

Exhibit A

Frequency Coordination

Per 47 C.F.R. Ch. 1 §25.130(b), attached is a “Frequency Coordination and Interference Analysis Report” performed pursuant to 47 C.F.R. Ch. 1 §25.203.

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
GCI Communications Corp.
EAGLE RIVER, AK
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
October 25, 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

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 10/09/2018.

Company

ACS Long Distance License Sub, Inc.
ACS Wireless License Sub, Inc.
ACS of Anchorage License Sub, Inc.
AT&T Mobility Spectrum LLC - AK
Alascom Inc
Alaska Pipeline Company
Alaska Railroad Corporation
Alaska Wireless Network, LLC
Chugach Electric Association, Inc.
Copper Valley Telephone Cooperative, Inc
Copper Valley Wireless Inc
Enstar Natural Gas Company
GCI Communications Corp.
MATANUSKA KENAI INC
MTA Communications, LLC
Matanuska Telephone Association, Inc.
Matanuska-Susitna, Borough of
Norstar Pipeline Company
State of Alaska
Verizon Wireless (VAW) LLC - 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: 10/25/2018
Job Number: 181009COMSTC03

Administrative Information

Call Sign E2491
Licensee Code P3203
Licensee Name GCI Communications Corp.

Site Information

EAGLE RIVER, AK

Latitude (NAD 83) 61° 17' 52.5" N
Longitude (NAD 83) 149° 26' 36.1" W
Climate Zone A
Rain Zone 2
Ground Elevation (AMSL) 141.73 m / 465.0 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 89° W to 200° West Longitude
Azimuth Range 116.4° to 234.2°
Corresponding Elevation Angles 5.0° / 9.2°
Antenna Centerline (AGL) 4.45 m / 14.6 ft

Antenna Information

Receive - R41301

Transmit - R61301

Manufacturer	SATCOM	SATCOM
Model	1300C (13 METER)	1300C (13 METER)
Gain / Diameter	53.0 dBi / 13.0 m	55.8 dBi / 13.0 m
3-dB / 15-dB Beamwidth	0.34° / 0.70°	0.24° / 0.50°

Max Available RF Power	(dBW/4 kHz)			45K0G7W - 108MG7W	
	(dBW/MHz)			<u>45K0D7W - 108MD7W</u>	
Maximum EIRP	(dBW/4 kHz)			-2.7	-14.77
	(dBW/MHz)			21.3	9.23
	(dBW)			53.1	41.0
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

Transmit 6.1 GHz

Emission / Frequency Range (MHz)	45K0G7W - 108MG7W / 3700.0 - 4200.0	45K0G7W - 108MG7W / 5925.0 - 6425.0
	45K0D7W - 108MD7W / 3700.0 - 4200.0	45K0D7W - 108MD7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance	730.1 km / 453.6 mi	428.3 km / 266.1 mi
Precipitation Scatter Contour Radius	619.2 km / 384.7 mi	101.7 km / 63.2 mi

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Longitude (NAD 83) 149° 26' 36.1" W
Ground Elevation (AMSL) 141.73 m / 465.0 ft
Antenna Centerline (AGL) 4.45 m / 14.6 ft
Antenna Model SATCOM 1300C (13 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 -2.7 (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	24.86	114.77	-12.91	100.00	-13.06	100.00
5	25.36	110.05	-11.02	100.00	-10.23	100.00
10	24.63	105.47	-11.00	100.00	-10.20	100.00
15	25.17	100.74	-11.00	100.00	-10.20	100.00
20	25.98	96.02	-11.00	100.00	-10.20	100.00
25	26.72	91.35	-11.00	100.00	-10.20	100.00
30	27.43	86.72	-11.00	100.00	-10.20	100.00
35	28.68	82.17	-11.00	100.00	-10.20	100.00
40	26.80	77.43	-11.00	100.00	-10.20	100.00
45	26.25	72.75	-11.00	100.00	-10.20	100.00
50	22.65	67.61	-11.00	100.00	-10.20	100.00
55	22.20	62.83	-11.00	100.00	-10.20	100.00
60	20.65	57.84	-11.00	100.00	-10.20	100.00
65	18.96	52.78	-11.00	100.00	-10.20	100.00
70	17.78	47.78	-10.11	100.00	-9.76	100.00
75	15.40	42.50	-8.00	100.00	-8.20	100.00
80	14.94	37.59	-6.52	100.00	-6.24	100.00
85	13.56	32.47	-4.99	100.00	-4.69	100.00
90	13.44	27.66	-3.06	100.00	-3.26	100.00
95	12.41	22.62	-1.05	107.39	-1.25	100.00
100	10.42	17.28	1.09	130.70	0.89	100.00
105	8.40	11.93	5.07	172.62	4.87	100.00
110	6.68	6.65	11.35	230.34	11.15	100.37
115	3.22	2.33	20.70	730.14	20.50	428.25
120	1.27	4.94	14.13	609.04	13.93	347.84
125	0.00	8.13	8.87	520.89	8.67	295.88
130	0.00	10.08	6.92	443.79	6.72	252.24
135	0.00	11.91	5.09	396.45	4.89	227.98
140	1.22	12.45	4.55	308.08	4.35	163.29
145	3.36	11.96	5.04	243.89	4.84	118.37
150	4.67	12.03	4.97	216.40	4.77	100.00
155	6.18	11.71	5.29	201.96	5.09	100.00
160	8.82	10.05	6.95	180.01	6.75	100.00
165	9.98	9.63	7.37	170.12	7.17	100.00
170	9.98	10.16	6.84	164.85	6.64	100.00
175	10.35	10.11	6.89	161.83	6.69	100.00
180	11.88	8.69	8.31	157.99	8.11	100.00
185	10.45	10.01	6.99	161.63	6.79	100.00

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Max Available RF Power -2.7 (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	10.04	10.10	6.90	164.69	6.70	100.00
195	8.02	11.58	5.42	179.09	5.22	100.00
200	7.60	11.25	5.75	186.50	5.55	100.00
205	8.22	9.72	7.28	188.59	7.08	100.00
210	8.95	7.88	9.24	193.20	9.04	100.00
215	10.23	5.37	13.26	203.98	13.06	100.00
220	11.78	2.48	20.06	232.66	19.86	100.00
225	10.08	2.50	20.00	249.12	19.80	103.45
230	10.38	0.45	39.44	460.18	41.33	237.87
235	11.00	2.00	22.02	403.69	21.82	204.29
240	8.84	5.83	12.35	209.57	12.15	100.00
245	7.92	10.89	6.11	184.71	5.91	100.00
250	5.47	16.24	1.51	188.61	1.31	100.00
255	3.58	21.52	-0.61	206.65	-0.81	100.00
260	2.31	26.65	-2.66	221.08	-2.86	109.17
265	0.25	31.96	-4.78	314.35	-4.59	186.23
270	0.00	36.82	-6.36	309.46	-5.93	186.42
275	0.00	41.66	-7.66	300.58	-7.86	178.95
280	0.39	46.47	-9.59	264.77	-9.49	151.10
285	0.97	51.29	-11.00	216.96	-10.20	118.39
290	1.24	56.19	-11.00	208.23	-10.20	110.69
295	1.54	61.10	-11.00	202.43	-10.20	103.07
300	1.94	66.02	-11.00	191.44	-10.20	100.00
305	3.15	70.93	-11.00	161.09	-10.20	100.00
310	6.79	75.83	-11.00	112.68	-10.20	100.00
315	8.99	80.82	-11.00	100.00	-10.20	100.00
320	9.85	85.82	-11.00	100.00	-10.20	100.00
325	12.45	90.82	-11.00	100.00	-10.20	100.00
330	13.96	95.80	-11.00	100.00	-10.20	100.00
335	13.23	100.79	-11.00	100.00	-10.20	100.00
340	16.94	105.67	-11.00	100.00	-10.20	100.00
345	19.33	110.48	-11.19	100.00	-10.49	100.00
350	20.69	115.26	-13.10	100.00	-13.30	100.00
355	22.77	119.80	-14.92	100.00	-15.12	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 25, 2018