

Exhibit 12

Interference Analysis Overlap Requirements

According to CFR 47 §74.1204(a), translators are required to protect all existing FM stations from interference due to overlap of the protected contours of the existing stations with the interfering contours of the new translators.

US Stations

In the attached tabular printout, only AP254 and WBYR have outgoing contour overlaps from the proposed translator, so no interference to other stations is anticipated. Incoming overlap is not prohibited.

AP254 is the current application, and need not be protected.

WBYR is second adjacent to the proposed translator, and, according to §74.1204(d),

"The provisions of this section concerning prohibited overlap will not apply where the area of such overlap lies entirely over water. In addition, an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to ... lack of population"

The F(50,50) signal from WBYR at the proposed site is 61.6 dBu. A 40 dB ratio of undesired to desired signal strength gives an allowable interfering F(50,10) field strength of 101.6 dBu. Utilizing the specified 4 bay half wave spaced antenna at 69 meters from the ground, the maximum signal strength on the ground is only 95.99 dBu (see attached spreadsheet), less than the above mentioned 101.6 dBu. It only reaches down to 32.18 m above the ground. There are no habitable buildings in the area which could reach up to intersect the contour. Hence §74.1204(d) applies, and the predicted area of interference is acceptable to the Commission.

No other entries are sufficiently close to the proposed translator to require analysis.

Canadian Consideration

The proposed translator is 178 km from the nearest point in Canada, within the 320 km limit established by treaty. The 0.027 kW ERP does not exceed the maximum 250 Watts, and the maximum 31.9 km F(50,10) 34 dBu contour (see data printout) does not exceed the statutory 60 km. No Canadian stations were found in the above search. Hence there is no outgoing interference with any Canadian stations. Because the 34 dBu F(50,10) contour does not cross the common border (31.9 km maximum contour distance is not greater than the 178 km minimum distance to Canada), Canadian concurrence is not required. The relevant document for this analysis is the July 9, 1997 modification to the February 25, 1991 agreement.

Exhibit 12
 CSN International

REFERENCE CH# 257D - 99.3 MHz, Pwr= 0.027 kW, HAAT=82.8 M, COR= 336 M DISPLAY DATES
 41 21 00 N Average Protected F(50-50)= 6.74 km DATA 08-21-03
 85 05 47 W Ave. F(50-10) 40 dBu= 22.5 54 dBu= 9.6 80 dBu= 2.1 100 dBu= .4 SEARCH 08-26-03

CH CITY	CALL STATE	TYPE	AZI. <--	DIST FILE #	LAT. LNG.	Pwr (kW) HAAT (M)	COR (M) INT (km)	PRO (km) LICENSEE	*IN* (Overlap in km)	*OUT*
257A Sturgis	WMSHFM MI	LIC C	330.2 150.2	53.83 BLH20010507AAF	41 46 11 85 25 09	3.000 90	367 16.7	23.1 Lake Cities Broadcasting	-25.37	14.12 C
254D Auburn	AP254 IN	APP C	0.0 180.0	0.00 BNPFT20030317KHY	41 21 00 85 05 47	0.027 75	336 0.4	6.4 Csn International	-5.97*	-6.79*
255B Van Wert	WBYR OH	LIC CN	158.1 338.1	47.43 BLH19890117KH	40 57 14 84 53 07	50.000 140	375 0.7	63.6 Pathfinder Communications	34.90	-16.94*
257A Van Buren Accepted by Canada on 940222	WCJC IN	LIC CN	210.7 30.7	88.17 BLH19890906KD	40 40 01 85 37 50	3.000 110	356 21.5	25.3 Mid-america Radio Group, I	4.05	41.33
260D Fort Wayne	970929 IN	APP CN	197.1 17.1	27.99 BFPT19970929TB	41 06 33 85 11 42	0.027 71	327 0.4	6.2 Maranatha Christian Fellow	21.16	21.38
257A Cridersville	RADD OH	ADD	128.3 308.3	105.94	40 45 20 84 06 39	6.000 -235	0 22.5	15.8	30.89	67.72
258D Ligoneer	AP258 IN	APP C	280.0 100.0	38.65 BNPFT20030314BLU	41 24 33 85 33 06	0.027 66	349 7.4	6.0 Friends Of Christian Radio	24.84	25.25

 "*"Affixed to 'IN' or 'Out' values = site inside protected contour.
 ERP and HAAT are on direct line to and from reference station.

Exhibit 12

Freespace Interference Study based on Vertical Radiation Pattern ERI Series 100 4-bay 1/2-wave spaced antenna

Depression Angle from Antenna	Antenna Relative Field	ERP Watts	ERP dBk	Distance to Ground from Antenna (m)	Free Space Signal (dBu)	2.5 dB Loss for Reflection	Signal Strength at Ground (dBu)	Circular Distance From Tower (m)	Distance to Contour using Free Space (m)	Height of Contour above Ground (m)
90	0.001	0.000	-75.69	69.00	54.46	2.5	51.96	0.00	0.23	68.77
85	0.002	0.000	-69.67	69.26	60.44	2.5	57.94	6.04	0.45	68.55
80	0.010	0.003	-55.69	70.06	74.32	2.5	71.82	12.17	2.27	66.76
75	0.021	0.012	-49.24	71.43	80.60	2.5	78.10	18.49	4.77	64.39
70	0.043	0.050	-43.02	73.43	86.59	2.5	84.09	25.11	9.78	59.81
65	0.073	0.144	-38.42	76.13	90.87	2.5	88.37	32.18	16.60	53.96
60	0.110	0.327	-34.86	79.67	94.04	2.5	91.54	39.84	25.01	47.34
55	0.150	0.608	-32.16	84.23	96.25	2.5	93.75	48.31	34.10	41.07
50	0.185	0.924	-30.34	90.07	97.49	2.5	94.99	57.90	42.06	36.78
45	0.200	1.080	-29.67	97.58	97.47	2.5	94.97	69.00	45.47	36.85
40	0.182	0.894	-30.48	107.34	95.82	2.5	93.32	82.23	41.38	42.40
35	0.115	0.357	-34.47	120.30	90.84	2.5	88.34	98.54	26.14	54.00
30	0.001	0.000	-75.69	138.00	48.44	2.5	45.94	119.51	0.23	68.89
25	0.177	0.846	-30.73	163.27	91.94	2.5	89.44	147.97	40.24	51.99
20	0.393	4.170	-23.80	201.74	97.03	2.5	94.53	189.58	89.35	38.44
15	0.615	10.212	-19.91	266.60	98.49	2.5	95.99	257.51	139.82	32.81
10	0.815	17.934	-17.46	397.36	97.47	2.5	94.97	391.32	185.28	36.83
5	0.952	24.470	-16.11	791.69	92.84	2.5	90.34	788.67	216.43	50.14

Distance to Ground Level assumes flat ground or a site where the site level is above average terrain in all azimuths.

Maximum ERP	27 watts	Max dBu at Ground Level	95.99	Lowest Height of Contour	32.81
Radiation Center AG	69 m				
Radiation Center AG	226 ft.				
Maximum ERP	-15.69 dBk				
Protected dBu	61.6 dBu				
Interfering dBu	101.6 dBu				
Free Space Distance	303.17 m				

Exhibit 12
 Canada Terrain and Contour Data
 AP254 Auburn, IN

ERP 0.027 kW
 N. Lat. 41 20 60
 W. Lon. 85 5 47
 Center of Radiation 336.00 m AMSL

Azimuth Deg T.	Avg Elev 3-16 km Meters AMSL	Effective Antenna Ht Meters AAT	ERP Kilowatts	Distance to Contour (km) 34.0 dBu F(50,10)
0	279.8	56.2	0.0270	26.2
30	273.6	62.4	0.0270	27.5
60	260.6	75.4	0.0270	30.3
90	256.4	79.6	0.0270	31.2
120	253.8	82.2	0.0270	31.8
-->150	253.2	82.8	0.0270	31.9<--
180	260.7	75.3	0.0270	30.3
210	259.8	76.2	0.0270	30.5
240	266.1	69.9	0.0270	29.1
270	278.9	57.1	0.0270	26.4
300	289.9	46.1	0.0270	23.7
330	288.4	47.6	0.0270	24.1
Average	268.433	67.567	<--HAAT m	