

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
ALASCOM, INC.
VALDEZ, AK
Satellite Earth Station
Call Sign: KB36

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

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.

Company

ALASCOM, INC.

COPPER VALLEY TELEPHONE COOPERATIVE INC

Copper Valley Wireless Inc

State of Alaska

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: 10/05/2010
Job Number: 101005COMSTC02

Administrative Information

Call Sign KB36
Licensee Code P1040
Licensee Name ALASCOM, INC.

Site Information

VALDEZ, AK

Latitude (NAD 83) 61° 7' 57.9" N
Longitude (NAD 83) 146° 20' 6.7" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 9.1 m / 29.9 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 86° W to 150° West Longitude
Azimuth Range 116.5° to 184.2°
Corresponding Elevation Angles 5.2° / 20.7°
Antenna Centerline (AGL) 3.0 m / 9.8 ft

Antenna Information

Receive

Manufacturer Andrew
Model ESA45P-1
Gain / Diameter 43.0 dBi / 4.5 m
3-dB / 15-dB Beamwidth 0.60° / 1.00°

Transmit

Andrew
ESA45P-1
47.0 dBi / 4.5 m
0.50° / 1.00°

		<u>9K60G7W - 36M0G7W</u>			
Max Available RF Power	(dBW/4 kHz)	-17.8	-24.05		
	(dBW/MHz)	6.2	0.05		
Maximum EIRP	(dBW/4 kHz)	29.2	22.95		
	(dBW/MHz)	33.0	46.95		
	(dBW)	33.0	62.49		
Interference Objectives:	Long Term	-152.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-142.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%

Frequency Information

Receive 4.0 GHz

Emission / Frequency Range (MHz) 9K60G7W - 36M0G7W / 3700.0 - 4200.0

Transmit 6.1 GHz

9K60G7W - 36M0G7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance 526.7 km / 327.3 mi 219.5 km / 136.4 mi
Precipitation Scatter Contour Radius 610.3 km / 379.2 mi 100.0 km / 62.1 mi

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Coordination Values

VALDEZ, AK

Licensee Name ALASCOM, INC.
Latitude (NAD 83) 61° 7' 57.9" N
Longitude (NAD 83) 146° 20' 6.7" W
Ground Elevation (AMSL) 9.1 m / 29.9 ft
Antenna Centerline (AGL) 3.0 m / 9.8 ft
Antenna Mode Receive 4.0 GHz Transmit 6.1 GHz
Interference Objectives: Long Term -152.0 dBW/MHz 20% -154.0 dBW/4 kHz 20%
Short Term -142.0 dBW/MHz 0.01% -131.0 dBW/4 kHz 0.0025%
Max Available RF Power -17.8 (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	23.28	115.10	-10.00	100.00	-10.00	100.00
5	24.34	110.26	-10.00	100.00	-10.00	100.00
10	23.23	105.68	-10.00	100.00	-10.00	100.00
15	22.73	100.97	-10.00	100.00	-10.00	100.00
20	22.40	96.22	-10.00	100.00	-10.00	100.00
25	22.33	91.45	-10.00	100.00	-10.00	100.00
30	19.95	86.63	-10.00	100.00	-10.00	100.00
35	18.89	81.76	-10.00	100.00	-10.00	100.00
40	18.25	76.87	-10.00	100.00	-10.00	100.00
45	17.11	71.93	-10.00	100.00	-10.00	100.00
50	16.15	66.97	-10.00	100.00	-10.00	100.00
55	14.10	61.89	-10.00	100.00	-10.00	100.00
60	13.48	56.91	-10.00	100.00	-10.00	100.00
65	12.85	51.92	-10.00	100.00	-10.00	100.00
70	10.01	46.71	-9.73	100.00	-9.73	100.00
75	7.07	41.55	-8.46	103.62	-8.46	100.00
80	3.50	36.55	-7.07	153.15	-7.07	100.00
85	0.36	31.84	-5.57	268.37	-5.57	121.52
90	0.27	26.93	-3.76	291.43	-3.76	134.00
95	0.00	22.09	-1.61	315.38	-1.61	144.99
100	0.00	17.28	1.06	334.58	1.06	153.92
105	0.00	12.60	4.49	360.36	4.49	168.28
110	0.00	8.30	9.02	395.84	9.02	185.84
115	0.00	5.38	13.74	526.75	13.74	219.47
120	0.00	6.15	12.27	474.05	12.27	199.80
125	0.00	8.23	9.11	419.43	9.11	186.19
130	0.00	10.18	6.80	384.48	6.80	177.27
135	0.00	12.03	5.00	364.28	5.00	170.25
140	0.40	13.36	3.86	328.90	3.86	143.79
145	1.15	14.20	3.20	270.24	3.20	108.04
150	2.92	13.86	3.45	218.59	3.45	100.00
155	4.83	13.19	4.00	188.33	4.00	100.00
160	2.62	16.32	1.68	215.77	1.68	100.00
165	1.61	18.10	0.56	236.71	0.56	100.00
170	2.66	17.62	0.85	210.40	0.85	100.00
175	4.07	16.55	1.53	187.28	1.53	100.00
180	4.78	15.96	1.92	177.69	1.92	100.00
185	3.16	17.53	0.91	202.72	0.91	100.00

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Coordination Values

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Longitude (NAD 83)	146° 20' 6.7" W		
Ground Elevation (AMSL)	9.1 m / 29.9 ft		
Antenna Centerline (AGL)	3.0 m / 9.8 ft		
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz
Interference Objectives: Long Term	-152.0 dBW/MHz	20%	-154.0 dBW/4 kHz
Short Term	-142.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz
Max Available RF Power			-17.8 (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	3.26	18.32	0.42	198.15	0.42	100.00
195	6.26	17.95	0.65	149.51	0.65	100.00
200	5.65	21.68	-1.40	146.71	-1.40	100.00
205	3.90	26.50	-3.58	161.71	-3.58	100.00
210	3.39	30.73	-5.19	164.79	-5.19	100.00
215	2.26	35.43	-6.73	185.00	-6.73	100.00
220	3.54	39.20	-7.83	148.57	-7.83	100.00
225	4.23	43.46	-8.95	133.23	-8.95	100.00
230	4.33	48.03	-10.00	127.72	-10.00	100.00
235	4.15	52.72	-10.00	130.17	-10.00	100.00
240	4.15	57.41	-10.00	130.17	-10.00	100.00
245	3.91	62.17	-10.00	133.79	-10.00	100.00
250	4.03	66.89	-10.00	131.82	-10.00	100.00
255	4.03	71.65	-10.00	131.82	-10.00	100.00
260	4.19	76.41	-10.00	129.63	-10.00	100.00
265	4.19	81.20	-10.00	129.63	-10.00	100.00
270	4.19	85.99	-10.00	129.62	-10.00	100.00
275	4.07	90.79	-10.00	131.27	-10.00	100.00
280	7.23	95.66	-10.00	100.00	-10.00	100.00
285	9.89	100.63	-10.00	100.00	-10.00	100.00
290	11.40	105.61	-10.00	100.00	-10.00	100.00
295	12.89	110.62	-10.00	100.00	-10.00	100.00
300	13.79	115.62	-10.00	100.00	-10.00	100.00
305	15.26	120.67	-10.00	100.00	-10.00	100.00
310	15.87	125.68	-10.00	100.00	-10.00	100.00
315	16.18	130.67	-10.00	100.00	-10.00	100.00
320	14.99	135.53	-10.00	100.00	-10.00	100.00
325	15.55	140.54	-10.00	100.00	-10.00	100.00
330	16.49	144.86	-10.00	100.00	-10.00	100.00
335	17.11	139.98	-10.00	100.00	-10.00	100.00
340	17.54	135.12	-10.00	100.00	-10.00	100.00
345	19.19	130.02	-10.00	100.00	-10.00	100.00
350	19.76	125.15	-10.00	100.00	-10.00	100.00
355	21.40	120.12	-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.



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

DATED: October 05, 2010