

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Darien Communications Inc
DARIEN, GA
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
June 06, 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

No great circle interference cases were identified during the interference study of the proposed earth station.

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 06/06/2018.

<u>Company</u>
Comsearch

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: 06/06/2018
Job Number: 180606COMSGE09

Administrative Information

Status ENGINEER PROPOSAL
Call Sign
Licensee Code DARICO
Licensee Name Darien Communications Inc

Site Information **DARIEN, GA**

Venue Name
Latitude (NAD 83) 31° 24' 44.7" N
Longitude (NAD 83) 81° 27' 18.4" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 9.48 m / 31.1 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Analog
Satellite Arc 60° W to 143° West Longitude
Azimuth Range 143.0° to 254.2°
Corresponding Elevation Angles 46.6° / 15.6°
Antenna Centerline (AGL) 5.2 m / 17.1 ft

Antenna Information **Receive - FCC32**

Manufacturer Scientific-Atlanta
Model 9037
Gain / Diameter 41.5 dBi / 3.7 m
3-dB / 15-dB Beamwidth 1.00° / 2.00°

Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Frequency Information **Receive 4.0 GHz**

Emission / Frequency Range (MHz) 36M0G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance 373.3 km / 231.9 mi
Precipitation Scatter Contour Radius 596.1 km / 370.4 mi

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Coordination Values

DARIEN, GA

Licensee Name Darien Communications Inc
Latitude (NAD 83) 31° 24' 44.7" N
Longitude (NAD 83) 81° 27' 18.4" W
Ground Elevation (AMSL) 9.48 m / 31.1 ft
Antenna Centerline (AGL) 5.2 m / 17.1 ft
Antenna Model Scientific-Atlanta 3.7 meter
Antenna Mode Receive 4.0 GHz
Interference Objectives: Long Term -156.0 dBW/MHz 20%
Short Term -146.0 dBW/MHz 0.01%

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	105.18	-10.00	285.28
5	0.00	109.97	-10.00	285.28
10	0.00	114.76	-10.00	285.28
15	0.00	115.00	-10.00	285.28
20	0.00	111.95	-10.00	285.28
25	0.00	108.80	-10.00	285.28
30	0.00	105.55	-10.00	285.28
35	0.00	102.24	-10.00	285.28
40	0.00	98.88	-10.00	285.28
45	0.00	95.47	-10.00	285.28
50	0.00	92.05	-10.00	285.28
55	0.00	88.62	-10.00	285.28
60	0.00	85.19	-10.00	285.28
65	0.00	81.78	-10.00	285.28
70	0.00	78.41	-10.00	285.28
75	0.00	75.08	-10.00	285.28
80	0.00	71.82	-10.00	285.28
85	0.00	68.65	-10.00	285.28
90	0.00	65.58	-10.00	285.28
95	0.00	62.64	-10.00	285.28
100	0.00	59.84	-10.00	285.28
105	0.00	57.23	-10.00	285.28
110	0.00	54.83	-10.00	285.28
115	0.00	52.67	-10.00	285.28
120	0.00	50.79	-10.00	285.28
125	0.00	49.22	-10.00	285.28
130	0.00	48.00	-10.00	285.28
135	0.00	47.15	-9.84	286.32
140	0.00	46.70	-9.73	286.98
145	0.00	46.66	-9.72	287.04
150	0.00	47.03	-9.81	286.49
155	0.00	47.80	-9.99	285.37
160	0.00	48.95	-10.00	285.28
165	0.00	50.46	-10.00	285.28
170	0.00	52.05	-10.00	285.28
175	0.00	53.07	-10.00	285.28
180	0.00	53.42	-10.00	285.28
185	0.00	53.07	-10.00	285.28

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Coordination Values

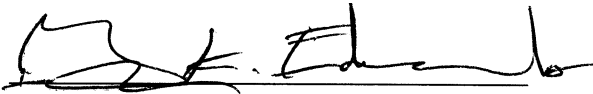
DARIEN, GA

Licensee Name Darien Communications Inc
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Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	52.06	-10.00	285.28
195	0.00	50.42	-10.00	285.28
200	0.00	48.26	-10.00	285.28
205	0.00	45.66	-9.49	288.55
210	0.00	42.70	-8.76	293.29
215	0.00	39.44	-7.90	298.99
220	0.00	35.96	-6.89	305.80
225	0.00	32.29	-5.73	314.54
230	0.00	28.48	-4.36	324.23
235	0.00	24.58	-2.77	335.84
240	0.00	21.01	-1.06	348.56
245	0.00	18.08	0.57	360.98
250	0.00	16.17	1.78	370.45
255	0.00	15.64	2.15	373.29
260	0.00	16.63	1.48	368.06
265	0.00	18.90	0.09	357.29
270	0.00	22.06	-1.59	344.57
275	0.00	25.78	-3.28	332.05
280	0.00	29.86	-4.88	320.56
285	0.00	34.16	-6.34	309.64
290	0.00	38.61	-7.67	300.54
295	0.00	43.17	-8.88	292.51
300	0.00	47.80	-9.99	285.37
305	0.00	52.48	-10.00	285.28
310	0.00	57.20	-10.00	285.28
315	0.00	61.95	-10.00	285.28
320	0.00	66.72	-10.00	285.28
325	0.00	71.51	-10.00	285.28
330	0.00	76.31	-10.00	285.28
335	0.00	81.12	-10.00	285.28
340	0.00	85.93	-10.00	285.28
345	0.00	90.75	-10.00	285.28
350	0.00	95.56	-10.00	285.28
355	0.00	100.37	-10.00	285.28

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: June 06, 2018

Frequency Coordination Waiver

Per FCC DA 18-398, the Applicant understands that the requirement for Frequency Coordination has been waived during the 90-day Freeze Order and therefore no Frequency Coordination report will be presented for any antennas presented with this Application for Registration of a C-band receive/only earth station operating in the 3700 – 4200 MHz receive band, **with the exception** of the 3.7 meter Scientific-Atlanta referenced previously in this document, that was coordinated.

The applicant understands that frequency coordination may be required at a later date as referenced in FCC DA 18-398 and will provide a coordination report at that time if requested.