

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
May 06, 2010

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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

The coordination data contain in this application was sent to the carriers as a courtesy and is in support of the FCC filing for operation with the APSTAR 6 satellite located at 226 degrees west longitude. The operational parameters of the APSTAR 6 satellite will be 7 dB less than the existing parameters on the E010016 license. This satellite is also located within the arc currently licensed.

Due to the minor nature of this notice this information is for you records only and no response is required.

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.

A information only coordination for this earth station was sent to the below listed carriers with a letter dated 05/06/2010.

Company

AT&T CORP

HONOLULU CITY & COUNTY DEPT OF INFO TECH

Hawaii State

Hawaiian Telcom (debtor-in-possession)

MAUI, COUNTY OF

New Cingular Wireless PCS LLC - Hawaii

University of Hawaii

Wireless Infrastructure Services

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.

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Earth Station Data Sheet

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

Date: 05/06/2010
Job Number: 100506COMSTC03

Administrative Information

Call Sign E010016
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) 36.58 m / 120.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 226° W to 226° West Longitude
Azimuth Range 261.6° to 261.6°
Corresponding Elevation Angles 12.0° / 12.0°
Antenna Centerline (AGL) 9.75 m / 32.0 ft

Antenna Information

Receive - V41103

Manufacturer VERTEX COMMUNICATIONS
Model 11 KPC
Gain / Diameter 51.9 dBi / 11.0 m
3-dB / 15-dB Beamwidth 0.40° / 0.90°

Transmit - V61103

Manufacturer VERTEX COMMUNICATIONS
Model 11 KPC
Gain / Diameter 55.4 dBi / 11.0 m
3-dB / 15-dB Beamwidth 0.30° / 0.60°

Max Available RF Power (dBW/4 kHz)
(dBW/MHz)

4M09G7W - 10M1G7W

-14.66 -16.04
9.3 7.96

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

40.74 39.36
64.74 63.36
70.84 73.38

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

Emission / Frequency Range (MHz) 4M09G7W - 10M1G7W / 3700.0 - 4200.0

Transmit 6.1 GHz

4M09G7W - 10M1G7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance 1072.3 km / 666.2 mi
Precipitation Scatter Contour Radius 383.7 km / 238.4 mi

349.4 km / 217.1 mi
100.0 km / 62.1 mi

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Coordination Values

KAPOLEI, HI

Licensee Name	Hawaii Pacific Teleport, L.P.				
Latitude (NAD 83)	21° 20' 8.0" N				
Longitude (NAD 83)	158° 5' 25.0" W				
Ground Elevation (AMSL)	36.58 m / 120.0 ft				
Antenna Centerline (AGL)	9.75 m / 32.0 ft				
Antenna Model	VERTEX COMMUNICATIONS 11 KPC				
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				-14.7 (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	8.08	98.38	-10.39	113.12	-9.60	100.00
5	7.77	103.36	-9.10	123.10	-9.60	100.00
10	7.75	108.35	-9.10	123.29	-9.60	100.00
15	7.09	113.31	-11.75	116.97	-11.59	100.00
20	7.38	118.30	-13.76	103.36	-12.60	100.00
25	5.96	123.19	-14.10	116.89	-12.60	100.00
30	5.18	128.08	-14.10	133.48	-12.60	100.00
35	3.97	132.87	-14.10	149.87	-12.60	100.00
40	3.77	137.74	-14.10	156.79	-12.60	100.00
45	3.72	142.61	-14.10	158.51	-12.60	100.00
50	2.40	147.12	-14.10	222.84	-12.60	100.00
55	1.75	151.63	-14.10	271.12	-12.60	100.00
60	1.76	156.20	-14.10	270.20	-12.60	100.00
65	1.47	160.42	-14.10	297.39	-12.60	100.00
70	1.30	164.27	-14.10	314.00	-12.60	100.00
75	0.78	167.01	-14.10	390.25	-12.60	104.79
80	0.00	167.90	-14.10	627.36	-12.60	202.99
85	0.00	167.54	-14.10	627.36	-12.60	202.99
90	0.00	165.39	-14.10	627.36	-12.60	202.99
95	0.00	162.09	-14.10	627.36	-12.60	202.99
100	0.00	158.15	-14.10	627.36	-12.60	202.99
105	1.09	154.31	-14.10	333.86	-12.60	100.00
110	1.09	149.74	-14.10	333.99	-12.60	100.00
115	1.09	145.06	-14.10	333.69	-12.60	100.00
120	0.00	140.05	-14.10	627.36	-12.60	202.99
125	0.00	135.29	-14.10	627.36	-12.60	202.99
130	0.00	130.50	-14.10	627.36	-12.60	202.99
135	0.00	125.67	-14.10	627.36	-12.60	202.99
140	0.00	120.83	-14.10	627.36	-12.60	202.99
145	0.00	115.97	-13.29	643.31	-12.60	202.99
150	0.00	111.10	-9.98	711.29	-10.26	219.04
155	0.00	106.23	-9.10	730.06	-9.60	223.64
160	0.00	101.34	-9.10	730.06	-9.60	223.64
165	0.00	96.45	-11.94	670.71	-9.60	223.64
170	0.00	91.56	-13.79	633.52	-10.29	218.87
175	0.00	86.67	-14.10	627.36	-10.60	216.71
180	0.00	81.78	-14.10	627.36	-11.24	212.27
185	0.00	76.90	-14.10	627.36	-12.22	205.57

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 Antenna Model VERTEX COMMUNICATIONS 11 KPC
 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 -14.7 (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	0.00	72.01	-14.10	627.36	-12.60	202.99
195	0.00	67.14	-14.10	627.36	-12.60	202.99
200	0.00	62.27	-14.10	627.36	-12.60	202.99
205	0.00	57.42	-14.10	627.36	-12.60	202.99
210	0.00	52.58	-12.65	656.23	-11.63	209.59
215	0.00	47.77	-10.21	706.54	-9.71	222.89
220	0.00	42.99	-8.70	738.70	-8.20	230.98
225	0.00	38.25	-7.40	766.95	-6.90	240.46
230	0.00	33.58	-5.82	799.16	-5.32	252.61
235	0.00	29.00	-4.70	824.77	-4.20	261.55
240	0.00	24.57	-2.84	869.09	-2.34	277.12
245	0.00	20.38	-0.33	932.25	0.17	299.53
250	0.00	16.63	1.92	992.10	2.42	318.85
255	0.00	13.67	3.23	1028.25	4.40	339.49
260	0.00	12.10	4.80	1072.30	5.30	349.41
265	0.00	12.46	4.44	1061.85	4.94	345.37
270	0.00	14.61	2.90	1019.01	3.79	332.92
275	0.00	17.91	1.15	971.25	1.65	311.25
280	0.00	21.85	-1.21	909.60	-0.71	291.47
285	0.00	26.14	-3.56	851.75	-3.06	271.01
290	0.00	30.64	-5.23	812.56	-4.73	257.28
295	0.53	35.10	-6.14	578.65	-5.64	178.48
300	1.10	39.69	-7.97	398.78	-7.47	103.74
305	1.68	44.37	-8.97	320.47	-8.47	100.00
310	2.58	49.08	-10.73	235.22	-10.23	100.00
315	3.13	53.91	-13.45	184.48	-12.16	100.00
320	3.61	58.78	-14.10	162.67	-12.60	100.00
325	4.17	63.67	-14.10	146.74	-12.60	100.00
330	4.78	68.58	-14.10	139.86	-12.60	100.00
335	5.29	73.52	-14.10	131.01	-12.60	100.00
340	5.83	78.47	-14.10	119.59	-11.91	100.00
345	6.44	83.43	-14.10	111.57	-10.91	100.00
350	7.73	88.41	-14.10	100.00	-10.60	100.00
355	10.31	93.40	-13.42	100.00	-9.92	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: May 06, 2010