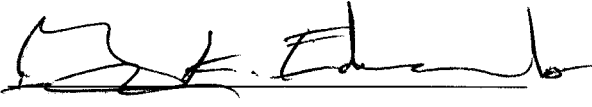
NAPA, CA

Licensee Name	Intelsat License LLC		
Latitude (NAD 83)	38° 14' 41.9" N		
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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	7.5 (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	6.38	38.45	-7.62	128.05	-7.62	100.00
195	5.74	37.99	-7.49	132.46	-7.49	100.00
200	5.54	36.66	-7.11	136.26	-7.11	100.00
205	5.18	35.08	-6.63	142.61	-6.63	100.00
210	5.05	33.52	-6.13	146.29	-6.13	100.00
215	4.76	32.75	-5.88	150.28	-5.88	100.10
220	4.10	33.02	-5.97	156.77	-5.97	104.22
225	2.99	34.41	-6.42	184.12	-6.42	117.61
230	2.24	36.03	-6.92	209.31	-6.92	131.83
235	1.75	37.93	-7.47	228.98	-7.47	143.90
240	0.94	40.54	-8.20	274.14	-8.20	174.73
245	0.60	43.09	-8.86	316.41	-8.86	203.67
250	0.23	45.98	-9.56	408.08	-9.56	261.45
255	0.21	48.88	-10.00	407.16	-10.00	261.06
260	0.29	51.97	-10.00	382.03	-10.00	247.36
265	0.47	55.21	-10.00	329.17	-10.00	212.44
270	0.53	58.69	-10.00	316.41	-10.00	203.96
275	0.50	62.35	-10.00	322.73	-10.00	208.17
280	0.45	66.11	-10.00	336.08	-10.00	217.00
285	0.48	69.93	-10.00	326.97	-10.00	210.98
290	0.85	73.74	-10.00	270.70	-10.00	172.73
295	0.74	77.71	-10.00	285.77	-10.00	182.95
300	0.90	81.69	-10.00	264.97	-10.00	168.84
305	1.24	85.69	-10.00	239.51	-10.00	150.81
310	0.74	89.74	-10.00	285.20	-10.00	182.56
315	0.98	93.77	-10.00	256.03	-10.00	161.74
320	0.97	97.80	-10.00	257.43	-10.00	162.69
325	0.95	101.80	-10.00	260.04	-10.00	164.46
330	0.74	105.73	-10.00	286.00	-10.00	183.11
335	0.00	109.44	-10.00	412.20	-10.00	264.12
340	0.00	113.25	-10.00	412.20	-10.00	264.12
345	0.00	116.98	-10.00	412.20	-10.00	264.12
350	0.00	120.60	-10.00	412.20	-10.00	264.12
355	0.00	117.86	-10.00	412.20	-10.00	264.12

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: December 06, 2021