

FREQUENCY COORDINATION AND INTERFERENCE ANALYSIS REPORT

Prepared for
Antioch University (WYSO-FM)
YELLOW SPRING, OH
Satellite Earth Station

Prepared By:
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147
August 15, 2011

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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

No great circle interference cases were identified during the interference study of the proposed earth station. There are no unresolved interference objections with the proposed earth station antenna.

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 or their coordination agents with a letter dated 08/04/2011.

<u>Company</u>
Comsearch

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.

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Earth Station Data Sheet

19700 Janelia Farm Boulevard, Ashburn, VA 20147
(703)726-5500 <http://www.comsearch.com>

Date: 08/15/2011
Job Number: 110804COMSGE02

Administrative Information

Status	ENGINEER PROPOSAL
Call Sign	E060293
Licensee Code	WYSOFM
Licensee Name	Antioch University (WYSO-FM)

Site Information

Venue Name	YELLOW SPRINGS, OH WYSO RADIO ANTIOCH U
Latitude (NAD 83)	39° 47' 54.8" N
Longitude (NAD 83)	83° 53' 27.1" W
Climate Zone	A
Rain Zone	2
Ground Elevation (AMSL)	311.81 m / 1023.0 ft

Link Information

Satellite Type	Geostationary
Mode	RO - Receive-Only
Modulation	Digital
Satellite Arc	60° W to 143° West Longitude
Azimuth Range	145.3° to 249.0°
Corresponding Elevation Angles	37.8° / 14.8°
Antenna Centerline (AGL)	17.98 m / 59.0 ft

Antenna Information

	Receive - FCC32
Manufacturer	Prodelin 3.7 meter
Gain / Diameter	41.7 dBi / 3.7 m
3-dB / 15-dB Beamwidth	1.40° / 2.40°

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)	30K0F1D - 10M3G7W / 3700.0 - 4200.0

Max Great Circle Coordination Distance	377.7 km / 234.7 mi
Precipitation Scatter Contour Radius	519.4 km / 322.7 mi

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Coordination Values

YELLOW SPRINGS, OH

Licensee Name Antioch University (WYSO-FM)
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Longitude (NAD 83) 83° 53' 27.1" W
Ground Elevation (AMSL) 311.81 m / 1023.0 ft
Antenna Centerline (AGL) 17.98 m / 59.0 ft
Antenna Model Prodelin 3.7 meter
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	0.00	110.23	-10.00	285.28
5	0.00	115.03	-10.00	285.28
10	0.00	119.82	-10.00	285.28
15	0.00	120.77	-10.00	285.28
20	0.00	117.20	-10.00	285.28
25	0.00	113.52	-10.00	285.28
30	0.00	109.76	-10.00	285.28
35	0.00	105.93	-10.00	285.28
40	0.00	102.06	-10.00	285.28
45	0.00	98.14	-10.00	285.28
50	0.00	94.20	-10.00	285.28
55	0.00	90.25	-10.00	285.28
60	0.00	86.30	-10.00	285.28
65	0.00	82.36	-10.00	285.28
70	0.00	78.44	-10.00	285.28
75	0.00	74.56	-10.00	285.28
80	0.00	70.72	-10.00	285.28
85	0.00	66.95	-10.00	285.28
90	0.00	63.27	-10.00	285.28
95	0.00	59.68	-10.00	285.28
100	0.00	56.23	-10.00	285.28
105	0.00	52.93	-10.00	285.28
110	0.00	49.83	-10.00	285.28
115	0.00	46.96	-9.79	286.59
120	0.00	44.39	-9.18	290.54
125	0.00	42.15	-8.62	294.21
130	0.00	40.31	-8.14	297.41
135	0.00	38.94	-7.76	299.93
140	0.00	38.08	-7.52	301.57
145	0.00	37.76	-7.43	302.18
150	0.00	38.01	-7.50	301.71
155	0.00	38.80	-7.72	300.19
160	0.00	40.11	-8.08	297.77
165	0.00	41.72	-8.51	294.95
170	0.00	42.95	-8.82	292.88
175	0.00	43.70	-9.01	291.65
180	0.00	43.95	-9.07	291.23
185	0.00	43.70	-9.01	291.64

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Coordination Values

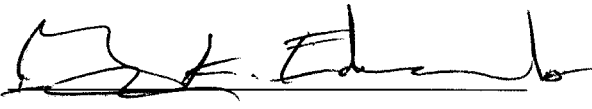
YELLOW SPRINGS, OH

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Azimuth (°)	Horizon Elevation (°)	Antenna Discrimination (°)	Receive 4.0 GHz	
			Horizon Gain (dBi)	Coordination Distance (km)
190	0.00	42.94	-8.82	292.88
195	0.00	41.72	-8.51	294.95
200	0.00	40.06	-8.07	297.87
205	0.00	38.02	-7.50	301.68
210	0.00	35.64	-6.80	306.46
215	0.00	32.98	-5.96	312.93
220	0.00	30.08	-4.96	319.99
225	0.00	26.98	-3.78	328.47
230	0.00	23.72	-2.38	338.72
235	0.00	20.31	-0.69	351.32
240	0.00	17.31	1.04	364.64
245	0.00	15.35	2.34	374.86
250	0.00	14.85	2.70	377.71
255	0.00	15.95	1.93	371.59
260	0.00	18.36	0.40	359.70
265	0.00	21.65	-1.39	346.10
270	0.00	25.48	-3.15	333.00
275	0.00	29.63	-4.79	321.14
280	0.00	34.00	-6.29	309.99
285	0.00	38.51	-7.64	300.74
290	0.00	43.11	-8.86	292.61
295	0.00	47.77	-9.98	285.41
300	0.00	52.49	-10.00	285.28
305	0.00	57.24	-10.00	285.28
310	0.00	62.01	-10.00	285.28
315	0.00	66.80	-10.00	285.28
320	0.00	71.61	-10.00	285.28
325	0.00	76.43	-10.00	285.28
330	0.00	81.26	-10.00	285.28
335	0.00	86.09	-10.00	285.28
340	0.00	90.92	-10.00	285.28
345	0.00	95.76	-10.00	285.28
350	0.00	100.59	-10.00	285.28
355	0.00	105.41	-10.00	285.28

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.

BY: 

Gary K. Edwards
Senior Manager
COMSEARCH
19700 Janelia Farm Boulevard
Ashburn, VA 20147

DATED: August 15, 2011