

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for  
**CAPROCK COMMUNICATIONS CORP.**  
**HOUMA, LA**  
**Temporary Satellite Earth Station**

**Prepared By:**  
**COMSEARCH**  
**19700 Janelia Farm Boulevard**  
**Ashburn, VA 20147**  
**January 23, 2007**

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.

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.

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.

Verbal and written coordination was conducted with the below listed carriers on 01/22/2007. There are no unresolved interference conflicts involving this earth station.

## Company

ALLTEL Communications, Inc.  
ALLTEL Mobile of Louisiana, LLC  
Acadiana Cellular General Partnership  
Bell Atlantic Mobile Allentown-Verizon W  
Cellular South Licenses, Inc.  
Celutel of Biloxi, Inc.  
Centennial Southeast License Company LLC  
Cleco Power LLC  
Delta Media Corporation  
Dixie Electric Membership Corp  
Entergy Services Inc  
Exxon Communications Company  
Federal Communications Commission  
Greater Lafourche Port Commission  
Hancock, County Of  
Louisiana State Communication Section  
Lafayette MSA Limited Partnership  
Lafourche Telephone Company, LLC  
Louisiana RSA #7 Cell Gen Partnership  
MCI Communication Services, Inc.  
New Orleans Educational Telecomm

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Networks USA  
New Cingular Wireless PCS LLC - FL, GA  
New Cingular Wireless PCS, LLC - LA  
Pathnet, Inc. - Debtor In Possession  
Sola Communications, Inc.  
Star Telephone Company  
Sprint Spectrum LP DBA Sprint PCS  
Sprint Spectrum LP Louisiana  
Stratos Offshore Services Company  
Texas Eastern Communications, Inc.  
Verizon Wireless Personal Comm., LP

I HEREBY CERTIFY THAT I AM THE TECHNICALLY QUALIFIED PERSON RESPONSIBLE FOR THE PREPARATION OF THE FREQUENCY COORDINATION DATA CONTAINED IN THIS APPLICATION. I AM FAMILIAR WITH PARTS 101 AND 25 OF THE FCC RULES AND REGULATIONS. 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 23, 2007

Following is the data pertinent to frequency coordination of the proposed earth station that was circulated to the carriers within the coordination contours.

**COMSEARCH**  
**Earth Station Data Sheet**

19700 Janelia Farm Boulevard, Ashburn, VA 20147  
(703)726-5665 <http://www.comsearch.com>

Date: 01/23/2007  
Job Number: 070122COMSTC02

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**Administrative Information**

Licensee Name CAPROCK COMMUNICATIONS CORP.

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**Site Information**

**HOUMA, LA**  
Latitude (NAD 83) 29° 32' 13.0" N  
Longitude (NAD 83) 90° 42' 12.0" W  
Climate Zone B  
Rain Zone 1  
Ground Elevation (AMSL) 1.52 m / 5.0 ft

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**Link Information**

Satellite Type Geostationary  
Mode TO - Transmit-Only  
Modulation Digital  
Satellite Arc 34.5° W West Longitude  
Azimuth Range 108.3°  
Corresponding Elevation Angles 20.8°  
Antenna Centerline (AGL) 0.55 m / 1.8 ft

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**Antenna Information**

**Transmit**  
Manufacturer Seatel 9797  
Gain / Diameter 41.7 dBi / 2.4 m  
3-dB / 15-dB Beamwidth 1.00° / 2.00°

Max Available RF Power (dBW/4 kHz) -10.8  
(dBW/MHz) 13.2

Maximum EIRP (dBW/4 kHz) 30.9  
(dBW/MHz) 54.9  
(dBW) 52.77

Interference Objectives: Long Term -154.0 dBW/4 kHz 20%  
Short Term -131.0 dBW/4 kHz 0.0025%

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**Frequency Information**

**Transmit 6.1 GHz**  
Emission / Frequency Range (MHz) 614KG7W / 5925.0 - 6425.0

Max Great Circle Coordination Distance 206.0 km / 128.0 mi  
Precipitation Scatter Contour Radius 100.0 km / 62.1 mi

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## Earth Station Data Sheet

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<b>Coordination Values</b>	<b>HOUMA, LA</b>
Licensee Name	CAPROCK COMMUNICATIONS CORP.
Latitude (NAD 83)	29° 32' 13.0" N
Longitude (NAD 83)	90° 42' 12.0" W
Ground Elevation (AMSL)	1.52 m / 5.0 ft
Antenna Centerline (AGL)	0.55 m / 1.8 ft
Antenna Mode	Transmit 6.1 GHz
Interference Objectives: Long Term	-154.0 dBW/4 kHz 20%
Short Term	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power	-10.8 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
0	0.00	107.03	-10.00	159.29
5	0.00	102.38	-10.00	159.29
10	0.00	97.72	-10.00	159.29
15	0.00	93.05	-10.00	159.29
20	0.00	88.38	-10.00	159.29
25	0.00	83.71	-10.00	159.29
30	0.00	79.04	-10.00	159.29
35	0.00	74.39	-10.00	159.29
40	0.00	69.75	-10.00	159.29
45	0.00	65.13	-10.00	159.29
50	0.00	60.55	-10.00	159.29
55	0.00	56.01	-10.00	159.29
60	0.00	51.52	-10.00	159.29
65	0.00	47.10	-9.83	160.06
70	0.00	42.79	-8.78	164.80
75	0.00	38.60	-7.66	170.07
80	0.00	34.59	-6.47	175.90
85	0.00	30.83	-5.22	182.27
90	0.00	27.42	-3.95	188.99
95	0.00	24.53	-2.74	195.65
100	0.00	22.33	-1.72	201.79
105	0.00	21.06	-1.09	205.45
110	0.00	20.89	-1.00	205.97
115	0.00	21.83	-1.48	203.19
120	0.00	23.77	-2.40	197.94
125	0.00	26.48	-3.57	191.06
130	0.00	29.74	-4.83	184.30
135	0.00	33.41	-6.10	177.80
140	0.00	37.35	-7.31	171.79
145	0.00	41.49	-8.45	166.35
150	0.00	45.77	-9.52	161.45
155	0.00	50.16	-10.00	159.29
160	0.00	54.63	-10.00	159.29
165	0.00	59.16	-10.00	159.29
170	0.00	63.73	-10.00	159.29
175	0.00	68.33	-10.00	159.29
180	0.00	72.97	-10.00	159.29
185	0.00	77.62	-10.00	159.29

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Interference Objectives: Long Term	-154.0 dBW/4 kHz 20%
Short Term	-131.0 dBW/4 kHz 0.0025%
Max Available RF Power	-10.8 (dBW/4 kHz)

			Transmit 6.1 GHz	
Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	82.28	-10.00	159.29
195	0.00	86.95	-10.00	159.29
200	0.00	91.62	-10.00	159.29
205	0.00	96.29	-10.00	159.29
210	0.00	100.96	-10.00	159.29
215	0.00	105.61	-10.00	159.29
220	0.00	110.25	-10.00	159.29
225	0.00	114.87	-10.00	159.29
230	0.00	119.45	-10.00	159.29
235	0.00	123.99	-10.00	159.29
240	0.00	128.48	-10.00	159.29
245	0.00	132.90	-10.00	159.29
250	0.00	137.21	-10.00	159.29
255	0.00	141.40	-10.00	159.29
260	0.00	145.41	-10.00	159.29
265	0.00	149.17	-10.00	159.29
270	0.00	152.58	-10.00	159.29
275	0.00	155.47	-10.00	159.29
280	0.00	157.67	-10.00	159.29
285	0.00	158.94	-10.00	159.29
290	0.00	159.11	-10.00	159.29
295	0.00	158.17	-10.00	159.29
300	0.00	156.23	-10.00	159.29
305	0.00	153.52	-10.00	159.29
310	0.00	150.26	-10.00	159.29
315	0.00	146.59	-10.00	159.29
320	0.00	142.65	-10.00	159.29
325	0.00	138.51	-10.00	159.29
330	0.00	134.23	-10.00	159.29
335	0.00	129.84	-10.00	159.29
340	0.00	125.37	-10.00	159.29
345	0.00	120.84	-10.00	159.29
350	0.00	116.27	-10.00	159.29
355	0.00	111.67	-10.00	159.29