

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
AST Telecom, LLC
Fagatogo Village Pago Pago, AS
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
January 19, 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

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 to the below carriers with a letter dated 11/05/2009, an information only letter sent on 01/19/2010.

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: 01/19/2010
Job Number: 100119COMSTC01

Administrative Information

Licensee Name AST Telecom, LLC

Site Information

FAGATOGO VILLAGE PAGO GAGO, AS

Latitude (NAD 83) 14° 16' 44.8" S
Longitude (NAD 83) 170° 41' 21.0" W
Climate Zone C
Rain Zone 4
Ground Elevation (AMSL) 3.0 m / 9.8 ft

Link Information

Satellite Type Geostationary
Mode TR - Transmit-Receive
Modulation Digital
Satellite Arc 177°W to 177° West Longitude
Azimuth Range 335.8° to 335.8°
Corresponding Elevation Angles 71.7° / 71.7°
Antenna Centerline (AGL) 1.8 m / 5.9 ft

Antenna Information

Receive

Transmit

Manufacturer	Prodelin 1251	Prodelin 1251	
Gain / Diameter	38.0 dBi / 2.4 m	42.0 dBi / 2.4 m	
3-dB / 15-dB Beamwidth	2.00° / 4.00°	1.00° / 2.00°	
Max Available RF Power (dBW/4 kHz)		-10.1	
(dBW/MHz)		6.99	
Maximum EIRP (dBW/4 kHz)		31.9	
(dBW/MHz)		49.0	
(dBW)		49.0	
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)	204KG7W / 4013.482	204KG7W / 6256.482
Max Great Circle Coordination Distance	710.9 km / 441.7 mi	251.9 km / 156.5 mi
Precipitation Scatter Contour Radius	100.0 km / 62.1 mi	100.0 km / 62.1 mi

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Coordination Values

FAGATOGO VILLAGE PAGO GAGO, AS

Licensee Name AST Telecom, LLC
Latitude (NAD 83) 14° 16' 44.8" S
Longitude (NAD 83) 170° 41' 21.0" W
Ground Elevation (AMSL) 3.0 m / 9.8 ft
Antenna Centerline (AGL) 1.8 m / 5.9 ft
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 -10.1 (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	0.00	73.35	-10.00	710.92	-10.00	251.95
5	0.00	74.08	-10.00	710.92	-10.00	251.95
10	0.00	74.93	-10.00	710.92	-10.00	251.95
15	0.00	75.90	-10.00	710.92	-10.00	251.95
20	0.00	76.98	-10.00	710.92	-10.00	251.95
25	0.00	78.15	-10.00	710.92	-10.00	251.95
30	0.00	79.40	-10.00	710.92	-10.00	251.95
35	0.00	80.73	-10.00	710.92	-10.00	251.95
40	0.00	82.13	-10.00	710.92	-10.00	251.95
45	0.00	83.58	-10.00	710.92	-10.00	251.95
50	0.00	85.08	-10.00	710.92	-10.00	251.95
55	0.00	86.61	-10.00	710.92	-10.00	251.95
60	0.00	88.17	-10.00	710.92	-10.00	251.95
65	0.00	89.73	-10.00	710.92	-10.00	251.95
70	0.00	91.30	-10.00	710.92	-10.00	251.95
75	0.00	92.86	-10.00	710.92	-10.00	251.95
80	0.00	94.40	-10.00	710.92	-10.00	251.95
85	0.00	95.91	-10.00	710.92	-10.00	251.95
90	0.00	97.38	-10.00	710.92	-10.00	251.95
95	0.00	98.80	-10.00	710.92	-10.00	251.95
100	0.00	100.16	-10.00	710.92	-10.00	251.95
105	0.00	101.44	-10.00	710.92	-10.00	251.95
110	0.00	102.64	-10.00	710.92	-10.00	251.95
115	0.00	103.74	-10.00	710.92	-10.00	251.95
120	0.00	104.75	-10.00	710.92	-10.00	251.95
125	0.00	105.64	-10.00	710.92	-10.00	251.95
130	0.00	106.42	-10.00	710.92	-10.00	251.95
135	0.00	107.07	-10.00	710.92	-10.00	251.95
140	0.00	107.59	-10.00	710.92	-10.00	251.95
145	0.00	107.97	-10.00	710.92	-10.00	251.95
150	0.00	108.21	-10.00	710.92	-10.00	251.95
155	0.00	108.30	-10.00	710.92	-10.00	251.95
160	0.00	108.26	-10.00	710.92	-10.00	251.95
165	0.00	108.06	-10.00	710.92	-10.00	251.95
170	0.00	107.73	-10.00	710.92	-10.00	251.95
175	0.00	107.26	-10.00	710.92	-10.00	251.95
180	0.00	106.65	-10.00	710.92	-10.00	251.95
185	0.00	105.92	-10.00	710.92	-10.00	251.95

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Coordination Values

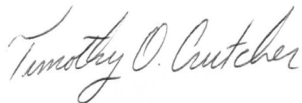
FAGATOGO VILLAGE PAGO GAGO, AS

Licensee Name	AST Telecom, LLC		
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Longitude (NAD 83)	170° 41' 21.0" W		
Ground Elevation (AMSL)	3.0 m / 9.8 ft		
Antenna Centerline (AGL)	1.8 m / 5.9 ft		
Antenna Mode	Receive 4.0 GHz		Transmit 6.1 GHz
Interference Objectives: Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz
Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz
Max Available RF Power			-10.1 (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	105.07	-10.00	710.92	-10.00	251.95
195	0.00	104.10	-10.00	710.92	-10.00	251.95
200	0.00	103.02	-10.00	710.92	-10.00	251.95
205	0.00	101.85	-10.00	710.92	-10.00	251.95
210	0.00	100.60	-10.00	710.92	-10.00	251.95
215	0.00	99.27	-10.00	710.92	-10.00	251.95
220	0.00	97.87	-10.00	710.92	-10.00	251.95
225	0.00	96.42	-10.00	710.92	-10.00	251.95
230	0.00	94.92	-10.00	710.92	-10.00	251.95
235	0.00	93.39	-10.00	710.92	-10.00	251.95
240	0.00	91.83	-10.00	710.92	-10.00	251.95
245	0.00	90.27	-10.00	710.92	-10.00	251.95
250	0.00	88.70	-10.00	710.92	-10.00	251.95
255	0.00	87.14	-10.00	710.92	-10.00	251.95
260	0.00	85.60	-10.00	710.92	-10.00	251.95
265	0.00	84.09	-10.00	710.92	-10.00	251.95
270	0.00	82.62	-10.00	710.92	-10.00	251.95
275	0.00	81.20	-10.00	710.92	-10.00	251.95
280	0.00	79.84	-10.00	710.92	-10.00	251.95
285	0.00	78.56	-10.00	710.92	-10.00	251.95
290	0.00	77.36	-10.00	710.92	-10.00	251.95
295	0.00	76.26	-10.00	710.92	-10.00	251.95
300	0.00	75.25	-10.00	710.92	-10.00	251.95
305	0.00	74.36	-10.00	710.92	-10.00	251.95
310	0.00	73.58	-10.00	710.92	-10.00	251.95
315	0.00	72.93	-10.00	710.92	-10.00	251.95
320	0.00	72.41	-10.00	710.92	-10.00	251.95
325	0.00	72.03	-10.00	710.92	-10.00	251.95
330	0.00	71.79	-10.00	710.92	-10.00	251.95
335	0.00	71.70	-10.00	710.92	-10.00	251.95
340	0.00	71.74	-10.00	710.92	-10.00	251.95
345	0.00	71.94	-10.00	710.92	-10.00	251.95
350	0.00	72.27	-10.00	710.92	-10.00	251.95
355	0.00	72.74	-10.00	710.92	-10.00	251.95

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: January 19, 2010