

Exhibit C

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Intelsat License LLC
PAUMALU, HI
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
October 05, 2020

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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.

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 08/18/2020.

Company

Aeronautical Radio Inc.
AT&T Corp.
AT&T Mobility Spectrum LLC - Hawaii
County of Kauai Department of Police
Hawaii Catholic TV, Inc
Hawaii, State of
Hawaiian Electric Company, Inc.
Hawaiian Telcom, Inc.
Honolulu City & County Dept of Info Tech
Maui Electric Company Ltd
Maui, County of
NEXSTAR BROADCASTING, INC.
Oceanic Time Warner Cable LLC
Ohana Broadcast Company LLC
University of Hawaii

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: 10/05/2020
Job Number: 200818COMSGE02

Administrative Information

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

Site Information PAUMALU, HI

Venue Name:
Latitude (NAD 83): 21° 40' 13.7" N
Longitude (NAD 83): 158° 2' 3.4" W
Climate Zone: C
Rain Zone: 4
Ground Elevation (AMSL): 142.7 m / 468.2 ft

Link Information

Satellite Type: Geostationary
Mode: TR - Transmit-Receive
Modulation: Digital
Satellite Arc: 83° W to 233° West Longitude
Azimuth Range: 95.6° to 264.3°
Corresponding Elevation Angles: 5.2° / 5.3°
Antenna Centerline (AGL): 6.71 m / 22.0 ft

Antenna Information

	Receive - FCC32	Transmit - FCC32
Manufacturer	CPI Sat	CPI Sat
Model	13.2FMA	13.2FMA
Gain / Diameter	53.0 dBi / 13.2 m	56.6 dBi / 13.2 m
3-dB / 15-dB Beamwidth	0.38° / 0.76°	0.26° / 0.52°
Max Available RF Power (dBW/4 kHz) (dBW/MHz)		7.0 31.0
Maximum EIRP (dBW/4 kHz) (dBW/MHz) (dBW)		63.6 87.6
158		
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)	56K0G7W - 72M0G7W / 3400.0 - 4200.0 500KG9D - 1M50G9D	64K0G7W - 72M0G7W / 5850.0 - 6584.0 64K0G7W - 72M0G7W / 6636.0 - 6725.0 1M00F9D - 1M50F9D / 5850.0 - 6425.0 1M00F9D - 1M50F9D / 6715.0 - 6725.0
Max Great Circle Coordination Distance	1361.0 km / 845.6 mi	853.7 km / 530.4 mi
Precipitation Scatter Contour Radius	430.7 km / 267.6 mi	279.1 km / 173.4 mi

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Coordination Values

PAUMALU, HI

Licensee Name Intelsat License LLC
Latitude (NAD 83) 21° 40' 13.7" N
Longitude (NAD 83) 158° 2' 3.4" W
Ground Elevation (AMSL) 142.7 m / 468.2 ft
Antenna Centerline (AGL) 6.71 m / 22.0 ft
Antenna Model CPI Sat 13.2 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 7.0 (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	95.62	-10.00	710.92	-10.00	433.86
5	0.00	90.64	-10.00	710.92	-10.00	433.86
10	0.00	85.66	-10.00	710.92	-10.00	433.86
15	0.00	80.68	-10.00	710.92	-10.00	433.86
20	0.00	75.70	-10.00	710.92	-10.00	433.86
25	0.00	70.72	-10.00	710.92	-10.00	433.86
30	0.00	65.75	-10.00	710.92	-10.00	433.86
35	0.00	60.77	-10.00	710.92	-10.00	433.86
40	0.00	55.80	-10.00	710.92	-10.00	433.86
45	0.00	50.83	-10.00	710.92	-10.00	433.86
50	0.30	45.85	-9.53	651.69	-9.53	391.91
55	0.48	40.87	-8.28	561.64	-8.28	339.13
60	0.36	35.93	-6.89	668.89	-6.89	403.46
65	0.55	30.96	-5.27	590.64	-5.27	355.68
70	0.83	25.99	-3.37	522.27	-3.37	317.75
75	1.10	21.03	-1.07	486.93	-1.07	300.19
80	1.17	16.14	1.80	517.84	1.80	317.65
85	1.65	11.22	5.75	492.59	5.75	307.74
90	2.07	6.46	11.74	509.91	11.74	319.12
95	2.15	3.14	19.58	724.39	19.58	545.91
100	2.65	5.06	14.39	464.93	14.39	296.42
105	2.94	9.52	7.53	356.60	7.53	226.03
110	2.73	14.19	3.20	336.02	3.20	210.54
115	3.49	18.44	0.35	265.64	0.35	155.71
120	3.35	23.03	-2.06	254.49	-2.06	146.18
125	3.19	27.57	-4.01	247.31	-4.01	140.21
130	3.23	31.98	-5.62	233.82	-5.62	129.39
135	3.27	36.31	-7.00	222.38	-7.00	120.23
140	2.65	40.82	-8.27	248.45	-8.27	138.83
145	2.23	45.12	-9.36	270.34	-9.36	154.41
150	2.23	49.05	-10.00	265.66	-10.00	150.59
155	2.27	52.69	-10.00	262.24	-10.00	148.05
160	2.12	56.08	-10.00	273.77	-10.00	156.62
165	2.65	58.50	-10.00	235.71	-10.00	128.53
170	2.33	60.75	-10.00	257.81	-10.00	144.77
175	2.16	62.08	-10.00	270.46	-10.00	154.15
180	2.43	62.18	-10.00	250.84	-10.00	139.62
185	2.30	61.95	-10.00	260.64	-10.00	146.86

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Coordination Values

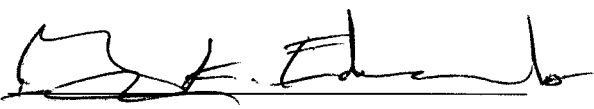
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Short Term -146.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power: 7.0 (dBW/4 kHz)

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	1.99	61.03	-10.00	283.60	-10.00	165.32
195	1.88	59.02	-10.00	293.85	-10.00	172.87
200	1.69	56.33	-10.00	312.62	-10.00	186.42
205	1.15	53.28	-10.00	369.79	-10.00	225.90
210	0.84	49.71	-10.00	426.12	-10.00	258.19
215	0.60	45.86	-9.53	496.38	-9.53	302.68
220	0.52	41.75	-8.52	540.50	-8.52	326.55
225	0.00	37.69	-7.41	766.86	-7.41	470.32
230	0.34	33.18	-6.02	697.02	-6.02	421.87
235	0.00	28.87	-4.51	829.19	-4.51	512.10
240	0.00	24.36	-2.67	873.32	-2.67	539.31
245	0.00	19.82	-0.43	929.74	-0.43	566.30
250	0.00	15.24	2.42	1005.82	2.42	612.47
255	0.00	10.72	6.25	1115.12	6.25	683.14
260	0.00	6.83	11.13	1269.25	11.13	791.56
265	0.00	5.33	13.83	1361.02	13.83	853.71
270	0.00	7.74	9.78	1224.80	9.78	761.21
275	0.00	11.89	5.12	1081.68	5.12	661.23
280	0.00	16.51	1.55	982.09	1.55	597.79
285	0.00	21.30	-1.21	909.63	-1.21	561.15
290	0.00	26.17	-3.44	854.45	-3.44	527.77
295	0.00	31.07	-5.31	810.66	-5.31	500.44
300	0.00	36.00	-6.91	777.82	-6.91	477.40
305	0.00	40.95	-8.31	747.17	-8.31	457.55
310	0.00	45.90	-9.55	720.54	-9.55	440.17
315	0.00	50.87	-10.00	710.92	-10.00	433.86
320	0.00	55.83	-10.00	710.92	-10.00	433.86
325	0.00	60.80	-10.00	710.92	-10.00	433.86
330	0.00	65.78	-10.00	710.92	-10.00	433.86
335	0.00	70.75	-10.00	710.92	-10.00	433.86
340	0.00	75.73	-10.00	710.92	-10.00	433.86
345	0.00	80.71	-10.00	710.92	-10.00	433.86
350	0.00	85.68	-10.00	710.92	-10.00	433.86
355	0.00	90.66	-10.00	710.92	-10.00	433.86

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: October 05, 2020