

# EXHIBIT C

## FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

**PanAmSat Licensee Corp.**  
**Ellenwood, Georgia**  
**(Call Sign: E000048)**

**Satellite Earth Station**

Prepared By:  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, Virginia 20147  
July 15, 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

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

Clearwire Spectrum Holdings II, LLC  
FiberTower Network Services Corp.  
Verizon Wireless (VAW) LLC (Georgia)

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 June 4, 2010.

#### Company

ALLTEL Communications, LLC  
Airband Communications Inc  
Atlanta Police Department  
Biltmore Communications  
Blue Ridge Electric Cooperative Inc  
CALHOUN COUNTY COMMISSIONERS  
CALHOUN, COUNTY OF  
Calhoun, County of - Emergency Managemen  
Cellco Partnership - Alabama  
Cellco Partnership dba Verizon Wire (GA  
City of Douglasville  
Clearwire Spectrum Holdings II, LLC  
Clearwire Spectrum Holdings III, LLC  
Conterra Ultra Broadband, LLC  
FULTON, COUNTY OF  
FiberTower Network Services Corp.  
Hall County 9-1-1  
International Communications Group, Inc.  
LigoWave  
METROPOLITAN AREA NETWORKS, INC.  
New Cingular Wireless PCS, LLC - LA, GM  
One Ring Networks, Inc.  
Open Range Communications  
PATHNET, INC. - DEBTOR IN POSSESSION  
SENETS BROADBAND  
Spalding, County of  
TOWER CLOUD, INC  
Verizon Wireless (VAW) LLC (Georgia)  
Verizon Wireless of The East LP - (GA)  
Verizon Wireless of the East LP- Alabama  
Vyvx, LLC - Atlanta  
ATLANTA TELEVISION STATION WUPA INC  
Auburn University  
BOARD OF EDUCATION, CITY OF ATLANTA  
CABLEVISION OF AUGUSTA,INC  
CHRISTIAN TELEVISION NETWORK, INC.

Company (Continued)

COMMUNITY TELEVISION, INC.  
DEPOT STREET COMMUNICATIONS INC  
Georgia Television Company  
JAMES CABLE PARTNERS L.P.  
JOSEPH V. EARLY  
KM LPTV OF ATLANTA, L.L.C.  
MCC Georgia LLC  
MEDIA GENERAL COMMUNICATIONS HOLDINGS, L  
MEREDITH CORPORATION  
MEREDITH CORPORATION - WGCL-TV  
MORRIS NETWORK INC  
NBC TELEMUNDO LICENSE CO.  
New World Communications of Atlanta, Inc  
Northland Cable Properties, Inc.  
PLANTATION CABLEVISION  
PRISM BROADCASTING NETWORK, INC.  
Pacific and Southern Company, Inc.  
SOUTHEASTERN MEDIA HOLDINGS, INC.  
UNIVISION ATLANTA, LLC  
WTVM License Subsidiary, LLC

Society of Broadcast Engineers

Alabama – Birmingham  
Alabama – Montgomery  
Georgia – Northern  
Georgia – Southern  
N. Carolina – Northwest  
S. Carolina Greenville  
S. Carolina – Midlands  
Tennessee - Knoxville

## **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: 07/15/2010  
Job Number: 100604COMSJC02

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### Administrative Information

Status ENGINEER PROPOSAL  
Call Sign E000048  
Licensee Code PANAS  
Licensee Name PanAmSat Licensee Corp

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### Site Information ELLENWOOD, GEORGIA

Venue Name  
Latitude (NAD 83) 33° 39' 52.4" N  
Longitude (NAD 83) 84° 16' 13.7" W  
Climate Zone A  
Rain Zone 1  
Ground Elevation (AMSL) 236.0 m / 774.3 ft

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### Link Information

Satellite Type Geostationary  
Mode TR - Transmit-Receive  
Modulation Digital  
Satellite Arc 40° W to 123° West Longitude  
Azimuth Range 119.6° to 235.3°  
Corresponding Elevation Angles 29.0° / 33.2°  
Antenna Centerline (AGL) 8.53 m / 28.0 ft

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### Antenna Information

**Receive**  
Manufacturer RSI  
Model 13 Meter  
Gain / Diameter 62.5 dBi / 13.0 m  
3-dB / 15-dB Beamwidth 0.80° / 1.40°

### Transmit

RSI  
13 Meter  
63.8 dBi / 13.0 m  
0.80° / 1.40°

Max Available RF Power (dBW/4 kHz)  
(dBW/MHz)

SEE ATTACHMENT 1  
SEE ATTACHMENT 1

Maximum EIRP (dBW/4 kHz)  
(dBW/MHz)  
(dBW)

SEE ATTACHMENT 1  
SEE ATTACHMENT 1  
SEE ATTACHMENT 1

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

-151.0 dBW/4 kHz 20%  
-128.0 dBW/4 kHz 0.0025%

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### Frequency Information

Emission / Frequency Range (MHz)

### Receive 11.0 GHz

SEE ATTACHMENT 1

### Transmit 14.0 GHz

SEE ATTACHMENT 1

Max Great Circle Coordination Distance 247.9 km / 154.0 mi  
Precipitation Scatter Contour Radius 524.8 km / 326.0 mi

173.6 km / 107.9 mi  
156.8 km / 97.4 mi



**COMSEARCH**  
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ATTACHMENT 1

RSI:  
 Model: 13.0 Meter

11 GHz Gain: 62.5 dBi  
 14 GHz Gain: 63.8 dBi

Modulation: Digital

Frequencies:

Receive Band: 10950.0 to 11200.0 MHz  
 11450.0 to 11700.0 MHz  
 11700.0 to 12200.0 MHz  
 12200.0 to 12750.0 MHz

Emission

64K0G7W – 72M0G7W

Transmit Band: 12750.0 to 13250.0 MHz  
 14000.0 to 14500.0 MHz

<u>Emission</u>	<u>RF Power Density (dBW/4 kHz)</u>	<u>EIRP Density (dBW/ 4 kHz)</u>
850KF2D	88.2	64.9
64K0G7W to 72M0G7W	61.8 to 89.0	49.8 to 46.4

Transmit Band: 13750.0 to 14000.0 MHz

<u>Emission</u>	<u>RF Power Density (dBW/4 kHz)</u>	<u>EIRP Density (dBW/ 4 kHz)</u>
850KF2D	68.0	44.7
265KG7W to 36M0G7W	68.0 to 84.0	49.8 to 44.5

# COMSEARCH

## Earth Station Data Sheet

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### Coordination Values

### ELLENWOOD, GA

Licensee Name PanAmSat Licensee Corp  
Latitude (NAD 83) 33° 39' 52.4" N  
Longitude (NAD 83) 84° 16' 13.7" W  
Ground Elevation (AMSL) 236.0 m / 774.3 ft  
Antenna Centerline (AGL) 8.53 m / 28.0 ft  
Antenna Model RSI 13 Meter  
Antenna Mode Receive 11.0 GHz Transmit 14.0 GHz  
Interference Objectives: Long Term -156.0 dBW/MHz 20% -151.0 dBW/4 kHz 20%  
Short Term -146.0 dBW/MHz 0.01% -128.0 dBW/4 kHz 0.0025%  
Max Available RF Power 1.1 (dBW/4 kHz)

Azimuth (°)	Receive 11.0 GHz			Transmit 14.0 GHz		
	Horizon Elevation (°)	Antenna Discrimination (°)	Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
0	0.35	115.72	-10.00	216.90	-10.00	143.31
5	0.35	111.45	-10.00	217.62	-10.00	144.06
10	0.38	107.15	-10.00	214.90	-10.00	141.27
15	0.39	102.81	-10.00	213.42	-10.00	139.78
20	0.38	98.44	-10.00	214.35	-10.00	140.72
25	0.33	94.06	-10.00	219.09	-10.00	145.57
30	0.35	89.67	-10.00	217.13	-10.00	143.55
35	0.25	85.29	-10.00	226.79	-10.00	153.66
40	0.49	80.89	-10.00	205.44	-10.00	131.91
45	0.48	76.53	-10.00	206.09	-10.00	132.54
50	0.54	72.17	-10.00	205.03	-10.00	130.50
55	0.57	67.86	-10.00	203.45	-10.00	129.02
60	0.54	63.60	-10.00	204.95	-10.00	130.43
65	0.27	59.49	-10.00	224.39	-10.00	151.11
70	0.40	55.33	-10.00	212.65	-10.00	139.00
75	0.35	51.34	-10.00	217.11	-10.00	143.53
80	0.00	47.64	-9.95	231.59	-9.95	158.76
85	0.46	43.70	-9.01	212.07	-9.01	137.54
90	0.84	39.96	-8.04	198.60	-8.04	122.95
95	0.90	36.67	-7.11	199.39	-7.11	122.83
100	0.98	33.73	-6.20	199.74	-6.20	122.32
105	0.79	31.48	-5.45	209.13	-5.45	131.37
110	1.02	29.44	-4.72	204.28	-4.72	125.12
115	0.94	28.39	-4.33	206.70	-4.33	129.28
120	1.02	27.96	-4.16	204.16	-4.16	126.74
125	1.14	28.31	-4.30	202.73	-4.30	123.26
130	1.22	29.49	-4.74	198.70	-4.74	119.99
135	1.15	31.49	-5.46	197.59	-5.46	119.68
140	1.26	33.91	-6.26	190.76	-6.26	114.50
145	1.86	36.47	-7.05	168.36	-7.05	100.00
150	2.05	39.35	-7.87	155.47	-7.87	100.00
155	1.56	42.45	-8.70	169.78	-8.70	100.29
160	1.28	45.04	-9.34	175.66	-9.34	105.20
165	1.22	47.02	-9.81	175.23	-9.81	105.27
170	0.98	48.69	-10.00	182.78	-10.00	111.27
175	1.29	49.28	-10.00	172.11	-10.00	103.11
180	1.04	49.82	-10.00	180.39	-10.00	109.39
185	0.71	49.85	-10.00	196.85	-10.00	123.04

# COMSEARCH

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### Coordination Values

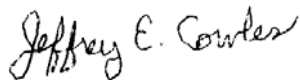
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Short Term -146.0 dBW/MHz 0.01% -128.0 dBW/4 kHz 0.0025%  
Max Available RF Power 1.1 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 11.0 GHz		Transmit 14.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
190	0.61	49.03	-10.00	201.39	-10.00	127.12
195	0.64	47.54	-9.93	200.35	-9.93	126.11
200	0.63	45.58	-9.47	202.90	-9.47	128.08
205	0.70	43.11	-8.86	201.63	-8.86	126.40
210	0.64	40.40	-8.16	205.11	-8.16	130.04
215	0.92	37.57	-7.37	197.20	-7.37	121.10
220	0.86	35.45	-6.74	202.87	-6.74	125.69
225	0.47	34.17	-6.34	222.26	-6.34	145.17
230	0.41	33.20	-6.03	229.31	-6.03	152.14
235	0.35	32.88	-5.92	235.63	-5.92	158.72
240	0.28	33.23	-6.04	241.58	-6.04	166.75
245	0.00	34.44	-6.43	247.86	-6.43	173.61
250	0.23	35.75	-6.83	242.31	-6.83	168.43
255	0.35	37.73	-7.42	228.74	-7.42	153.06
260	0.58	40.06	-8.07	208.13	-8.07	132.83
265	0.60	42.95	-8.82	204.18	-8.82	129.73
270	0.84	45.99	-9.57	191.66	-9.57	118.20
275	1.05	49.33	-10.00	180.09	-10.00	109.16
280	1.67	52.68	-10.00	156.44	-10.00	100.00
285	2.68	56.11	-10.00	131.97	-10.00	100.00
290	4.09	59.64	-10.00	109.11	-10.00	100.00
295	4.84	63.61	-10.00	100.00	-10.00	100.00
300	5.07	67.82	-10.00	100.00	-10.00	100.00
305	5.67	72.05	-10.00	100.00	-10.00	100.00
310	5.54	76.45	-10.00	100.00	-10.00	100.00
315	5.20	80.88	-10.00	100.00	-10.00	100.00
320	4.81	85.30	-10.00	100.20	-10.00	100.00
325	4.61	89.70	-10.00	102.61	-10.00	100.00
330	3.77	94.05	-10.00	114.09	-10.00	100.00
335	3.25	98.35	-10.00	122.93	-10.00	100.00
340	2.30	102.53	-10.00	139.74	-10.00	100.00
345	1.05	106.54	-10.00	179.92	-10.00	109.02
350	0.46	110.54	-10.00	207.62	-10.00	134.03
355	0.46	114.59	-10.00	208.14	-10.00	134.53

## 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.

A handwritten signature in black ink that reads "Jeffrey E. Cowles". The signature is written in a cursive style. To the right of the signature is a vertical red line.

Jeffrey E. Cowles  
Principal Frequency Planner  
COMSEARCH  
19700 Janelia Farm Boulevard  
Ashburn, Va 20147

DATED: July 15, 2010