

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Hawaii Pacific Teleport, L.P.
KAPOLEI, HI
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
March 26, 2018

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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

There were no great circle interference cases identified during the interference study of the proposed earth station.

No 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 03/26/2018.

Company

AT&T Corp.
County of Kauai Department of Police
Harmer Radio and Electronics, Inc.
Hawaii State
Hawaiian Electric Company, Inc
Hawaiian Telcom, Inc.
Honolulu City & County Dept of Info Tech
Maui, County of
NEXSTAR BROADCASTING, INC.
New Cingular Wireless PCS LLC - Hawaii
Oceanic Time Warner Cable LLC
Olympic Wireless, LLC
Sandwich Isles Communications, Inc
University of Hawaii
Verizon Wireless VAW LLC - (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: 03/26/2018
Job Number: 180326COMSTC14

Administrative Information

Status ENGINEER PROPOSAL
Call Sign E010016
Licensee Code HAWPAC
Licensee Name Hawaii Pacific Teleport, L.P.

Site Information

KAPOLEI, HI
Venue Name
Latitude (NAD 83) 21° 20' 8.0" N
Longitude (NAD 83) 158° 5' 25.0" W
Climate Zone C
Rain Zone 4
Ground Elevation (AMSL) 36.57 m / 120.0 ft

Link Information

Satellite Type Geostationary
Mode TO - Transmit-Only
Modulation Digital
Satellite Arc 222° W to 222° West Longitude
Azimuth Range 259.9° to 259.9°
Corresponding Elevation Angles 15.8° / 15.8°
Antenna Centerline (AGL) 7.31 m / 24.0 ft

Antenna Information

Transmit - A60931
Manufacturer ANDREW CORPORATION
Model ESA9.3-46
Gain / Diameter 53.9 dBi / 9.3 m
3-dB / 15-dB Beamwidth 0.30° / 0.60°

Max Available RF Power (dBW/4 kHz) -4.8
(dBW/MHz) 19.2

Maximum EIRP (dBW/4 kHz) 49.1
(dBW/MHz) 73.1
(dBW) 69.1

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) 400KG7D / 5850.0 - 5925.0

Max Great Circle Coordination Distance 383.2 km / 238.1 mi
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

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Coordination Values

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Ground Elevation (AMSL) 36.57 m / 120.0 ft
Antenna Centerline (AGL) 7.31 m / 24.0 ft
Antenna Model Andrew Corporation ESA9.3-46
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 -4.8 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	9.18	100.04	-10.10	100.00
5	8.78	104.99	-10.10	100.00
10	8.53	109.93	-10.10	100.00
15	8.52	114.89	-13.03	100.00
20	7.95	119.79	-16.93	100.00
25	7.46	124.68	-17.10	100.00
30	6.89	129.52	-17.10	100.00
35	6.31	134.32	-17.10	100.00
40	5.43	138.99	-17.10	100.00
45	4.91	143.65	-17.10	100.00
50	4.39	148.18	-17.10	100.00
55	4.07	152.63	-17.10	100.00
60	3.90	156.93	-17.10	100.00
65	3.38	160.69	-17.10	100.00
70	2.23	163.25	-17.10	100.00
75	0.00	163.46	-17.10	238.23
80	0.69	164.88	-17.10	145.57
85	0.00	163.40	-17.10	238.23
90	0.00	161.30	-17.10	238.23
95	0.00	158.26	-17.10	238.23
100	0.00	154.62	-17.10	238.23
105	0.00	150.61	-17.10	238.23
110	0.00	146.34	-17.10	238.23
115	0.00	141.92	-17.10	238.23
120	0.00	137.39	-17.10	238.23
125	0.00	132.77	-17.10	238.23
130	0.00	128.11	-17.10	238.23
135	0.00	123.40	-17.10	238.23
140	0.00	118.66	-16.03	246.32
145	0.00	113.89	-12.44	275.44
150	0.00	109.11	-10.10	296.12
155	0.00	104.32	-10.10	296.12
160	0.00	99.52	-10.10	296.12
165	0.00	94.71	-10.10	296.12
170	0.00	89.90	-10.10	296.12
175	0.00	85.09	-10.10	296.12
180	0.00	80.28	-10.10	296.12
185	0.00	75.48	-10.10	296.12

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Interference Objectives: Long Term -154.0 dBW/4 kHz 20%
Short Term -131.0 dBW/4 kHz 0.0025%
Max Available RF Power -4.8 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	70.69	-10.10	296.12
195	0.00	65.91	-10.10	296.12
200	0.00	61.15	-10.10	296.12
205	0.00	56.41	-10.10	296.12
210	0.00	51.70	-10.10	296.12
215	0.00	47.03	-9.51	301.59
220	0.00	42.42	-8.58	308.01
225	0.00	37.89	-7.26	321.05
230	0.00	33.48	-5.80	336.30
235	0.00	29.22	-5.10	343.87
240	0.00	25.22	-5.10	343.87
245	0.00	21.60	-5.10	343.87
250	0.00	18.59	-3.97	356.60
255	0.00	16.54	-2.33	376.09
260	0.00	15.82	-1.75	383.22
265	0.00	16.60	-2.38	375.49
270	0.00	18.70	-4.06	355.60
275	0.00	21.74	-5.10	343.87
280	0.00	25.38	-5.10	343.87
285	0.00	29.39	-5.10	343.87
290	0.00	33.66	-5.83	335.91
295	0.67	37.84	-7.24	216.95
300	1.30	42.23	-8.55	142.21
305	1.80	46.78	-9.46	107.29
310	2.68	51.35	-10.10	100.00
315	3.27	56.05	-10.10	100.00
320	3.64	60.84	-10.10	100.00
325	4.22	65.65	-10.10	100.00
330	4.83	70.48	-10.10	100.00
335	5.31	75.36	-10.10	100.00
340	5.86	80.25	-10.10	100.00
345	6.64	85.17	-10.10	100.00
350	7.77	90.10	-10.10	100.00
355	9.60	95.07	-10.10	100.00

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.



Timothy O. Crutcher
Frequency Planner
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: March 26, 2018