

Multicomm Sciences Int'l, Inc



Wireless Engineering Services

FCC - Satellite - Microwave - Lightguide
Frequency Coordination - Path Surveys
Radiation Hazard Testing - CAD & Route Mapping

Mail@MulticommSciences.com

288 West Main Street
Denville, NJ 07834

Phone: 973-627-7400

Fax: 973-625-1002

<http://www.MulticommSciences.com>

FREQUENCY COORDINATION REPORT

4 AND 6 GHZ TRANSMIT-RECEIVE EARTH STATION

SPIRIT COMMUNICATIONS, INC.

WESTERVILLE, OH

MARCH 15, 2005

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 Microwave Environment as defined on the frequency coordination data sheet.

2. SUMMARY OF RESULTS

There were no potential great circle interference cases at 4 GHz. All of the potential great circle interference cases at 6 GHz were found to be acceptable on the basis that harmful interference will not likely result from the proposed operation, considering the criteria, the potential interference receive levels, and the total propagation losses.

There were no reported cases of rain scatter beam intersections.

3. **SUPPLEMENTAL SHOWING**

The Satellite Earth station proposed in this Application was coordinated by Multicomm Sciences International, Inc., Frequency Coordinators Group, using computer techniques and in accordance with Parts 25 and 101 of the FCC Rules and Regulations.

4. **FREQUENCY COORDINATION DATA**

Frequency Coordination Data which is attached, contains the following:

Technical Characteristics of Proposed Earth Station

Horizon Antenna Gain Plot

Discrimination Angle Plot

Local Horizon Plot

Satellite Elevation Plot

4 and 6 GHz Coordination Contour

4 and 6 GHz Rain Scatter

5. **FREQUENCY COORDINATION STATEMENT (FCC PART 101)**

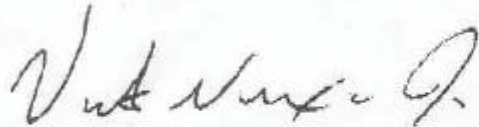
Holders of licenses, permittees, prior filed applicants or planners of 6 GHz transmitting stations were notified on February 11, 2005 of the proposed Earth Station technical details in accordance with Section 25.203 (c-2) of the FCC Rules and Regulations. Satisfactory coordination was achieved on the basis that harmful interference would not occur, or that sufficient terrestrial blocking exists.

AT&T
American Cellular
New Cingular Wireless Svcs of FI. – OH
Cellco Partnership - Michigan and Ohio
City of Cincinnati
Minford Cellular Telephone
Ohio RSA 2 LP
Ohio RSA 5 LP
New Par – Michigan and Ohio
MCI Worldcom Network Svcs
Ohio RSA 6 LP
Orange Cnty Cellular Telephone
Toledo MSA LP
Cincinnati City OH
East Ohio Gas
CNG Transmission
Norfolk Southern Railway
Springfield Cellular Telephone
Corban Networks

6. **Certification of Person Responsible for Preparing Frequency Coordination Information Submitted in this Application**

I hereby certify that I am the technically qualified person responsible for preparation of the frequency coordination information contained in this application; that I am familiar with Parts 101 and 25 of the Commission's Rules;

that I have either prepared or reviewed the frequency coordination information submitted in this application; and, that it is complete and accurate to the best of my knowledge.



Victor Nexon, Jr., President
Multicomm Sciences International, Inc.
March 15, 2005



SATELLITE EARTH STATION
 FREQUENCY COORDINATION DATA
 2/12/05

COMPANY NAME:	SPIRIT COMMUNICATIONS, INC.
EARTH STATION LOCATION:	WESTERVILLE, OH
LATITUDE (DMS):	40 8 16.4 Nad 83
LONGITUDE (DMS):	82 55 59.9 "
SITE GROUND ELEVATION (FT. AMSL):	870.0
ANTENNA CENTER LINE (FT)	9.0
ANTENNA TYPE:	VERTEX
	4.8M
ANTENNA DIAMETER (METERS):	4.8
4 GHZ ANTENNA GAIN (DBI):	44.0
15 DB HALF BEAMWIDTH (DEG):	1.14
6 GHZ ANTENNA GAIN (DBI):	48.1
15 DB HALF BEAMWIDTH (DEG):	.68
OPERATING MODE:	T/R
RECEIVE BAND (MHZ):	3700 - 4200
TRANSMIT BAND (MHZ):	5925 - 6425
MISSION DESIGNATOR	12MOG7W
MODULATION:	DIGITAL
MAX. AVAILABLE RF POWER (DBW/4KHZ):	-10.0
(DBW/12MHZ):	24.8
MAX. EIRP (DBW/4KHZ):	38.1
(DBW/12MHZ):	72.9
MAX. PERMISSIBLE INTERFERENCE POWER	
4 GHZ 20% (DBW)	-140.0
4 GHZ 0.0100% (DBW)	-130.0
6 GHZ 20% (DBW/4KHZ)	-154.0
6 GHZ 0.0025% (DBW/4KHZ)	-131.0
SATELLITE ARC (MIN/MAX)	65/143 DEG
AZIMUTH	153.3/249.6 DEG
ELEVATION	40.0/ 14.0 DEG
RADIO CLIMATE	A
RAIN ZONE	2
MAXIMUM GREAT CIRCLE COORDINATION DISTANCE (KM)	
4 GHZ	230.9
6 GHZ	143.7
PRECIPITATION SCATTER CONTOUR RADIUS (KM)	
4 GHZ	102.0
6 GHZ	103.0

MULTICOMM SCIENCES INTERNATIONAL, INC.
 Denville, NJ 07834 (973)-627-7400

WESTERVILLE, OH

40 8 16.4

82 55 59.9

AZ DEG	DISC DEG	HOR DEGREES	4GHZ HOR GAIN	6GHZ HOR GAIN	4GHZ COORD KM	6GHZ COORD KM	RAIN 4 SCAT KM	RAIN 6 SCAT KM
5.	115.	.0	-12.0	-15.0	124.5	102.0	102.0	103.0
10.	119.	.0	-12.0	-15.0	123.0	102.0	102.0	103.0
15.	124.	.0	-12.0	-15.0	121.6	102.0	102.0	103.0
20.	122.	.0	-12.0	-15.0	122.3	102.0	102.0	103.0
25.	118.	.0	-12.0	-15.0	123.3	102.0	102.0	103.0
30.	115.	.0	-12.0	-15.0	124.4	102.0	102.0	103.0
35.	111.	.0	-12.0	-15.0	125.5	102.0	102.0	103.0
40.	108.	.0	-12.0	-15.0	126.8	102.0	102.0	103.0
45.	104.	.0	-12.0	-15.0	128.1	102.0	102.0	103.0
50.	100.	.0	-12.0	-15.0	129.5	102.0	102.0	103.0
55.	96.	.0	-12.0	-15.0	131.0	102.0	102.0	103.0
60.	93.	.0	-12.0	-15.0	132.5	102.0	102.0	103.0
65.	89.	.0	-12.0	-15.0	134.2	102.0	102.0	103.0
70.	85.	.0	-12.0	-15.0	135.9	102.0	102.0	103.0
75.	81.	.0	-12.0	-15.0	137.8	102.0	102.0	103.0
80.	77.	.0	-12.0	-15.0	139.7	102.0	102.0	103.0
85.	74.	.0	-12.0	-15.0	141.8	102.0	102.0	103.0
90.	70.	.0	-12.0	-15.0	143.9	102.0	102.0	103.0
95.	66.	.0	-12.0	-15.0	146.2	102.0	102.0	103.0
100.	63.	.0	-12.0	-15.0	148.5	102.0	102.0	103.0
105.	59.	.0	-12.0	-15.0	151.0	102.0	102.0	103.0
110.	56.	.0	-12.0	-15.0	153.5	102.0	102.0	103.0
115.	53.	.0	-12.0	-15.0	156.1	102.0	102.0	103.0
120.	50.	.0	-12.0	-15.0	158.6	102.0	102.0	103.0
125.	48.	.0	-9.9	-9.9	161.1	100.2	102.0	103.0
130.	45.	.0	-9.4	-9.4	163.5	101.7	102.0	103.0
135.	43.	.0	-8.9	-8.9	165.6	103.0	102.0	103.0
140.	42.	.0	-8.5	-8.5	167.4	104.1	102.0	103.0
145.	41.	.0	-8.3	-8.3	168.7	105.0	102.0	103.0
150.	40.	.0	-8.1	-8.1	169.4	105.4	102.0	103.0
155.	40.	.0	-8.1	-8.1	169.6	105.5	102.0	103.0
160.	40.	.0	-8.2	-8.2	169.0	105.2	102.0	103.0
165.	41.	.0	-8.4	-8.4	167.9	104.5	102.0	103.0
170.	43.	.0	-8.7	-8.7	166.5	103.6	102.0	103.0
175.	43.	.0	-8.9	-8.9	165.7	103.1	102.0	103.0
180.	44.	.0	-9.0	-9.0	165.4	102.9	102.0	103.0
185.	43.	.0	-8.9	-8.9	165.7	103.1	102.0	103.0
190.	43.	.0	-8.7	-8.7	166.5	103.6	102.0	103.0
195.	41.	.0	-8.4	-8.4	167.9	104.5	102.0	103.0
200.	40.	.0	-8.0	-8.0	170.0	105.7	102.0	103.0
205.	38.	.0	-7.4	-7.4	172.6	107.4	102.0	103.0

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WESTERVILLE, OH

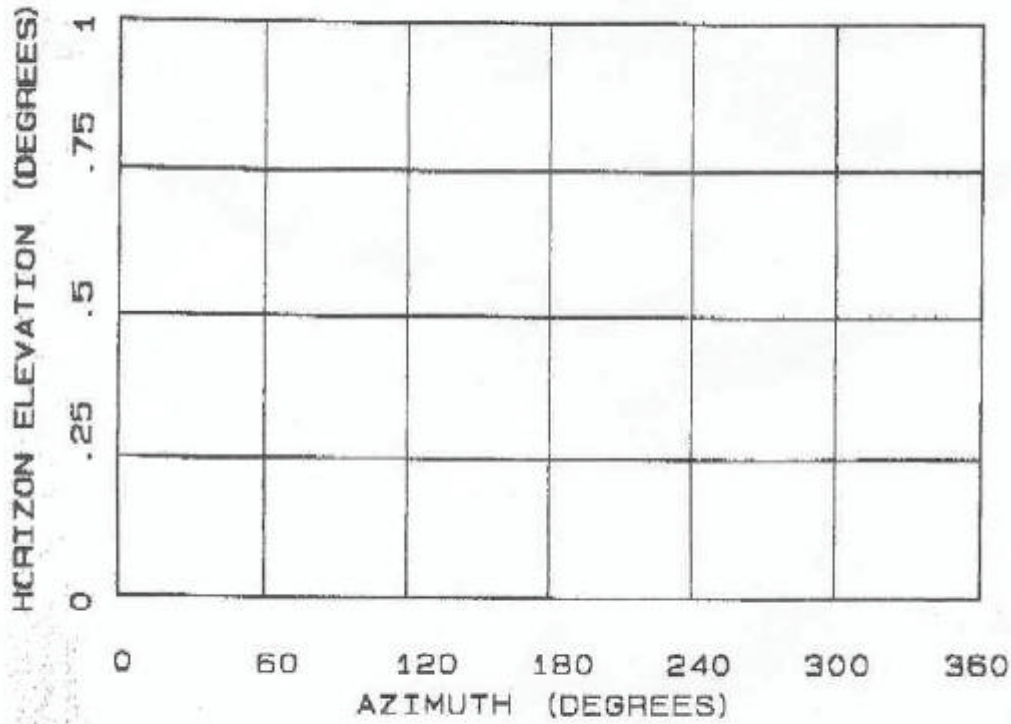
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82 55 59.9

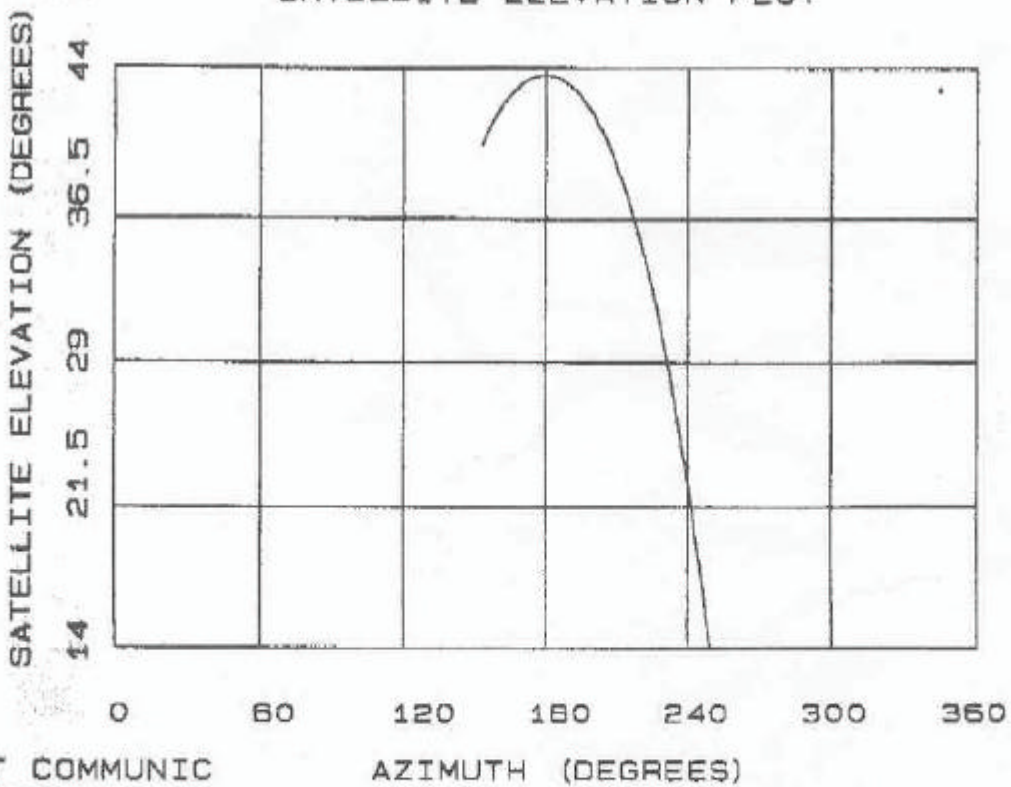
	DISC DEG	HOR DEGREES	ANG DEGREES	4GHZ HOR GAIN	6GHZ HOR GAIN	4GHZ COORD KM	6GHZ COORD KM	RAIN 4 SCAT KM	RAIN 6 SCAT KM
10.	35.	.0		-6.7	-6.7	175.9	109.4	102.0	103.0
15.	33.	.0		-5.9	-5.9	179.9	111.9	102.0	103.0
20.	30.	.0		-4.9	-4.9	184.9	115.0	102.0	103.0
25.	27.	.0		-3.7	-3.7	190.9	118.8	102.0	103.0
30.	24.	.0		-2.3	-2.3	198.3	123.4	102.0	103.0
35.	20.	.0		-.6	-.6	207.5	129.1	102.0	103.0
40.	17.	.0		1.3	1.3	218.4	135.9	102.0	103.0
45.	15.	.0		2.8	2.8	227.5	141.6	102.0	103.0
50.	14.	.0		3.3	3.3	230.9	143.7	102.0	103.0
55.	15.	.0		2.6	2.6	226.4	140.9	102.0	103.0
60.	17.	.0		1.0	1.0	216.8	134.9	102.0	103.0
65.	21.	.0		-.9	-.9	206.0	128.1	102.0	103.0
70.	25.	.0		-2.7	-2.7	195.8	121.8	102.0	103.0
75.	29.	.0		-4.5	-4.5	186.9	116.3	102.0	103.0
80.	33.	.0		-6.0	-6.0	179.2	111.5	102.0	103.0
85.	38.	.0		-7.4	-7.4	172.6	107.4	102.0	103.0
90.	42.	.0		-8.7	-8.7	166.8	103.8	102.0	103.0
95.	47.	.0		-9.8	-9.8	161.7	100.6	102.0	103.0
100.	52.	.0		-12.0	-15.0	157.2	102.0	102.0	103.0
105.	57.	.0		-12.0	-15.0	153.2	102.0	102.0	103.0
110.	61.	.0		-12.0	-15.0	149.6	102.0	102.0	103.0
115.	66.	.0		-12.0	-15.0	146.3	102.0	102.0	103.0
120.	71.	.0		-12.0	-15.0	143.3	102.0	102.0	103.0
125.	76.	.0		-12.0	-15.0	140.5	102.0	102.0	103.0
130.	81.	.0		-12.0	-15.0	138.0	102.0	102.0	103.0
135.	86.	.0		-12.0	-15.0	135.7	102.0	102.0	103.0
140.	90.	.0		-12.0	-15.0	133.5	102.0	102.0	103.0
145.	95.	.0		-12.0	-15.0	131.4	102.0	102.0	103.0
150.	100.	.0		-12.0	-15.0	129.5	102.0	102.0	103.0
155.	105.	.0		-12.0	-15.0	127.7	102.0	102.0	103.0
160.	110.	.0		-12.0	-15.0	126.1	102.0	102.0	103.0

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LOCAL HORIZON PLOT



SATELLITE ELEVATION PLOT

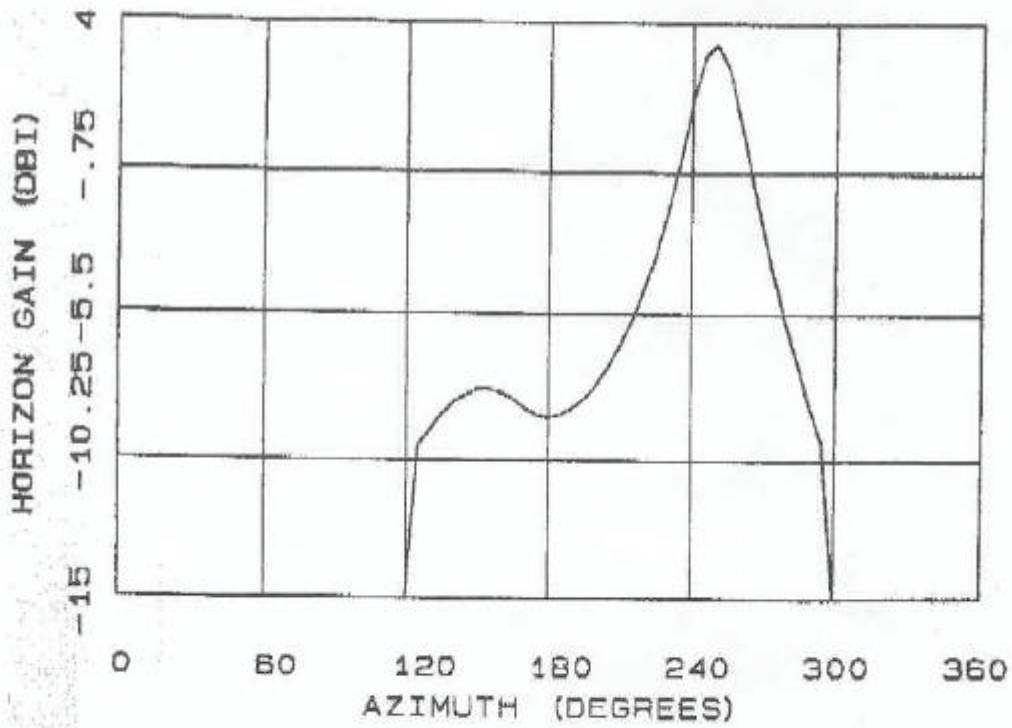


SPIRIT COMMUNIC
WESTERVILLE, OH

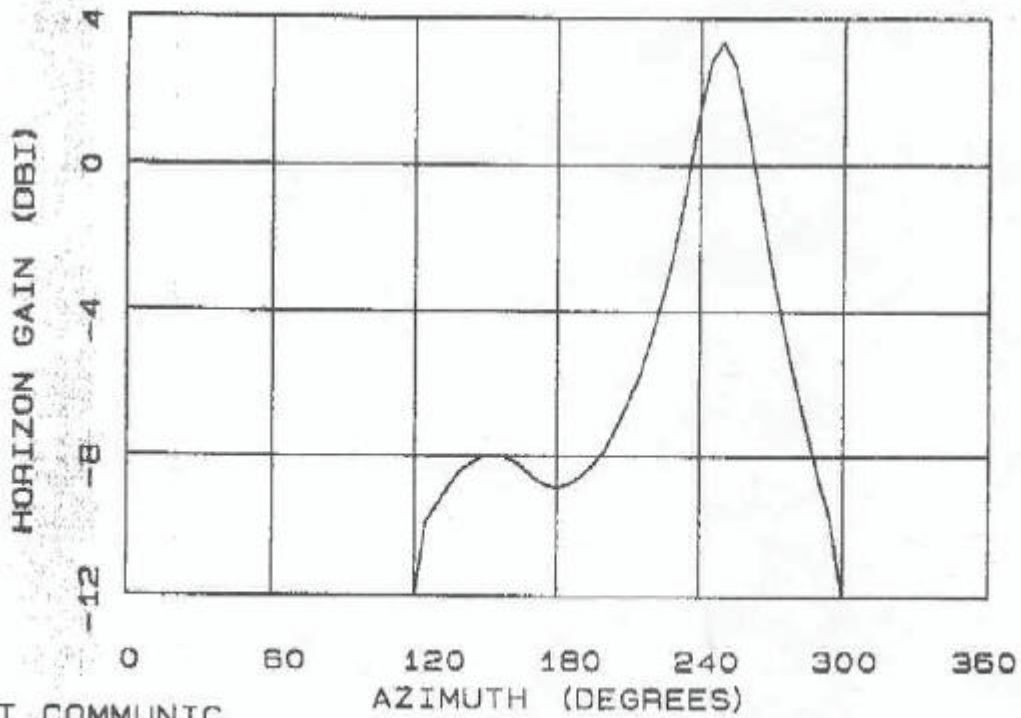
40 8 16.4N 82 55 59.9W
03-15-2005

MSI

HORIZON ANTENNA GAIN PLOT 6 GHZ



HORIZON ANTENNA PLOT 4 GHZ



PIRIT COMMUNIC
ESTERVILLE, OH
40 8 16.4N 82 55 59.9W
3-15-2005

MSI



SPIRIT COMMUNIC
 WESTERVILLE, OH
 40° 8' 16.4" N 82° 55' 59.9" W
 03-15-2005

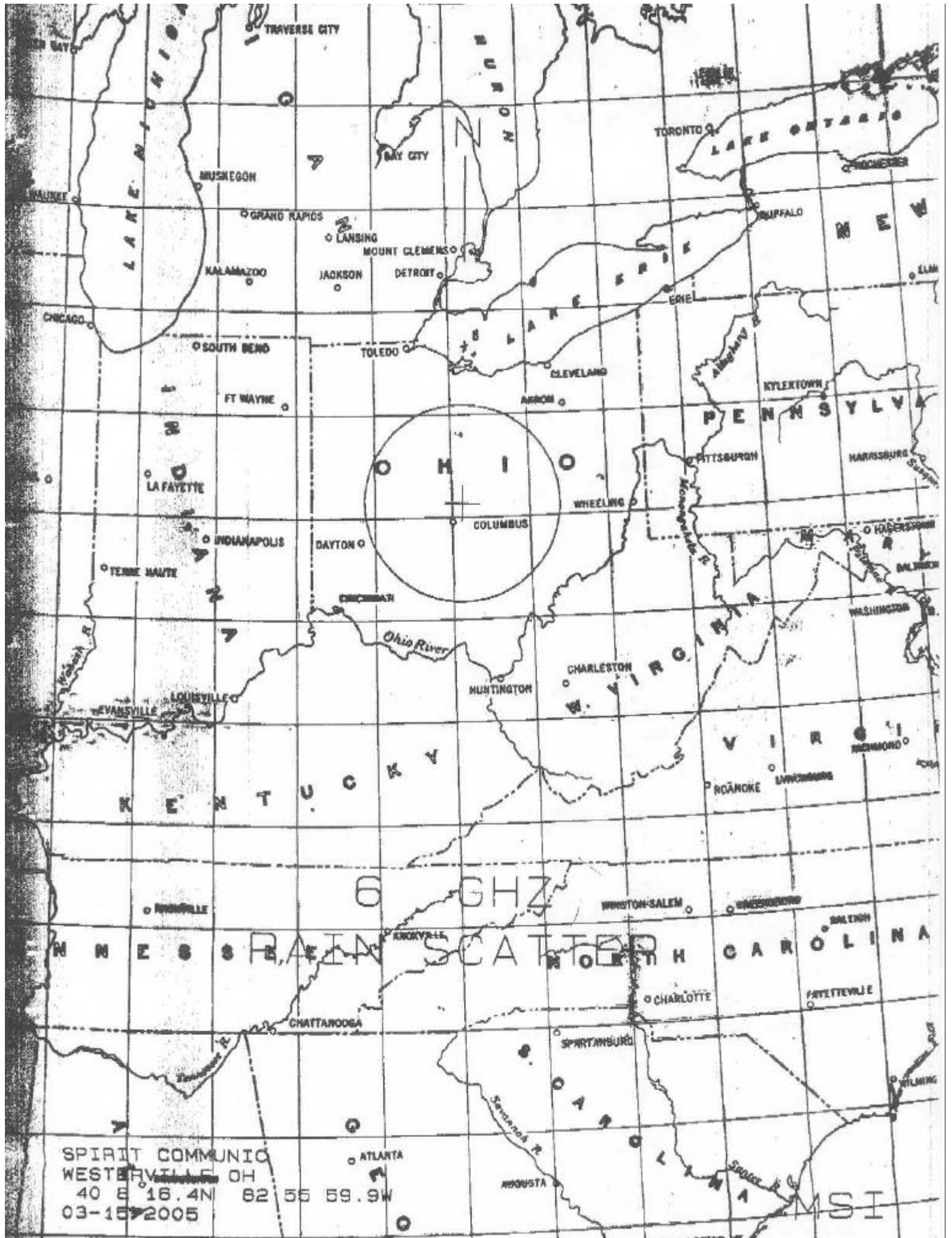
MSI



4 GHZ

COORDINATION CONT

SPIRIT COMMUNIC
WESTERMILLE, OH
40 8 16 24 N 82 55 59.9W



SPIRIT COMMUNIC
WESTERVILLE OH
40 8 16.4N 82 55 59.9W
03-15-2005

6 GHz

6 GHz SCATTER

MSI



SPIRIT COMMUNIC
 WESTERVILLE, OH
 40° 16.4N 82° 55.9W
 03-12-2008

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February 11, 2005

TO: All Coordinators

RE: Spirit Communication Inc.
T/R Earth Station
Westerville, OH

Dear Sir or Madam:

On behalf of our client, Spirit Communication Inc., we are forwarding the attached coordination data for a transmit-receive earth station in Westerville, OH.

Pursuant to Part 25.203 © of the FCC Rules and Regulations, a frequency coordination study of the facilities covered by this coordination was conducted by MSI. The results of the study indicate that no unacceptable interference will result.

We request that you examine the enclosed data for potential interference. We would appreciate a response by February 23, 2005. If we do not receive a response by that date, we shall assume you have no objections.

If you should have any questions, please do not hesitate to contact MSI.

Sincerely,

Andrea Palsulich, Manager
Data Processing Dept
Enc.