

CONTOUR OVERLAP AND  
LONGLEY-RICE INTERFERENCE STUDIES  
PROPOSED W66CZ  
CHANNEL 50 – PORTSMOUTH, OHIO

We conducted a computer analysis of the interference situation for the proposed facility, the results of which are shown in Exhibit D-2. The study is based on contour protection requirements of Sections 74.705, 74.706, and 74.707 of the FCC's Rules with respect to analog full-power, digital full-power, and low power television stations, respectively. It concludes that the facility proposed herein meets these requirements except to two stations: WDTN-DT (CP and STA), Channel 50 in Dayton, Ohio; and, WOAY-DT (CP and STA), Channel 50 in Oak Hill, West Virginia.

We then conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to WDTN-DT and WOAY-DT. The software utilizes a 2-square kilometer cell size, calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 2000 U.S. Census to count population within cells. In addition, the program does not attribute interference to the proposed facility in cells within the protected contour of the station under study where interference from another source (other than Trinity's proposed W66CZ) already is predicted to exist (also known as "masking"). The results of this study are provided in Exhibit D-3. It concludes that the facility proposed herein causes no significant interference to either station of concern.

EXHIBIT D-1

As a result, a waiver of Section 74.706 of the Commission's Rules with respect to interference to WDTN-DT and WOAY-DT is requested and believed to be justified based on the aforementioned Longley-Rice studies

EXHIBIT D-2

PROPOSED W66CZ  
CH. 50 - PORTSMOUTH OH

## REFERENCE

38 43 20 N  
83 00 05 W

LPTV Pwr = 12.4 kW, HAMS L COR= 452 M

## DISPLAY DATES

DATA 02-22-03  
SEARCH 08-01-03

..... Channel 50Z, 686 MHz .....

Call	Channel	Location		Dist	Azi	FCC	Margin
WDTN-D*CP	50	Dayton	OH	154.85	316.1	> 269.77	-114.92
WDTN-D*ST	50	Dayton	OH	154.85	316.1	> 266.97	-112.12
WOAY-D*CP	50	Oak Hill	WV	182.72	117.2	> 269.17	-86.45
WOAY-D*ST	50	Oak Hill	WV	182.72	117.2	> 228.56	-45.84
WEAO-D*AP	50	Akron	OH	287.00	23.5	> 280.56	6.44
W49BN* LI	49+	Huntington	WV	51.32	135.6	> 025.49	25.96
WBXX-D*CP	50	Crossville	TN	313.22	202.5	> 281.57	36.44
WPCB-D CPM	50	Greensburg	PA	333.13	55.0	> 295.20	37.93
WOHZ-L LI	50Z	Mansfield	OH	229.05	8.1	> 190.02	39.03
WPCBTV ALD	50	GREENSBURG	PA	333.12	55.1	> 286.68	46.44
WTVQTV LI	36Z	Lexington	KY	143.68	238.2	> 088.22	55.46
WKEF-D CP	51	Dayton	OH	155.24	316.3	> 094.21	61.03
WKEF ALD	51	DAYTON	OH	155.31	316.1	> 094.25	61.06
WKEF-D ST	51	Dayton	OH	155.24	316.3	> 091.64	63.60
WSFJTV LI	51Z	Newark	OH	145.36	20.3	> 079.72	65.64
WKHA LI	35+	Hazard	KY	170.55	185.5	> 104.34	66.21
WTAPTV ALD	49	PARKERSBURG	WV	142.51	60.2	> 075.44	67.07
WTAP-D CP	49	Parkersburg	WV	142.51	60.2	> 075.20	67.31
WYMTTV LI	57-	Hazard	KY	170.37	185.4	> 100.00	70.37

\* Actual radials antenna height and directional patterns used (if any)

## INTERFERENCE SUMMARY

PROPOSED W66CZ  
CHANNEL 50 - PORTSMOUTH, OHIO

<u>Call Sign</u>	<u>Status</u>	<u>City, State</u>	<u>Ch.</u>	<u>Longley-Rice Service Population</u>	<u>Unmasked Interference From Proposed Facility</u>	<u>%</u>
WDTN-DT BPCDT-19991020ABX	CP	Dayton, OH	50	3,138,507	0	0
WDTN-DT BDSTA-20021217ACD	STA	Dayton, OH	50	3,023,471	82	<0.1
WOAY-DT BPCDT-19991101AJZ	CP	Oak Hill, WV	50	529,228	671	0.1
WOAY-DT BDSTA-20021023ABJ	STA	Oak Hill, WV	50	133,547	81	<0.1