

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Allen Holdings, Inc
KAPOLEI, HI
Satellite Earth Station
Andrew 4.5

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
March 3, 2011

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	6
5. CERTIFICATION.....	10

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

This minor notice is for the correction of the coordinates for Call Sign E100091. The correction is less than one second.

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

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 03/03/2011.

Company

AT&T CORP

Clearwire Hawaii Partners Spectrum LLC

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.

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

Date: 03/03/2011
 Job Number: 110303COMSTC08

Administrative Information

Licensee Name Allen Holdings, Inc

Site Information

KAPOLEI, HI

Venue Name
 Latitude (NAD 83) 21° 20' 10.2" N
 Longitude (NAD 83) 158° 5' 18.0" W
 Climate Zone A
 Rain Zone 4
 Ground Elevation (AMSL) 38.4 m / 126.0 ft

Link Information

Satellite Type Geostationary
 Mode TR - Transmit-Receive
 Modulation Digital
 Satellite Arc 180° W to 188° West Longitude
 Azimuth Range 227.9° to 237.7°
 Corresponding Elevation Angles 54.8° / 48.0°
 Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Information

Receive

Transmit

Manufacturer	Andrew ESA45	Andrew ESA45
Gain / Diameter	44.0 dBi / 4.5 m	47.1 dBi / 4.5 m
3-dB / 15-dB Beamwidth	0.80° / 1.60°	0.40° / 0.80°

			<u>51K2G7W</u> - <u>36M0G7W</u>
Max Available RF Power	(dBW/4 kHz)	-13.1	-13.1
	(dBW/MHz)	10.9	10.9
Maximum EIRP	(dBW/4 kHz)	34.0	34.0
	(dBW/MHz)	58.0	58.0
	(dBW)	45.07	73.54

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)	51K2G7W - 36M0G7W / 3700.0 - 4200.0	51K2G7W - 36M0G7W / 5925.0 - 6425.0
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Max Great Circle Coordination Distance	285.3 km / 177.2 mi	134.0 km / 83.3 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 ft
Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Mode Receive 4.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20% Transmit 6.1 GHz -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 -13.1 (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	8.80	114.46	-10.00	100.00	-10.00	100.00
5	9.15	118.15	-10.00	100.00	-10.00	100.00
10	7.53	120.79	-10.00	108.66	-10.00	100.00
15	7.02	123.68	-10.00	114.16	-10.00	100.00
20	5.93	125.57	-10.00	125.89	-10.00	100.00
25	5.47	126.92	-10.00	130.26	-10.00	100.00
30	5.52	128.39	-10.00	129.84	-10.00	100.00
35	5.77	129.74	-10.00	127.44	-10.00	100.00
40	4.11	128.88	-10.00	146.18	-10.00	100.00
45	3.24	128.39	-10.00	164.14	-10.00	100.00
50	3.24	128.42	-10.00	164.14	-10.00	100.00
55	5.12	129.96	-10.00	133.64	-10.00	100.00
60	5.12	129.26	-10.00	133.65	-10.00	100.00
65	5.12	128.21	-10.00	133.64	-10.00	100.00
70	4.53	126.32	-10.00	139.98	-10.00	100.00
75	4.53	124.68	-10.00	139.98	-10.00	100.00
80	2.42	121.14	-10.00	184.80	-10.00	100.00
85	2.42	119.13	-10.00	184.80	-10.00	100.00
90	2.42	116.93	-10.00	184.82	-10.00	100.00
95	0.30	113.28	-10.00	272.89	-10.00	127.07
100	0.00	110.73	-10.00	285.28	-10.00	134.03
105	0.00	108.24	-10.00	285.28	-10.00	134.03
110	0.00	105.64	-10.00	285.28	-10.00	134.03
115	0.00	102.95	-10.00	285.28	-10.00	134.03
120	0.00	100.19	-10.00	285.28	-10.00	134.03
125	0.00	97.38	-10.00	285.28	-10.00	134.03
130	0.00	94.53	-10.00	285.28	-10.00	134.03
135	0.00	91.65	-10.00	285.28	-10.00	134.03
140	0.00	88.77	-10.00	285.28	-10.00	134.03
145	0.00	85.89	-10.00	285.28	-10.00	134.03
150	0.00	83.04	-10.00	285.28	-10.00	134.03
155	0.00	80.22	-10.00	285.28	-10.00	134.03
160	0.00	77.45	-10.00	285.28	-10.00	134.03
165	0.00	74.75	-10.00	285.28	-10.00	134.03
170	0.00	72.14	-10.00	285.28	-10.00	134.03
175	0.00	69.63	-10.00	285.28	-10.00	134.03
180	0.00	67.24	-10.00	285.28	-10.00	134.03
185	0.00	65.00	-10.00	285.28	-10.00	134.03

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 ft
Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Mode Receive 4.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Transmit 6.1 GHz

-154.0 dBW/4 kHz 20%
-131.0 dBW/4 kHz 0.0025%

Max Available RF Power

-13.1 (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	62.92	-10.00	285.28	-10.00	134.03
195	0.00	60.56	-10.00	285.28	-10.00	134.03
200	0.00	58.05	-10.00	285.28	-10.00	134.03
205	3.08	53.44	-10.00	169.47	-10.00	100.00
210	3.08	51.20	-10.00	169.48	-10.00	100.00
215	3.09	49.24	-10.00	169.46	-10.00	100.00
220	2.52	48.12	-10.00	182.55	-10.00	100.00
225	2.52	46.87	-9.77	183.67	-9.77	100.00
230	1.50	47.02	-9.81	206.48	-9.81	100.00
235	0.00	48.10	-10.00	285.28	-10.00	134.03
240	0.00	48.08	-10.00	285.28	-10.00	134.03
245	0.00	48.46	-10.00	285.28	-10.00	134.03
250	0.00	49.21	-10.00	285.28	-10.00	134.03
255	0.00	50.33	-10.00	285.28	-10.00	134.03
260	0.00	51.79	-10.00	285.28	-10.00	134.03
265	0.00	53.55	-10.00	285.28	-10.00	134.03
270	0.00	55.59	-10.00	285.28	-10.00	134.03
275	0.00	57.87	-10.00	285.28	-10.00	134.03
280	0.00	60.37	-10.00	285.28	-10.00	134.03
285	1.63	62.13	-10.00	204.40	-10.00	100.00
290	1.63	65.07	-10.00	204.40	-10.00	100.00
295	3.31	67.44	-10.00	162.47	-10.00	100.00
300	3.31	70.72	-10.00	162.49	-10.00	100.00
305	3.31	74.10	-10.00	162.48	-10.00	100.00
310	4.29	77.32	-10.00	143.53	-10.00	100.00
315	4.64	80.82	-10.00	138.38	-10.00	100.00
320	6.07	84.29	-10.00	124.44	-10.00	100.00
325	7.66	87.95	-10.00	107.32	-10.00	100.00
330	9.44	91.81	-10.00	100.00	-10.00	100.00
335	10.77	95.81	-10.00	100.00	-10.00	100.00
340	10.13	99.69	-10.00	100.00	-10.00	100.00
345	7.66	103.10	-10.00	107.38	-10.00	100.00
350	7.55	106.78	-10.00	108.53	-10.00	100.00
355	7.55	110.42	-10.00	108.51	-10.00	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 3, 2011

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Allen Holdings, Inc
KAPOLEI, HI
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
March 03, 2011

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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.

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 03/03/2011.

Company

AT&T CORP
Clearwire Hawaii Partners Spectrum LLC
Coral Wireless Licenses, LLC
HAWAIIAN ELECTRIC CO INC
HONOLULU CITY & COUNTY
HONOLULU CITY & COUNTY DEPT OF INFO TECH
Hawaii State
Hawaiian Telcom, Inc.
Honolulu Board of Water Supply
Kahuku Wind Power, LLC
MAUI ELECTRIC COMPANY LTD
MAUI, COUNTY OF
MID PACIFIC COMMUNICATIONS INC
New Cingular Wireless PCS LLC - Hawaii
Trex Broadband

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: 03/03/2011
Job Number: 110303COMSTC05

Administrative Information

Licensee Name Allen Holdings, Inc

Site Information

KAPOLEI, HI

Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Climate Zone A
Rain Zone 4
Ground Elevation (AMSL) 38.4 m / 126.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 188° W to 188° West Longitude
Azimuth Range 237.7° to 237.7°
Corresponding Elevation Angles 48.0° / 48.0°
Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Information

Receive

Transmit

Manufacturer	Andrew	Andrew
Model	ESA45	ESA45
Gain / Diameter	51.6 dBi / 4.5 m	53.6 dBi / 4.5 m
3-dB / 15-dB Beamwidth	0.80° / 1.60°	0.40° / 0.80°

				<u>51K2G7W</u>	<u>-36M0G7W</u>
Max Available RF Power	(dBW/4 kHz)			-14.1	-19.5
	(dBW/MHz)			-3.03	4.5
Maximum EIRP	(dBW/4 kHz)			39.5	34.0
	(dBW/MHz)			50.57	58.0
	(dBW)			50.57	73.54
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%

Frequency Information

Receive 11.0 GHz

Transmit 14.0 GHz

Emission / Frequency Range (MHz)	51K2G7W - 36M0G7W / 10950.0 - 11200.0	51K2G7W - 36M0G7W / 14000.0 - 14500.0
	51K2G7W - 36M0G7W / 11450.0 - 11700.0	
Max Great Circle Coordination Distance	231.4 km / 143.7 mi	115.6 km / 71.8 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 ft
Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Mode Receive 11.0 GHz

Transmit 14.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

-151.0 dBW/4 kHz 20%
-128.0 dBW/4 kHz 0.0025%

Max Available RF Power

-14.1 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	8.80	114.46	-10.00	100.00	-10.00	100.00
5	9.15	118.15	-10.00	100.00	-10.00	100.00
10	7.53	120.79	-10.00	100.00	-10.00	100.00
15	7.02	123.68	-10.00	100.00	-10.00	100.00
20	5.93	125.95	-10.00	100.00	-10.00	100.00
25	5.47	128.31	-10.00	100.00	-10.00	100.00
30	5.52	130.74	-10.00	100.00	-10.00	100.00
35	5.77	133.06	-10.00	100.00	-10.00	100.00
40	4.11	133.33	-10.00	108.89	-10.00	100.00
45	3.24	133.81	-10.00	123.15	-10.00	100.00
50	3.24	134.68	-10.00	123.15	-10.00	100.00
55	5.12	137.02	-10.00	100.00	-10.00	100.00
60	5.12	137.03	-10.00	100.00	-10.00	100.00
65	5.12	136.59	-10.00	100.00	-10.00	100.00
70	4.53	135.12	-10.00	103.64	-10.00	100.00
75	4.53	133.82	-10.00	103.64	-10.00	100.00
80	2.42	130.32	-10.00	137.03	-10.00	100.00
85	2.42	128.43	-10.00	137.04	-10.00	100.00
90	2.42	126.24	-10.00	137.05	-10.00	100.00
95	0.30	122.33	-10.00	221.82	-10.00	107.83
100	0.00	119.63	-10.00	231.37	-10.00	115.56
105	0.00	116.96	-10.00	231.37	-10.00	115.56
110	0.00	114.13	-10.00	231.37	-10.00	115.56
115	0.00	111.17	-10.00	231.37	-10.00	115.56
120	0.00	108.10	-10.00	231.37	-10.00	115.56
125	0.00	104.94	-10.00	231.37	-10.00	115.56
130	0.00	101.72	-10.00	231.37	-10.00	115.56
135	0.00	98.44	-10.00	231.37	-10.00	115.56
140	0.00	95.13	-10.00	231.37	-10.00	115.56
145	0.00	91.80	-10.00	231.37	-10.00	115.56
150	0.00	88.45	-10.00	231.37	-10.00	115.56
155	0.00	85.12	-10.00	231.37	-10.00	115.56
160	0.00	81.80	-10.00	231.37	-10.00	115.56
165	0.00	78.52	-10.00	231.37	-10.00	115.56
170	0.00	75.29	-10.00	231.37	-10.00	115.56
175	0.00	72.13	-10.00	231.37	-10.00	115.56
180	0.00	69.06	-10.00	231.37	-10.00	115.56
185	0.00	66.09	-10.00	231.37	-10.00	115.56

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc

Latitude (NAD 83) 21° 20' 10.2" N

Longitude (NAD 83) 158° 5' 18.0" W

Ground Elevation (AMSL) 38.4 m / 126.0 ft

Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Mode Receive 11.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%

Short Term -146.0 dBW/MHz 0.01%

Transmit 14.0 GHz

-151.0 dBW/4 kHz 20%

-128.0 dBW/4 kHz 0.0025%

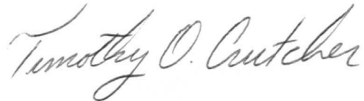
Max Available RF Power

-14.1 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	63.25	-10.00	231.37	-10.00	115.56
195	0.00	60.56	-10.00	231.37	-10.00	115.56
200	0.00	58.05	-10.00	231.37	-10.00	115.56
205	3.08	53.44	-10.00	125.87	-10.00	100.00
210	3.08	51.20	-10.00	125.88	-10.00	100.00
215	3.09	49.24	-10.00	125.87	-10.00	100.00
220	2.52	48.12	-10.00	135.02	-10.00	100.00
225	2.52	46.87	-9.77	135.93	-9.77	100.00
230	1.50	47.02	-9.81	163.14	-9.81	100.00
235	0.00	48.10	-10.00	231.37	-10.00	115.56
240	0.00	48.08	-10.00	231.37	-10.00	115.56
245	0.00	48.46	-10.00	231.37	-10.00	115.56
250	0.00	49.21	-10.00	231.37	-10.00	115.56
255	0.00	50.33	-10.00	231.37	-10.00	115.56
260	0.00	51.79	-10.00	231.37	-10.00	115.56
265	0.00	53.55	-10.00	231.37	-10.00	115.56
270	0.00	55.59	-10.00	231.37	-10.00	115.56
275	0.00	57.87	-10.00	231.37	-10.00	115.56
280	0.00	60.37	-10.00	231.37	-10.00	115.56
285	1.63	62.13	-10.00	157.74	-10.00	100.00
290	1.63	65.07	-10.00	157.74	-10.00	100.00
295	3.31	67.44	-10.00	121.87	-10.00	100.00
300	3.31	70.72	-10.00	121.89	-10.00	100.00
305	3.31	74.10	-10.00	121.88	-10.00	100.00
310	4.29	77.32	-10.00	106.67	-10.00	100.00
315	4.64	80.82	-10.00	102.26	-10.00	100.00
320	6.07	84.29	-10.00	100.00	-10.00	100.00
325	7.66	87.95	-10.00	100.00	-10.00	100.00
330	9.44	91.81	-10.00	100.00	-10.00	100.00
335	10.77	95.81	-10.00	100.00	-10.00	100.00
340	10.13	99.69	-10.00	100.00	-10.00	100.00
345	7.66	103.10	-10.00	100.00	-10.00	100.00
350	7.55	106.78	-10.00	100.00	-10.00	100.00
355	7.55	110.42	-10.00	100.00	-10.00	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.

A handwritten signature in cursive script that reads "Timothy O. Crutcher".

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

DATED: March 03, 2011

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Allen Holdings, Inc
KAPOLEI, HI
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
March 03, 2011

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	6
5. CERTIFICATION.....	10

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.

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 03/03/2011.

Company

AT&T CORP
Clearwire Hawaii Partners Spectrum LLC
Coral Wireless Licenses, LLC
HAWAIIAN ELECTRIC CO INC
HONOLULU CITY & COUNTY
HONOLULU CITY & COUNTY DEPT OF INFO TECH
Hawaii State
Hawaiian Telcom, Inc.
Honolulu Board of Water Supply
Kahuku Wind Power, LLC
MAUI ELECTRIC COMPANY LTD
MAUI, COUNTY OF
MID PACIFIC COMMUNICATIONS INC
New Cingular Wireless PCS LLC - Hawaii
Trex Broadband

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: 03/03/2011
 Job Number: 110303COMSTC06

Administrative Information

Licensee Name Allen Holdings, Inc

Site Information

KAPOLEI, HI

Latitude (NAD 83) 21° 20' 10.2" N
 Longitude (NAD 83) 158° 5' 18.0" W
 Climate Zone A
 Rain Zone 4
 Ground Elevation (AMSL) 38.4 m / 126.0 ft

Link Information

Satellite Type Geostationary
 Mode TR - Transmit-Receive
 Modulation Digital
 Satellite Arc 188° W to 188° West Longitude
 Azimuth Range 237.7° to 237.7°
 Corresponding Elevation Angles 48.0° / 48.0°
 Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Information

Receive

Transmit

Manufacturer	Vertex RSI	Vertex RSI
Model	KPK	KPK
Gain / Diameter	58.0 dBi / 8.1 m	59.7 dBi / 8.1 m
3-dB / 15-dB Beamwidth	0.21° / 0.42°	0.16° / 0.34°

				<u>51K2G7W - 36M0G7W</u>	
Max Available RF Power	(dBW/4 kHz)			-14.1	-14.1
	(dBW/MHz)			-3.03	9.9
Maximum EIRP	(dBW/4 kHz)			45.6	45.6
	(dBW/MHz)			56.67	69.6
	(dBW)			56.67	85.14
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-151.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-128.0 dBW/4 kHz	0.0025%

Frequency Information

Receive 11.0 GHz

Transmit 14.0 GHz

Emission / Frequency Range (MHz)	64K0G7W - 36M0G7W / 10950.0 - 11200.0	51K2G7W - 36M0G7W / 14000.0 - 14500.0
	64K0G7W - 36M0G7W / 11450.0 - 11700.0	

Max Great Circle Coordination Distance	231.4 km / 143.7 mi	115.6 km / 71.8 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 ft
Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Mode Receive 11.0 GHz

Transmit 14.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

-151.0 dBW/4 kHz 20%
-128.0 dBW/4 kHz 0.0025%

Max Available RF Power

-14.1 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	8.80	114.46	-10.00	100.00	-10.00	100.00
5	9.15	118.15	-10.00	100.00	-10.00	100.00
10	7.53	120.79	-10.00	100.00	-10.00	100.00
15	7.02	123.68	-10.00	100.00	-10.00	100.00
20	5.93	125.95	-10.00	100.00	-10.00	100.00
25	5.47	128.31	-10.00	100.00	-10.00	100.00
30	5.52	130.74	-10.00	100.00	-10.00	100.00
35	5.77	133.06	-10.00	100.00	-10.00	100.00
40	4.11	133.33	-10.00	108.89	-10.00	100.00
45	3.24	133.81	-10.00	123.15	-10.00	100.00
50	3.24	134.68	-10.00	123.15	-10.00	100.00
55	5.12	137.02	-10.00	100.00	-10.00	100.00
60	5.12	137.03	-10.00	100.00	-10.00	100.00
65	5.12	136.59	-10.00	100.00	-10.00	100.00
70	4.53	135.12	-10.00	103.64	-10.00	100.00
75	4.53	133.82	-10.00	103.64	-10.00	100.00
80	2.42	130.32	-10.00	137.03	-10.00	100.00
85	2.42	128.43	-10.00	137.04	-10.00	100.00
90	2.42	126.24	-10.00	137.05	-10.00	100.00
95	0.30	122.33	-10.00	221.82	-10.00	107.83
100	0.00	119.63	-10.00	231.37	-10.00	115.56
105	0.00	116.96	-10.00	231.37	-10.00	115.56
110	0.00	114.13	-10.00	231.37	-10.00	115.56
115	0.00	111.17	-10.00	231.37	-10.00	115.56
120	0.00	108.10	-10.00	231.37	-10.00	115.56
125	0.00	104.94	-10.00	231.37	-10.00	115.56
130	0.00	101.72	-10.00	231.37	-10.00	115.56
135	0.00	98.44	-10.00	231.37	-10.00	115.56
140	0.00	95.13	-10.00	231.37	-10.00	115.56
145	0.00	91.80	-10.00	231.37	-10.00	115.56
150	0.00	88.45	-10.00	231.37	-10.00	115.56
155	0.00	85.12	-10.00	231.37	-10.00	115.56
160	0.00	81.80	-10.00	231.37	-10.00	115.56
165	0.00	78.52	-10.00	231.37	-10.00	115.56
170	0.00	75.29	-10.00	231.37	-10.00	115.56
175	0.00	72.13	-10.00	231.37	-10.00	115.56
180	0.00	69.06	-10.00	231.37	-10.00	115.56
185	0.00	66.09	-10.00	231.37	-10.00	115.56

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc

Latitude (NAD 83) 21° 20' 10.2" N

Longitude (NAD 83) 158° 5' 18.0" W

Ground Elevation (AMSL) 38.4 m / 126.0 ft

Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Mode Receive 11.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%

Short Term -146.0 dBW/MHz 0.01%

Transmit 14.0 GHz

-151.0 dBW/4 kHz 20%

-128.0 dBW/4 kHz 0.0025%

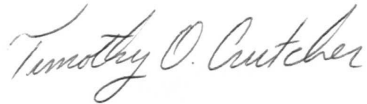
Max Available RF Power

-14.1 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	63.25	-10.00	231.37	-10.00	115.56
195	0.00	60.56	-10.00	231.37	-10.00	115.56
200	0.00	58.05	-10.00	231.37	-10.00	115.56
205	3.08	53.44	-10.00	125.87	-10.00	100.00
210	3.08	51.20	-10.00	125.88	-10.00	100.00
215	3.09	49.24	-10.00	125.87	-10.00	100.00
220	2.52	48.12	-10.00	135.02	-10.00	100.00
225	2.52	46.87	-9.77	135.93	-9.77	100.00
230	1.50	47.02	-9.81	163.14	-9.81	100.00
235	0.00	48.10	-10.00	231.37	-10.00	115.56
240	0.00	48.08	-10.00	231.37	-10.00	115.56
245	0.00	48.46	-10.00	231.37	-10.00	115.56
250	0.00	49.21	-10.00	231.37	-10.00	115.56
255	0.00	50.33	-10.00	231.37	-10.00	115.56
260	0.00	51.79	-10.00	231.37	-10.00	115.56
265	0.00	53.55	-10.00	231.37	-10.00	115.56
270	0.00	55.59	-10.00	231.37	-10.00	115.56
275	0.00	57.87	-10.00	231.37	-10.00	115.56
280	0.00	60.37	-10.00	231.37	-10.00	115.56
285	1.63	62.13	-10.00	157.74	-10.00	100.00
290	1.63	65.07	-10.00	157.74	-10.00	100.00
295	3.31	67.44	-10.00	121.87	-10.00	100.00
300	3.31	70.72	-10.00	121.89	-10.00	100.00
305	3.31	74.10	-10.00	121.88	-10.00	100.00
310	4.29	77.32	-10.00	106.67	-10.00	100.00
315	4.64	80.82	-10.00	102.26	-10.00	100.00
320	6.07	84.29	-10.00	100.00	-10.00	100.00
325	7.66	87.95	-10.00	100.00	-10.00	100.00
330	9.44	91.81	-10.00	100.00	-10.00	100.00
335	10.77	95.81	-10.00	100.00	-10.00	100.00
340	10.13	99.69	-10.00	100.00	-10.00	100.00
345	7.66	103.10	-10.00	100.00	-10.00	100.00
350	7.55	106.78	-10.00	100.00	-10.00	100.00
355	7.55	110.42	-10.00	100.00	-10.00	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.

A handwritten signature in cursive script that reads "Timothy O. Crutcher".

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

DATED: March 03, 2011

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Allen Holdings, Inc
KAPOLEI, HI
Satellite Earth Station
Vertex 9.0 Meter

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
March 3, 2011

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	6
5. CERTIFICATION.....	10

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

This minor notice is for the correction of the coordinates for Call Sign E100091. The correction is less than one second.

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

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 03/03/2011.

Company

AT&T CORP

Clearwire Hawaii Partners Spectrum LLC

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.

COMSEARCH

Earth Station Data Sheet

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

Date: 03/03/2011
Job Number: 110303COMSTC03

Administrative Information

Call Sign E100091
Licensee Name Allen Holdings, Inc

Site Information

KAPOLEI, HI

Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Climate Zone A
Rain Zone 4
Ground Elevation (AMSL) 38.4 m / 126.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 113° W to 233° West Longitude
Azimuth Range 109.9° to 264.4°
Corresponding Elevation Angles 33.9° / 5.4°
Antenna Centerline (AGL) 6.0 m / 19.7 ft

Antenna Information

Receive

Manufacturer VERTEX
Gain / Diameter 50.0 dBi / 9.0 m
3-dB / 15-dB Beamwidth 0.40° / 0.80°

Transmit

VERTEX
53.5 dBi / 9.0 m
0.26° / 0.52°

		<u>51K2G7W - 36M0G7W</u>			
Max Available RF Power	(dBW/4 kHz)	-13.0		-13.0	
	(dBW/MHz)	1.93		11.0	
Maximum EIRP	(dBW/4 kHz)	40.5		40.5	
	(dBW/MHz)	64.5		64.5	
	(dBW)	51.57		80.0	
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

Emission / Frequency Range (MHz) 51K2G7W - 36M0G7W / 3700.0 - 4200.0

Transmit 6.1 GHz

51K2G7W - 36M0G7W / 5850.0 - 6425.0

Max Great Circle Coordination Distance 656.9 km / 408.1 mi 295.7 km / 183.7 mi
Precipitation Scatter Contour Radius 428.9 km / 266.5 mi 100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 ft
Antenna Centerline (AGL) 6.0 m / 19.7 ft

Antenna Mode Receive 4.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20% Transmit 6.1 GHz -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 -13.0 (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	8.50	95.60	-10.00	100.00	-10.00	100.00
5	8.85	100.58	-10.00	100.00	-10.00	100.00
10	7.19	98.87	-10.00	112.31	-10.00	100.00
15	6.62	94.39	-10.00	118.47	-10.00	100.00
20	5.53	89.95	-10.00	129.73	-10.00	100.00
25	5.07	85.57	-10.00	134.15	-10.00	100.00
30	5.11	81.19	-10.00	133.73	-10.00	100.00
35	5.37	76.80	-10.00	131.30	-10.00	100.00
40	3.71	72.75	-10.00	153.85	-10.00	100.00
45	2.54	68.80	-10.00	182.15	-10.00	100.00
50	2.34	64.74	-10.00	186.72	-10.00	100.00
55	3.91	60.16	-10.00	149.63	-10.00	100.00
60	3.91	56.12	-10.00	149.64	-10.00	100.00
65	3.91	52.19	-10.00	149.62	-10.00	100.00
70	3.32	48.70	-10.00	162.31	-10.00	100.00
75	3.32	45.12	-9.36	165.58	-9.36	100.00
80	1.21	43.18	-8.88	219.44	-8.88	100.00
85	1.21	40.27	-8.12	223.35	-8.12	100.00
90	1.21	37.72	-7.41	227.14	-7.41	100.00
95	0.00	36.69	-7.11	304.30	-7.11	142.76
100	0.00	35.17	-6.65	307.46	-6.65	144.20
105	0.00	34.22	-6.36	309.50	-6.36	145.14
110	0.00	33.91	-6.26	310.20	-6.26	145.46
115	0.00	34.24	-6.36	309.47	-6.36	145.13
120	0.00	35.20	-6.66	307.39	-6.66	144.17
125	0.00	36.73	-7.13	304.21	-7.13	142.72
130	0.00	38.78	-7.71	300.23	-7.71	140.92
135	0.00	41.25	-8.39	295.75	-8.39	138.91
140	0.00	44.09	-9.11	291.02	-9.11	136.81
145	0.00	47.21	-9.85	286.23	-9.85	134.72
150	0.00	50.57	-10.00	285.28	-10.00	134.30
155	0.00	54.11	-10.00	285.28	-10.00	134.30
160	0.00	57.56	-10.00	285.28	-10.00	134.30
165	0.00	60.55	-10.00	285.28	-10.00	134.30
170	0.00	62.92	-10.00	285.28	-10.00	134.30
175	0.00	64.46	-10.00	285.28	-10.00	134.30
180	0.00	65.00	-10.00	285.28	-10.00	134.30
185	0.00	64.46	-10.00	285.28	-10.00	134.30

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 ft
Antenna Centerline (AGL) 6.0 m / 19.7 ft

Antenna Mode Receive 4.0 GHz

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Transmit 6.1 GHz

-154.0 dBW/4 kHz 20%
-131.0 dBW/4 kHz 0.0025%

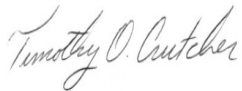
Max Available RF Power

-13.0 (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	0.00	62.92	-10.00	285.28	-10.00	134.30
195	0.00	60.55	-10.00	285.28	-10.00	134.30
200	0.00	57.56	-10.00	285.28	-10.00	134.30
205	1.87	53.18	-10.00	198.04	-10.00	100.00
210	1.87	49.47	-10.00	198.05	-10.00	100.00
215	1.87	45.51	-9.45	200.56	-9.45	100.00
220	1.31	41.60	-8.48	218.48	-8.48	100.00
225	1.31	37.32	-7.30	224.63	-7.30	100.00
230	0.28	33.35	-6.08	300.51	-6.08	138.31
235	0.00	29.00	-4.56	322.82	-4.56	151.08
240	0.00	24.48	-2.72	336.18	-2.72	157.56
245	0.00	19.92	-0.48	352.91	-0.48	165.98
250	0.00	15.34	2.36	374.95	2.36	178.64
255	0.00	10.81	6.15	405.31	6.15	193.27
260	0.00	6.94	10.97	447.85	10.97	210.13
265	0.00	5.41	13.68	656.87	13.68	295.68
270	0.00	7.76	9.76	436.78	9.76	205.40
275	0.00	11.87	5.14	396.80	5.14	189.36
280	0.00	16.48	1.58	368.81	1.58	175.61
285	0.42	21.17	-1.14	319.49	-1.14	141.84
290	0.62	26.01	-3.38	283.81	-3.38	124.00
295	2.10	30.76	-5.20	212.61	-5.20	100.00
300	2.10	35.73	-6.83	204.73	-6.83	100.00
305	2.65	40.68	-8.23	188.32	-8.23	100.00
310	3.68	45.63	-9.48	156.91	-9.48	100.00
315	4.04	50.62	-10.00	147.32	-10.00	100.00
320	5.47	55.60	-10.00	130.31	-10.00	100.00
325	7.06	60.62	-10.00	113.66	-10.00	100.00
330	9.14	65.66	-10.00	100.00	-10.00	100.00
335	10.47	70.68	-10.00	100.00	-10.00	100.00
340	9.74	75.65	-10.00	100.00	-10.00	100.00
345	7.09	80.61	-10.00	113.40	-10.00	100.00
350	6.81	85.61	-10.00	116.37	-10.00	100.00
355	7.31	90.60	-10.00	111.05	-10.00	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 3, 2011

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Allen Holdings, Inc
KAPOLEI, HI
Satellite Earth Station
Two Vertex 11.0 Meter Antennas

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
March 7, 2011

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	6
5. CERTIFICATION.....	10

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

This **minor** notice is for the correction of the coordinates for Call Sign E100091. The correction is less than one second.

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

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 03/03/2011.

Company

AT&T CORP

Clearwire Hawaii Partners Spectrum LLC

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.

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

Date: 03/03/2011
 Job Number: 110303COMSTC07

Administrative Information

Licensee Name Allen Holdings, Inc

Site Information

KAPOLEI, HI

Latitude (NAD 83) 21° 20' 10.2" N
 Longitude (NAD 83) 158° 5' 18.0" W
 Climate Zone C
 Rain Zone 4
 Ground Elevation (AMSL) 38.4 m / 126.0 ft

Link Information

Satellite Type Geostationary
 Mode TR - Transmit-Receive
 Modulation Digital
 Satellite Arc 206° W to 233° West Longitude
 Azimuth Range 251.8° to 264.4°
 Corresponding Elevation Angles 31.2° / 5.4°
 Antenna Centerline (AGL) 9.75 m / 32.0 ft

Antenna Information

Receive - V41103

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

Transmit - V61103

VERTEX COMMUNICATIONS
 11 KPC (two antennas)
 55.4 dBi / 11.0 m
 0.30° / 0.60°

			<u>51K2G7W</u> - <u>36M0G7W</u>
Max Available RF Power	(dBW/4 kHz)	-7.0	-12.55
	(dBW/MHz)	4.07	11.43
Maximum EIRP	(dBW/4 kHz)	48.4	42.85
	(dBW/MHz)	59.47	66.85
	(dBW)	59.47	82.39

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

Emission / Frequency Range (MHz) 51K2G7W - 36M0G7W / 3700.0 - 4200.0

Transmit 6.1 GHz

51K2G7W - 36M0G7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance	1365.6 km / 848.4 mi	566.5 km / 352.0 mi
Precipitation Scatter Contour Radius	428.9 km / 266.5 mi	100.0 km / 62.1 mi

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 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 -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	8.13	95.60	-9.10	118.65	-9.60	100.00
5	8.48	100.59	-9.10	113.29	-9.60	100.00
10	6.81	105.60	-9.10	133.45	-9.60	100.00
15	6.12	110.60	-9.58	138.69	-9.96	100.00
20	5.03	115.60	-13.22	141.78	-12.60	100.00
25	4.57	120.60	-14.10	142.23	-12.60	100.00
30	4.61	125.60	-14.10	141.73	-12.60	100.00
35	4.86	130.60	-14.10	138.91	-12.60	100.00
40	3.20	135.56	-14.10	177.55	-12.60	100.00
45	2.03	140.49	-14.10	246.69	-12.60	100.00
50	1.83	144.01	-14.10	263.44	-12.60	100.00
55	2.40	147.02	-14.10	222.77	-12.60	100.00
60	2.40	149.06	-14.10	222.79	-12.60	100.00
65	2.40	150.47	-14.10	222.76	-12.60	100.00
70	1.80	150.55	-14.10	266.53	-12.60	100.00
75	1.80	150.44	-14.10	266.53	-12.60	100.00
80	0.00	147.85	-14.10	627.36	-12.60	255.90
85	0.00	146.38	-14.10	627.36	-12.60	255.90
90	0.00	144.35	-14.10	627.36	-12.60	255.90
95	0.00	141.83	-14.10	627.36	-12.60	255.90
100	0.00	138.93	-14.10	627.36	-12.60	255.90
105	0.00	135.71	-14.10	627.36	-12.60	255.90
110	0.00	132.24	-14.10	627.36	-12.60	255.90
115	0.00	128.58	-14.10	627.36	-12.60	255.90
120	0.00	124.76	-14.10	627.36	-12.60	255.90
125	0.00	120.83	-14.10	627.36	-12.60	255.90
130	0.00	116.80	-13.46	640.03	-12.60	255.90
135	0.00	112.69	-11.25	684.78	-11.21	267.19
140	0.00	108.53	-9.10	730.06	-9.60	280.94
145	0.00	104.32	-9.10	730.06	-9.60	280.94
150	0.00	100.08	-9.10	730.06	-9.60	280.94
155	0.00	95.82	-9.10	730.06	-9.60	280.94
160	0.00	91.55	-9.10	730.06	-9.60	280.94
165	0.00	87.27	-9.62	719.04	-9.60	280.94
170	0.00	83.00	-13.22	644.70	-9.72	279.85
175	0.00	78.74	-14.10	627.36	-10.60	272.34
180	0.00	74.51	-14.10	627.36	-10.72	271.36
185	0.00	70.31	-14.10	627.36	-11.71	263.08

COMSEARCH

Earth Station Data Sheet

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

Coordination Values

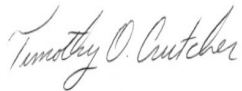
KAPOLEI, HI

Licensee Name Allen Holdings, Inc
Latitude (NAD 83) 21° 20' 10.2" N
Longitude (NAD 83) 158° 5' 18.0" W
Ground Elevation (AMSL) 38.4 m / 126.0 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 -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	0.00	66.16	-14.10	627.36	-12.60	255.90
195	0.00	62.08	-14.10	627.36	-12.60	255.90
200	0.00	58.07	-14.10	627.36	-12.60	255.90
205	0.35	54.01	-13.51	545.32	-12.21	224.59
210	0.35	50.18	-11.21	587.36	-10.67	233.04
215	0.35	46.18	-9.57	621.75	-9.07	245.04
220	0.00	42.16	-8.53	742.30	-8.03	294.92
225	0.00	37.85	-7.24	770.46	-6.74	306.88
230	0.00	33.46	-5.79	799.69	-5.29	318.70
235	0.00	29.00	-4.70	824.77	-4.20	329.89
240	0.00	24.48	-2.79	870.37	-2.29	350.71
245	0.00	19.92	-0.05	939.38	0.45	383.21
250	0.00	15.34	2.70	1013.37	3.20	419.16
255	0.00	10.81	6.09	1110.33	6.59	470.23
260	0.00	6.94	11.03	1265.64	10.53	527.34
265	0.00	5.41	14.09	1365.59	13.59	566.51
270	0.00	7.76	9.39	1212.28	9.64	514.34
275	0.00	11.87	5.03	1078.97	5.53	455.20
280	0.00	16.48	2.01	994.50	2.51	409.90
285	0.00	21.26	-0.86	918.62	-0.36	373.32
290	0.37	26.06	-3.52	730.29	-3.02	290.00
295	0.83	30.91	-5.28	490.46	-4.78	197.01
300	1.48	35.79	-6.42	368.46	-5.92	133.49
305	2.26	40.70	-8.24	277.69	-7.74	100.00
310	2.92	45.66	-9.36	222.74	-8.86	100.00
315	3.31	50.63	-11.48	190.59	-10.85	100.00
320	4.71	55.61	-14.10	140.58	-12.60	100.00
325	6.31	60.61	-14.10	112.82	-12.60	100.00
330	8.77	65.65	-14.10	100.00	-11.78	100.00
335	10.10	70.67	-14.10	100.00	-10.87	100.00
340	9.25	75.64	-14.10	100.00	-10.60	100.00
345	6.75	80.61	-13.52	111.31	-10.02	100.00
350	6.56	85.61	-11.15	125.65	-9.60	100.00
355	7.01	90.60	-9.10	131.32	-9.60	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 3, 2011