

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.
Cold Bay, AK
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
October 17, 2018

TABLE OF CONTENTS

1. CONCLUSIONS	3
2. SUMMARY OF RESULTS	4
3. SUPPLEMENTAL SHOWING	5
4. EARTH STATION COORDINATION DATA.....	6
5. CERTIFICATION.....	11

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 on 10/02/2018.

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.

Date: 10/02/2018
 Job Number: 181002COMSTC13

Administrative Information

Call Sign E960425
 Licensee Code P3203
 Licensee Name GCI Communications Corp.

Site Information COLD BAY, AK

Latitude (NAD 83) 55° 12' 12.1" N
 Longitude (NAD 83) 162° 42' 43.5" W
 Climate Zone B
 Rain Zone 2
 Ground Elevation (AMSL) 22.25 m / 73.0 ft

Link Information

Satellite Type Geostationary
 Mode TR - Transmit-Receive
 Modulation Digital
 Satellite Arc 98° W to 228° West Longitude
 Azimuth Range 111.2° to 249.3°
 Corresponding Elevation Angles 5.4° / 5.1°
 Antenna Centerline (AGL) 3.08 m / 10.1 ft

Antenna Information

Manufacturer
 Model
 Gain / Diameter
 3-dB / 15-dB Beamwidth

Receive

Viasat / Scientific-Atlanta
 8136
 41.8 dBi / 3.6 m
 1.40° / 3.00°

Transmit

Viasat / Scientific-Atlanta
 8136
 45.9 dBi / 3.6 m
 0.90° / 1.70°

				45K0G7W - 108MG7W	
				<u>45K0D7W - 108MD7W</u>	
Max Available RF Power	(dBW/4 kHz)			-2.7	-18.29
	(dBW/MHz)			21.3	5.71
Maximum EIRP	(dBW/4 kHz)			43.2	27.61
	(dBW/MHz)			67.2	51.61
	(dBW)			53.71	71.92
Interference Objectives:	Long Term	-158.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-148.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	
	0.0025%				

Frequency Information

Emission / Frequency Range (MHz)
 6425.0
 6425.0

Receive 4.0 GHz

45K0G7W - 108MG7W / 3700.0 - 4200.0
 45K0D7W - 108MD7W / 3700.0 - 4200.0

Transmit 6.1 GHz

45K0G7W - 108MG7W / 5925.0 -
 45K0D7W - 108MD7W / 5925.0 -

Max Great Circle Coordination Distance 870.3 km / 540.7 mi 380.3 km / 236.3 mi
 Precipitation Scatter Contour Radius 619.9 km / 385.1 mi 101.6 km / 63.1 mi

Coordination Values		COLD BAY, AK	
Licensee Name	GCI Communications Corp.		
Latitude (NAD 83)	55° 12' 12.1" N		
Longitude (NAD 83)	162° 42' 43.5" W		
Ground Elevation (AMSL)	22.25 m / 73.0 ft		
Antenna Centerline (AGL)	3.08 m / 10.1 ft		
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz
Interference Objectives: Long Term	-158.0 dBW/MHz	20%	-154.0 dBW/4 kHz
		20%	
Short Term	-148.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz
	0.0025%		
Max Available RF Power	-2.7 (dBW/4 kHz)		

6.1 GHz		Receive 4.0 GHz		Transmit		
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.32	110.63	-10.00	395.17	-10.00	180.13
5	0.00	106.13	-10.00	437.80	-10.00	200.77
10	0.00	101.16	-10.00	437.80	-10.00	200.77
15	0.00	96.18	-10.00	437.80	-10.00	200.77
20	0.00	91.20	-10.00	437.80	-10.00	200.77
25	0.00	86.22	-10.00	437.80	-10.00	200.77
30	0.00	81.25	-10.00	437.80	-10.00	200.77
35	0.00	76.27	-10.00	437.80	-10.00	200.77
40	0.00	71.29	-10.00	437.80	-10.00	200.77
45	0.00	66.32	-10.00	437.80	-10.00	200.77
50	0.00	61.35	-10.00	437.80	-10.00	200.77
55	0.00	56.38	-10.00	437.80	-10.00	200.77
60	0.00	51.41	-10.00	437.80	-10.00	200.77
65	0.00	46.45	-9.68	442.10	-9.68	202.63
70	0.00	41.50	-8.45	458.72	-8.45	209.76
75	0.00	36.56	-7.07	477.52	-7.07	218.00
80	0.00	31.63	-5.50	500.73	-5.50	227.72
85	0.00	26.73	-3.67	529.15	-3.67	239.44
90	0.00	21.86	-1.49	564.99	-1.49	253.97
95	0.00	17.08	1.19	612.05	1.19	271.34
100	0.00	12.45	4.62	676.51	4.62	298.32
105	0.00	8.25	9.08	769.87	9.08	337.95
110	0.00	5.58	13.33	870.30	13.33	380.32
115	0.00	6.64	11.45	823.43	11.45	360.67
120	0.00	9.21	7.89	743.90	7.89	326.83
125	0.00	11.69	5.31	690.14	5.31	304.04
130	0.00	14.07	3.30	650.63	3.30	287.51
135	0.00	16.29	1.70	621.33	1.70	275.14
140	0.00	18.38	0.39	597.72	0.39	265.51
145	0.00	20.29	-0.68	578.89	-0.68	257.92
150	0.00	22.00	-1.56	563.86	-1.56	253.52
155	0.00	23.49	-2.27	551.94	-2.27	248.71
160	0.25	24.50	-2.73	522.37	-2.73	235.82
165	0.38	25.37	-3.11	462.37	-3.11	208.43
170	0.49	25.99	-3.37	420.49	-3.37	188.70

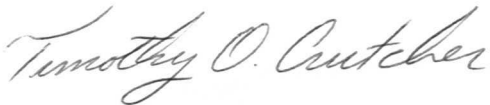
175	0.51	26.41	-3.54	412.26	-3.54	184.94
180	0.43	26.62	-3.63	435.40	-3.63	195.79
185	0.38	26.53	-3.59	456.65	-3.59	206.04

Coordination Values		COLD BAY, AK	
Licensee Name	GCI Communications Corp.		
Latitude (NAD 83)	55° 12' 12.1" N		
Longitude (NAD 83)	162° 42' 43.5" W		
Ground Elevation (AMSL)	22.25 m / 73.0 ft		
Antenna Centerline (AGL)	3.08 m / 10.1 ft		
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz
Interference Objectives: Long Term	-158.0 dBW/MHz	20%	-154.0 dBW/4 kHz
		20%	
Short Term	-148.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz
	0.0025%		
Max Available RF Power	-2.7 (dBW/4 kHz)		

6.1 GHz		Receive 4.0 GHz			Transmit	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.56	25.92	-3.34	404.25	-3.34	181.11
195	0.56	25.20	-3.03	408.10	-3.03	182.77
200	0.59	24.17	-2.58	406.40	-2.58	181.80
205	0.76	22.77	-1.93	381.33	-1.93	169.96
210	0.52	21.51	-1.32	438.87	-1.32	196.74
215	0.54	19.79	-0.41	445.12	-0.41	199.25
220	0.66	17.78	0.75	434.93	0.75	193.76
225	0.49	15.85	2.00	491.22	2.00	219.50
230	0.51	13.61	3.65	511.49	3.65	227.84
235	0.52	11.24	5.73	543.81	5.73	241.08
240	0.95	8.39	8.90	483.49	8.90	221.76
245	1.41	5.44	13.61	515.83	13.61	255.97
250	2.12	3.10	19.71	581.17	19.71	325.64
255	2.68	6.21	12.17	358.36	12.17	157.46
260	1.81	11.21	5.76	352.09	5.76	155.01
265	0.66	16.32	1.68	448.92	1.68	200.22
270	0.51	21.19	-1.16	442.39	-1.16	198.30
275	0.29	26.13	-3.43	494.63	-3.43	223.69
280	0.00	31.09	-5.32	503.58	-5.32	228.90
285	0.36	35.98	-6.90	420.39	-6.90	190.45
290	0.21	40.95	-8.31	455.14	-8.31	207.99
295	0.00	45.93	-9.55	443.75	-9.55	203.34
300	0.00	50.89	-10.00	437.80	-10.00	200.77
305	0.00	55.86	-10.00	437.80	-10.00	200.77
310	0.00	60.83	-10.00	437.80	-10.00	200.77
315	0.00	65.81	-10.00	437.80	-10.00	200.77
320	0.00	70.79	-10.00	437.80	-10.00	200.77
325	0.21	75.76	-10.00	434.93	-10.00	199.41
330	0.23	80.74	-10.00	428.41	-10.00	195.94
335	0.20	85.72	-10.00	437.03	-10.00	200.41
340	0.00	90.70	-10.00	437.80	-10.00	200.77
345	0.36	95.68	-10.00	381.92	-10.00	173.84
350	0.37	100.67	-10.00	377.56	-10.00	171.77
355	0.00	105.64	-10.00	437.80	-10.00	200.77

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 17, 2018