

# FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for

**Ascent Media Network Services, Inc.  
Stamford, Connecticut**

**Satellite Earth Station**

Prepared By:

COMSEARCH

19700 JANELIA FARM BOULEVARD

ASHBURN, VIRGINIA 20147

JULY 28, 2005

## TABLE OF CONTENTS

<u>1. CONCLUSIONS</u> .....	3
<u>2. SUMMARY OF RESULTS</u> .....	4
<u>3. SUPPLEMENTAL SHOWING</u> .....	5
<u>4. EARTH STATION COORDINATION DATA</u> .....	6
<u>5. CERTIFICATION</u> .....	10

## **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

None

No 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.

Expedited coordination data for this earth station was e-mailed and/or faxed to the below listed carriers with a letter dated July 14, 2005.

#### Company

American Cellular Corporation  
Ascent Media Network Services, Inc.  
Atlantic City Electric Company  
CONNECTICUT STATE POLICE DEPARTMENT  
CONSOLIDATED EDISON COMPANY OF NEW YORK  
Cellco Partnership - (W-NY)  
Cellco Partnership - CT, W-MA  
Cellco Partnership - Newark-Dallas-Route  
Cellco Partnership- PA Region  
Cellco Prtnrshp - Phil. Tri-State Rgn  
Cingular Pennsylvania, LLC  
Corban Networks, Inc.  
Direct Broadcast Services, Inc.  
FELHC, Inc.  
Global Crossing North America, Inc.  
Intermedia Services, LLC.  
LB Tower Company LLC  
Lenfest MNC, Inc.  
MCI Worldcom Network Services, Inc.  
NBC Telemundo License Co.  
NEW JERSEY STATE POLICE  
New Cingular Wireless PCS LLC -NJ  
New Cingular Wireless PCS LLC -NE Reg  
New York SMSA Limited Partnership  
OCEAN, COUNTY OF  
Ocean County Division of Wireless Tech  
Orange Poughkeepsie SMSA LTD Partnership  
PENNSYLVANIA TURNPIKE COMMISSION  
PSEG Services Corporation  
SBA BROADBAND SERVICES, INC.  
SUFFOLK, COUNTY OF  
Stevens Institute of Technology Trustees  
Trinity Broadcasting Network Inc  
Vanguard Cellular Pennsylvania, LLC

## **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: 07/27/2005  
Job Number: 050714COMSJC01

### Administrative Information

Status: ENGINEER PROPOSAL  
Call Sign: E940242  
Licensee Code: GWNSAC  
Licensee Name: Ascent Media Network Services, Inc.

### Site Information STAMFORD, CONNECTICUT

Venue Name:  
Latitude (NAD 83): 41° 4' 34.3" N  
Longitude (NAD 83): 73° 31' 14.4" W  
Climate Zone: B  
Rain Zone: 2  
Ground Elevation (AMSL): 16.76 m / 55.0 ft

### Link Information

Satellite Type: Geostationary  
Mode: TR - Transmit-Receive  
Modulation: Analog and Digital  
Satellite Arc: 62° W to 143° West Longitude  
Azimuth Range: 162.8° to 256.2°  
Corresponding Elevation Angles: 41.1° / 6.7°  
Antenna Centerline (AGL): 6.4 m / 21.0 ft

### Antenna Information

	Receive - S41101	Transmit - S61101
Manufacturer	SCIENTIFIC-ATLANTA, INC	SCIENTIFIC-ATLANTA, INC
Model	8007	8007
Gain / Diameter	52.0 dBi / 11.0 m	54.4 dBi / 11.0 m
3-dB / 15-dB Beamwidth	0.40° / 0.78°	0.26° / 0.54°

		36M0F8W	24M0G7W		
Max Available RF Power	(dBW/4 kHz)	3.0	-7.8		
	(dBW/MHz)	27.0	16.2		
Maximum EIRP	(dBW/4 kHz)	57.4	46.6		
	(dBW/MHz)	81.4	70.6		
	(dBW)	84.4	84.4		
Interference Objectives:	Long Term	-156.0 dBW/MHz	20%	-154.0 dBW/4 kHz	20%
	Short Term	-146.0 dBW/MHz	0.01%	-131.0 dBW/4 kHz	0.0025%

### Frequency Information

	Receive 4.0 GHz	Transmit 6.1 GHz
Emission / Frequency Range (MHz)	24M0G7W / 3700.0 - 4200.0 36M0F8W / 3700.0 - 4200.0	24M0G7W / 5925.0 - 6425.0 36M0F8W / 5925.0 - 6425.0
Max Great Circle Coordination Distance	539.9 km / 335.4 mi	326.4 km / 202.8 mi
Precipitation Scatter Contour Radius	586.3 km / 364.3 mi	262.7 km / 163.2 mi





# COMSEARCH

## Earth Station Data Sheet

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### Coordination Values

### STAMFORD, CT

Licensee Name Ascent Media Network Services, Inc.  
Latitude (NAD 83) 41° 4' 34.3" N  
Longitude (NAD 83) 73° 31' 14.4" W  
Ground Elevation (AMSL) 16.76 m / 55.0 ft  
Antenna Centerline (AGL) 6.4 m / 21.0 ft  
Antenna Model SCIENTIFIC-ATLANTA, INC 8007  
Antenna Mode Receive 4.0 GHz  
Interference Objectives: Long Term -156.0 dBW/MHz 20%  
Short Term -146.0 dBW/MHz 0.01%  
Max Available RF Power

Transmit 6.1 GHz  
-154.0 dBW/4 kHz 20%  
-131.0 dBW/4 kHz 0.0025%  
3.0 (dBW/4 kHz)

Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz		Transmit 6.1 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)	Horizon Gain (dBi)	Coordination Distance (km)
185	0.00	42.28	-8.83	427.04	-14.60	207.12
190	0.00	41.56	-8.25	434.52	-14.60	207.12
195	0.00	40.39	-7.31	447.03	-14.60	207.12
200	0.00	38.79	-6.52	457.82	-13.63	212.83
205	0.00	36.83	-5.73	468.16	-12.06	222.38
210	0.00	34.53	-4.81	481.31	-10.23	233.93
215	0.22	31.78	-3.71	488.12	-8.02	243.78
220	0.37	28.86	-2.77	445.00	-5.69	230.65
225	0.66	25.63	-2.13	374.98	-3.11	205.34
230	0.81	22.35	-0.94	360.62	-2.60	192.55
235	1.08	18.85	0.46	337.98	-2.14	173.78
240	1.29	15.29	1.88	335.47	-0.72	172.19
245	1.44	11.67	5.33	357.52	1.73	178.72
250	1.69	7.92	9.15	377.90	6.55	194.54
255	1.73	5.09	13.82	539.90	11.22	326.40
260	1.91	6.11	11.89	389.89	9.29	201.09
265	2.11	9.93	6.15	314.84	3.55	160.69
270	2.22	14.51	2.49	276.67	-0.11	141.36
275	1.98	19.38	0.25	270.85	-2.35	138.56
280	1.67	24.31	-1.72	274.71	-2.60	148.04
285	1.37	29.26	-2.85	285.13	-6.01	144.07
290	1.23	34.20	-4.68	279.24	-9.96	133.31
295	1.00	39.17	-6.67	278.07	-13.93	126.53
300	1.06	44.11	-10.00	250.24	-14.60	122.81
305	1.12	49.05	-10.00	246.67	-14.60	121.21
310	1.20	54.01	-10.00	241.94	-14.60	119.11
315	1.23	58.98	-10.00	240.36	-14.60	118.43
320	1.14	63.95	-10.00	245.78	-14.60	120.81
325	1.18	68.92	-10.00	243.25	-14.60	119.69
330	1.30	73.89	-10.00	236.31	-14.60	116.70
335	1.15	78.87	-10.00	244.99	-14.60	120.45
340	1.55	83.84	-10.00	222.62	-14.60	112.78
345	1.87	88.82	-10.00	205.84	-14.60	105.22
350	1.84	93.81	-10.00	207.32	-14.60	105.91
355	1.52	98.78	-10.00	223.88	-14.60	113.32

## 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.



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

DATED: July 28, 2005