

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
SkyLine Telephone Membership Corporation
SkyBest Communications
West Jefferson, Nc
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
November 28, 2007

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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 receive-only earth station.

Company

MCI Communication Services, Inc.

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 11/26/2007.

Company

AT&T COMMUNICATIONS OF VIRGINIA INC
MCI Communication Services, Inc.

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: 11/28/2007
Job Number: 071126COMSTC04

Administrative Information

Licensee Name SkyLine Telephone Membership Corporation
SkyBest Communications

Site Information

WEST JEFFERSON, NC

Latitude (NAD 83) 36° 24' 53.3" N
Longitude (NAD 83) 81° 29' 52.4" W
Climate Zone A
Rain Zone 1
Ground Elevation (AMSL) 932.4 m / 3059.1 ft

Link Information

Satellite Type Geostationary
Mode RO - Receive-Only
Modulation Analog and Digital
Satellite Arc 60° W to 143° West Longitude
Azimuth Range 146.4° to 252.1°
Corresponding Elevation Angles 42.0° / 14.1°
Antenna Centerline (AGL) 3.66 m / 12.0 ft

Antenna Information

Receive - T40501

Manufacturer ANTENNA TECH CORP
Model SIMULSAT 5M
Gain / Diameter 44.0 dBi / 5.0 m
3-dB / 15-dB Beamwidth 0.80° / 2.20°

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
36M0F3F / 3700.0 - 4200.0

Max Great Circle Coordination Distance 366.4 km / 227.6 mi
Precipitation Scatter Contour Radius 603.0 km / 374.7 mi

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Coordination Values	WEST JEFFERSON, NC
Latitude (NAD 83)	36° 24' 53.3" N
Longitude (NAD 83)	81° 29' 52.4" W
Ground Elevation (AMSL)	932.4 m / 3059.1 ft
Antenna Centerline (AGL)	3.66 m / 12.0 ft
Antenna Model	ANTENNA TECH CORP SIMULSAT 5M
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	2.86	107.51	-1.02	217.35
5	4.42	112.52	-1.11	188.91
10	5.16	117.49	-1.11	177.34
15	5.10	121.94	-1.08	178.32
20	4.80	118.22	-1.05	182.95
25	4.63	114.48	-1.06	185.71
30	5.06	110.84	-1.01	179.14
35	4.45	106.84	-1.17	188.08
40	2.86	102.67	-1.08	217.04
45	1.20	98.63	-1.06	266.66
50	0.82	94.84	-1.14	285.67
55	2.50	91.11	-1.06	225.60
60	1.94	87.28	-1.04	240.42
65	0.46	83.61	-1.24	313.31
70	0.38	79.91	-1.08	324.30
75	0.23	76.27	-1.05	345.04
80	0.00	72.73	-1.14	347.95
85	1.02	68.85	-1.07	273.55
90	2.02	64.95	-1.16	237.30
95	1.95	61.52	-1.03	240.39
100	3.90	57.18	-1.11	197.79
105	5.84	52.77	-1.02	169.38
110	7.86	48.27	-1.17	140.96
115	7.72	45.19	-1.04	143.20
120	6.43	43.28	-0.31	163.75
125	4.71	42.25	0.10	190.79
130	3.54	41.35	0.46	210.64
135	1.94	41.43	0.43	250.32
140	2.17	40.29	0.88	246.36
145	1.89	40.17	0.93	255.46
150	2.02	40.15	0.94	251.28
155	3.18	39.64	1.07	222.08
160	3.69	40.32	0.87	209.85
165	3.34	42.19	0.12	213.12
170	3.13	43.62	-0.45	214.39
175	2.70	44.79	-0.92	221.57
180	2.10	45.65	-1.13	235.25
185	2.82	44.67	-0.87	219.01

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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)
190	3.30	43.46	-0.38	211.14
195	4.03	41.56	0.38	203.12
200	4.29	39.67	1.07	202.62
205	5.52	36.57	1.69	189.09
210	7.53	32.54	3.48	173.35
215	9.41	28.40	5.64	163.18
220	10.79	24.48	7.21	160.06
225	13.18	19.62	9.23	153.29
230	14.30	15.61	11.64	158.69
235	15.80	11.18	13.82	160.41
240	16.15	7.49	15.51	170.53
245	15.40	4.46	23.16	221.12
250	15.15	0.94	39.39	366.38
255	15.16	3.04	29.84	274.84
260	15.04	7.92	15.08	176.64
265	14.74	12.88	13.00	163.68
270	14.19	17.87	10.28	151.53
275	14.20	22.87	7.85	137.87
280	13.93	27.87	5.85	130.55
285	12.98	32.88	3.27	123.91
290	12.33	37.90	1.42	119.34
295	10.91	42.96	-0.19	121.43
300	9.14	48.06	-1.14	130.77
305	6.93	53.21	-1.26	151.72
310	5.25	58.30	-1.14	176.03
315	4.66	63.27	-1.15	184.65
320	2.83	68.32	-1.07	217.67
325	1.40	73.30	-1.07	259.18
330	1.00	78.19	-1.17	273.61
335	0.33	83.07	-1.01	332.07
340	1.29	87.92	-1.07	263.24
345	1.51	92.80	-1.08	255.06
350	1.71	97.68	-1.13	247.81
355	2.75	102.61	-1.07	219.66

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.



Timothy O. Crutcher
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COMSEARCH
19700 Janelia Farm Boulevard
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DATED: November 28, 2007