

GUSA Licensee LLC
Response to FCC Form 312, Schedule B, Question E18
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Attachment 1: Comsearch Frequency Coordination and Interference Analysis Report

Attachment 2: Information on Microwave Landing System Sites

ATTACHMENT 1

**FREQUENCY COORDINATION AND INTERFERENCE
ANALYSIS REPORT**

Prepared for
GUSA Licensee, LLC
SEBRING RFT1, FL
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
July 22, 2020

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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.

The following companies reported potential great circle interference conflicts that did not meet the objectives on a line-of-sight basis. When over-the-horizon losses are considered on the interfering paths, sufficient blockage exists to negate harmful interference from occurring with the proposed transmit-receive earth station.

Company

<Companies Responding with Cases>

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 06/12/2020.

Company

America-CV Station Group, Inc.
American Broadcasting Companies, Inc.
Board of Trustees Fla Gulf Coast Univ
Board of Trustees, University of Florida
CBS Television Stations
Cbs Operations Investments, Inc.
Christian Television of Palm Beach Cnty
Daytona State College, Inc.
Eastern Florida State College
Entravision Holdings, LLC
Florida West Coast Public Broadcasting I
Fort Myers Broadcasting Company
Fox Television Stations, LLC
Good Life Broadcasting, Inc.
Graham Media Group, Florida, Inc.
Graham Media Group, Inc.
Graham Media Group, Orlando, Inc
Gray Television Licensee, LLC
Gray Television Licensee, LLC
Hearst Properties Inc.
Ion Media Orlando License, Inc.
Meycom Inc.
Miami Television Station WBFS Inc
Montclair Communications Inc.
Montclair Communications Inc.
Multimedia Holdings Corporation
NBC Telemundo License LLC
NEXSTAR BROADCASTING, INC.
New World Communications of Tampa, Inc.
Orlando Hearst Television, Inc.
Pacific and Southern, LLC
SBE Coordinator
School Board of Broward County
Scripps Broadcasting Holdings, LLC
Scripps Broadcasting Holdings, LLC,
Scripps Media, Inc. - WFTS TV
Scripps Media, Inc. - WPTV
South Florida PBS, Inc
South Florida PBS, Inc
Storer Broadcasting Co

Sun Broadcasting, Inc.
Sunbeam Television Corp.
Unimas Miami LLC
University of Central Florida
WFTV, Inc.
WJCT, Inc.
WLTV License Partnership, G.P.
WPEC Licensee, LLC
WPLG, Inc.
WTvx Licensee, LLC
WWSB License Subsidiary, LLC
Waterman Broadcasting

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: 07/22/2020
Job Number: 200612COMSGE02

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	E050097
Licensee Code	ZAIRSA
Licensee Name	GUSA Licensee, LLC

Site Information

Venue Name	SEBRING RFT1, FL
Latitude (NAD 83)	27° 27' 34.3" N
Longitude (NAD 83)	81° 21' 26.6" W
Climate Zone	A
Rain Zone	1
Ground Elevation (AMSL)	15.24 m / 50.0 ft

Link Information

Satellite Type	Low Earth Orbit
Mode	TR - Transmit-Receive
Modulation	Analog and Digital
Minimum Elevation Angle	5.0°
Azimuth Range	0.0° to 360°
Antenna Centerline (AGL)	5.7 m / 18.7 ft

Antenna Information

	Receive - FCC32	Transmit - FCC32		
Manufacturer	Seatel	Seatel		
Model	Tracker T 6000	Tracker T 6000		
Gain / Diameter	49.4 dBi / 6.0 m	47.6 dBi / 6.0 m		
3-dB / 15-dB Beamwidth	0.44° / 0.88°	0.60° / 2.00°		
Max Available RF Power	(dBW/4 kHz) (dBW/MHz)	10.9 20.9		
Maximum EIRP	(dBW/4 kHz) (dBW/MHz)	58.5 68.5		
Interference Objectives:	Long Term Short Term	-153.0 dBW/MHz -143.0 dBW/MHz	20% 0.01%	-140.0 dBW/4 kHz 20% -103.0 dBW/4 kHz 0.0025%

Frequency Information

Emission / Frequency Range (MHz)	Receive 7.0 GHz 1M23G7W - 1M23XXX / 6900.0 - 7055.0 NON / 6900.0 - 7055.0	Transmit 5.1 GHz 1M23G7W - 1M23XXX / 5096.0 - 5250.0 NON / 5096.0 - 5250.0
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Max Great Circle Coordination Distance	374.0 km / 232.4 mi	395.0 km / 245.4 mi
Precipitation Scatter Contour Radius	533.2 km / 331.3 mi	100.0 km / 62.1 mi

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19700 Janelia Farm Boulevard, Ashburn, VA 20147
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Coordination Values		SEBRING RFT1, FL				
Licensee Name		GUSA Licensee, LLC				
Latitude (NAD 83)		27° 27' 34.3" N				
Longitude (NAD 83)		81° 21' 26.6" W				
Ground Elevation (AMSL)		15.24 m / 50.0 ft				
Antenna Centerline (AGL)		5.7 m / 18.7 ft				
Antenna Model		Seatel 6.0 meter				
Antenna Mode		Receive 7.0 GHz		Transmit 5.1 GHz		
Interference Objectives: Long Term		-153.0 dBW/MHz		-140.0 dBW/4 kHz		20%
Short Term		-143.0 dBW/MHz		-103.0 dBW/4 kHz		0.0025%
Max Available RF Power		10.9 (dBW/4 kHz)				
Azimuth (°)		Horizon Elevation (°)	Antenna Discrimination (°)	Receive 7.0 GHz	Transmit 5.1 GHz	
				Horizon Gain (dBi)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	94.01	94.01	10.40	10.40	395.00
5	0.00	89.01	89.01	10.40	10.40	395.00
10	0.00	84.01	84.01	10.40	10.40	395.00
15	0.00	79.01	79.01	10.40	10.40	395.00
20	0.00	74.01	74.01	10.40	10.40	395.00
25	0.00	69.02	69.02	10.40	10.40	395.00
30	0.00	64.02	64.02	10.40	10.40	395.00
35	0.00	59.02	59.02	10.40	10.40	395.00
40	0.00	54.02	54.02	10.40	10.40	395.00
45	0.00	49.02	49.02	10.40	10.40	395.00
50	0.00	44.02	44.02	10.40	10.40	395.00
55	0.00	39.02	39.02	10.40	10.40	395.00
60	0.00	34.03	34.03	10.40	10.40	395.00
65	0.00	29.03	29.03	10.40	10.40	395.00
70	0.00	24.03	24.03	10.40	10.40	395.00
75	0.00	19.04	19.04	10.40	10.40	395.00
80	0.00	14.05	14.05	10.40	10.40	395.00
85	0.00	9.07	9.07	10.40	10.40	395.00
90	0.00	4.14	4.14	10.40	10.40	395.00
95	0.00	1.43	1.43	10.40	10.40	395.00
100	0.00	6.08	6.08	10.40	10.40	395.00
105	0.00	11.04	11.04	10.40	10.40	395.00
110	0.00	16.02	16.02	10.40	10.40	395.00
115	0.00	21.01	21.01	10.40	10.40	395.00
120	0.00	26.01	26.01	10.40	10.40	395.00
125	0.00	31.00	31.00	10.40	10.40	395.00
130	0.00	36.00	36.00	10.40	10.40	395.00
135	0.00	41.00	41.00	10.40	10.40	395.00
140	0.00	46.00	46.00	10.40	10.40	395.00
145	0.00	51.00	51.00	10.40	10.40	395.00
150	0.00	55.99	55.99	10.40	10.40	395.00
155	0.00	60.99	60.99	10.40	10.40	395.00
160	0.00	65.99	65.99	10.40	10.40	395.00
165	0.00	70.99	70.99	10.40	10.40	395.00
170	0.00	75.99	75.99	10.40	10.40	395.00
175	0.00	80.99	80.99	10.40	10.40	395.00
180	0.00	85.99	85.99	10.40	10.40	395.00
185	0.00	90.99	90.99	10.40	10.40	395.00

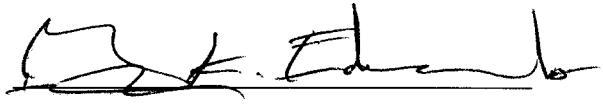
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Antenna Centerline (AGL)		5.7 m / 18.7 ft			
Antenna Model		Seatel 6.0 meter			
Antenna Mode		Receive 7.0 GHz		Transmit 5.1 GHz	
Interference Objectives: Long Term		-153.0 dBW/MHz	20%	-140.0 dBW/4 kHz	20%
Short Term		-143.0 dBW/MHz	0.01%	-103.0 dBW/4 kHz	0.0025%
Max Available RF Power		10.9 (dBW/4 kHz)			

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 7.0 GHz		Transmit 5.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	95.99	10.40	374.00	10.40	395.00
195	0.00	100.99	10.40	374.00	10.40	395.00
200	0.00	105.99	10.40	374.00	10.40	395.00
205	0.00	110.99	10.40	374.00	10.40	395.00
210	0.00	115.98	10.40	374.00	10.40	395.00
215	0.00	120.98	10.40	374.00	10.40	395.00
220	0.00	125.98	10.40	374.00	10.40	395.00
225	0.00	130.98	10.40	374.00	10.40	395.00
230	0.20	135.97	10.40	374.00	10.40	395.00
235	0.21	140.97	10.40	374.00	10.40	395.00
240	0.00	145.97	10.40	374.00	10.40	395.00
245	0.00	150.97	10.40	374.00	10.40	395.00
250	0.00	155.97	10.40	374.00	10.40	395.00
255	0.00	160.96	10.40	374.00	10.40	395.00
260	0.23	165.93	10.40	374.00	10.40	395.00
265	0.24	170.90	10.40	374.00	10.40	395.00
270	0.31	175.77	10.40	374.00	10.40	395.00
275	0.33	178.32	10.40	374.00	10.40	395.00
280	0.24	173.88	10.40	374.00	10.40	395.00
285	0.00	168.96	10.40	374.00	10.40	395.00
290	0.00	163.98	10.40	374.00	10.40	395.00
295	0.00	158.99	10.40	374.00	10.40	395.00
300	0.00	153.99	10.40	374.00	10.40	395.00
305	0.00	149.00	10.40	374.00	10.40	395.00
310	0.00	144.00	10.40	374.00	10.40	395.00
315	0.00	139.00	10.40	374.00	10.40	395.00
320	0.00	134.00	10.40	374.00	10.40	395.00
325	0.00	129.00	10.40	374.00	10.40	395.00
330	0.00	124.01	10.40	374.00	10.40	395.00
335	0.00	119.01	10.40	374.00	10.40	395.00
340	0.00	114.01	10.40	374.00	10.40	395.00
345	0.00	109.01	10.40	374.00	10.40	395.00
350	0.00	104.01	10.40	374.00	10.40	395.00
355	0.00	99.01	10.40	374.00	10.40	395.00

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.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: July 22, 2020

ATTACHMENT 2

Information on Microwave Landing System Sites

For the Sebring, Florida, Globalstar gateway site, there are three potential MLS sites, i.e., Category III airports, within the 213 nautical miles transmit co-ordination distance. The Sebring site is located at 27-27-35 N, 81-21-28 W. The airports are:

JAX	Jacksonville International airport, approximately 182 nautical miles from Sebring
TPA	Tampa International Airport, approximately 70 nautical miles away
MCO	Orlando International Airport, approximately 58 nautical miles away

These sites fall outside the 39.8 nautical mile maximum trigger distance for MLS/MSS coordination. In addition, based on a directory used for MLS coordination purposes, and to the best of its knowledge, Globalstar believes that MLS is not active at any of these airport sites.