

**GCL Licensee LLC**  
**Response to FCC Form 312, Schedule B, Question E18**  
**Page 1 of 1**

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  
**Globalstar Caribbean, Ltd**  
**FINCA PASCUA, PR**  
**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

Alpha Broadcasting Corporation  
America-CV Station Group, Inc.  
Asociacion Evangelistica Cristo Viene  
Catholic, Apostolic & Roman Church in PR  
Cebridge Acquisition, L.P.  
Corp. of Seventh Day Adventists of W Pr  
Eastern Television Corporation  
Encuentrio Christian Network Corp  
JB Media Group  
La Cadena Del Milagro, Inc.  
Puerto Rico Public Broadcasting Corp.  
Ramon A Hernandez  
SBE Coordinator  
Sistema Universitario Ana G. Mendez, Inc  
Spanish Broadcasting System Holding Comp  
Teleadoracion Christian Network Inc.  
Telecinco Inc.  
Telemundo of Puerto Rico  
Televicentro of Puerto Rico, LLC.  
Virgin Island Public Broadcasting System  
WLII/WSUR License Partnership, G.P.

## **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: 200612COMSGE01

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### Administrative Information

Status ENGINEER PROPOSAL  
Call Sign E990337  
Licensee Code GLOCAR  
Licensee Name Globalstar Caribbean, Ltd

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### Site Information

#### FINCA PASCUA, PR

Venue Name  
Latitude (NAD 83) 17° 58' 40.9" N  
Longitude (NAD 83) 67° 8' 13.6" W  
Climate Zone C  
Rain Zone 1  
Ground Elevation (AMSL) 55.0 m / 180.5 ft

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### 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

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### 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 20% -143.0 dBW/MHz 0.01%	-140.0 dBW/4 kHz 20% -103.0 dBW/4 kHz 0.0025%

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### Frequency Information

#### Receive 7.0 GHz

#### Transmit 5.1 GHz

Emission / Frequency Range (MHz)	1M23G7W - 1M23XXX / 6900.0 - 7055.0 NON / 6900.0 - 7055.0	1M23G7W - 1M23XXX / 5096.0 - 5250.0 NON / 5096.0 - 5250.0
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Max Great Circle Coordination Distance	591.8 km / 367.7 mi	370.0 km / 229.9 mi
Precipitation Scatter Contour Radius	533.2 km / 331.3 mi	100.0 km / 62.1 mi



# COMSEARCH

## Earth Station Data Sheet

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### Coordination Values

### FINCA PASCUA, PR

Licensee Name Globalstar Caribbean, Ltd  
Latitude (NAD 83) 17° 58' 40.9" N  
Longitude (NAD 83) 67° 8' 13.6" W  
Ground Elevation (AMSL) 55.0 m / 180.5 ft  
Antenna Centerline (AGL) 5.7 m / 18.7 ft  
Antenna Model Seatel 6 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)
0	4.81	97.34	11.50	591.80	11.50	370.00
5	3.35	92.38	11.50	591.80	11.50	370.00
10	4.51	87.45	11.50	591.80	11.50	370.00
15	3.26	82.53	11.50	591.80	11.50	370.00
20	2.14	77.66	11.50	591.80	11.50	370.00
25	3.24	72.69	11.50	591.80	11.50	370.00
30	5.12	67.65	11.50	591.80	11.50	370.00
35	5.51	62.69	11.50	591.80	11.50	370.00
40	5.76	57.73	11.50	591.80	11.50	370.00
45	5.59	52.81	11.50	591.80	11.50	370.00
50	5.29	47.92	11.50	591.80	11.50	370.00
55	4.63	43.12	11.50	591.80	11.50	370.00
60	3.99	38.38	11.50	591.80	11.50	370.00
65	2.67	33.91	11.50	591.80	11.50	370.00
70	2.14	29.41	11.50	591.80	11.50	370.00
75	1.85	25.00	11.50	591.80	11.50	370.00
80	0.65	21.36	11.50	591.80	11.50	370.00
85	0.61	17.62	11.50	591.80	11.50	370.00
90	0.44	14.75	11.50	591.80	11.50	370.00
95	0.47	12.97	11.50	591.80	11.50	370.00
100	0.00	13.47	11.50	591.80	11.50	370.00
105	0.00	15.21	11.50	591.80	11.50	370.00
110	0.00	18.18	11.50	591.80	11.50	370.00
115	0.00	21.87	11.50	591.80	11.50	370.00
120	0.00	25.99	11.50	591.80	11.50	370.00
125	0.00	30.36	11.50	591.80	11.50	370.00
130	0.00	34.89	11.50	591.80	11.50	370.00
135	0.00	39.51	11.50	591.80	11.50	370.00
140	0.00	44.21	11.50	591.80	11.50	370.00
145	0.00	48.96	11.50	591.80	11.50	370.00
150	0.00	53.74	11.50	591.80	11.50	370.00
155	0.00	58.54	11.50	591.80	11.50	370.00
160	0.00	63.37	11.50	591.80	11.50	370.00
165	0.00	68.21	11.50	591.80	11.50	370.00
170	0.00	73.06	11.50	591.80	11.50	370.00
175	0.00	77.92	11.50	591.80	11.50	370.00
180	0.00	82.78	11.50	591.80	11.50	370.00
185	0.00	87.65	11.50	591.80	11.50	370.00

# COMSEARCH

## Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5500 <http://www.comsearch.com>

### Coordination Values

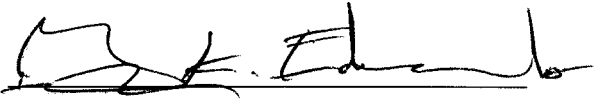
### FINCA PASCUA, PR

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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	92.51	11.50	591.80	11.50	370.00
195	0.00	97.38	11.50	591.80	11.50	370.00
200	0.41	102.26	11.50	591.80	11.50	370.00
205	0.41	107.13	11.50	591.80	11.50	370.00
210	0.41	111.99	11.50	591.80	11.50	370.00
215	0.27	116.82	11.50	591.80	11.50	370.00
220	0.64	121.71	11.50	591.80	11.50	370.00
225	0.57	126.52	11.50	591.80	11.50	370.00
230	0.23	131.25	11.50	591.80	11.50	370.00
235	0.00	135.95	11.50	591.80	11.50	370.00
240	0.00	140.64	11.50	591.80	11.50	370.00
245	0.56	145.45	11.50	591.80	11.50	370.00
250	0.85	150.12	11.50	591.80	11.50	370.00
255	0.72	154.49	11.50	591.80	11.50	370.00
260	1.54	159.13	11.50	591.80	11.50	370.00
265	1.54	163.02	11.50	591.80	11.50	370.00
270	1.54	166.19	11.50	591.80	11.50	370.00
275	3.04	169.54	11.50	591.80	11.50	370.00
280	3.04	169.50	11.50	591.80	11.50	370.00
285	5.38	169.11	11.50	591.80	11.50	370.00
290	5.44	165.24	11.50	591.80	11.50	370.00
295	5.55	160.87	11.50	591.80	11.50	370.00
300	6.18	156.40	11.50	591.80	11.50	370.00
305	5.66	151.48	11.50	591.80	11.50	370.00
310	5.66	146.65	11.50	591.80	11.50	370.00
315	4.58	141.58	11.50	591.80	11.50	370.00
320	4.64	136.72	11.50	591.80	11.50	370.00
325	4.58	131.82	11.50	591.80	11.50	370.00
330	4.40	126.90	11.50	591.80	11.50	370.00
335	4.78	122.02	11.50	591.80	11.50	370.00
340	5.43	117.14	11.50	591.80	11.50	370.00
345	5.22	112.19	11.50	591.80	11.50	370.00
350	5.78	107.27	11.50	591.80	11.50	370.00
355	5.70	102.31	11.50	591.80	11.50	370.00

## 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 Finca Pascual, Las Palmas, Cabo Rojo, Puerto Rico, Globalstar gateway site, there is one potential MLS site, i.e., Category III airport, within the 200 nautical miles transmit coordination distance. The Las Palmas site is located at (NAD 83) 17-58-42 N, 67-08-12 W. The airport is:

SJU	San Juan Luis Muñoz Marin International Airport, approximately 69 nautical miles from Las Palmas
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This airport site is located near San Juan in Carolina, Puerto Rico, and falls 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 this airport.