

CONTOUR OVERLAP AND  
LONGLY-RICE INTERFERENCE STUDIES  
PROPOSED W56DN  
CHANNEL 41 - EVANSVILLE, INDIANA

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 five stations: WNPX-DT, Channel 36 in Cookeville, Tennessee; WTWO-DT, Channel 36 in Terre Haute, Indiana; WKMU-DT, Channel 36 in Murray, Kentucky; new DTV Station on Channel 36 in Springfield, Illinois; and WKMA, Channel 35 in Madisonville, Kentucky.

We then conducted detailed interference studies using the Longley-Rice methodology contained in the Commission's *OET Bulletin No. 69*, with respect to these facilities of concern. The software utilizes a 2-square kilometer cell size (except where noted), calculates signal strength at 1.0 kilometer increments along each radial studied, and employs the 1990 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 proposed W56DN) already is predicted to exist (also known as "masking"). The results of these studies are provided in Exhibit D-3. They conclude that the facility

proposed herein causes no significant new interference to any of the potentially affected stations.

As a result, waivers of Section 74.705 of the Commission's Rules with respect to interference to WKMA-TV, and, Section 74.706 with regard to WNPX-DT, WTWO-DT, WKMU-DT, and the new DT proposal in Springfield, are requested and believed to be justified based on the aforementioned Longley-Rice studies.

SMITH AND FISHER

EXHIBIT D-2

PROPOSED W56DN  
CH. 36 - EVANSVILLE INDIANA

REFERENCE  
37 53 17 N  
87 32 37 W

LPTV Pwr = 13.5 kW, HAMS L COR= 278 M

DISPLAY DATES  
DATA 07-12-03  
SEARCH 07-16-03

..... Channel 36-, 602 MHz .....

Call	Channel	Location	Dist	Azi	FCC	Margin
WNPX-D AP	36	Cookeville	TN 191.69	159.6	> 315.85	-124.16
WNPX-D LI	36	Cookeville	TN 192.17	159.6	> 315.96	-123.79
WNPX-D BD	36	Cookeville	TN 191.68	159.6	> 314.64	-122.96
WTWO-D CP	36	Terre Haute	IN 150.93	5.0	> 272.73	-121.80
WKMU-D LI	36	Murray	KY 159.21	213.8	> 276.77	-117.55
WTWO-D BD	36	Terre Haute	IN 150.93	5.0	> 265.22	-114.29
WKMATV LI	35-	Madisonville	KY 77.49	178.0	> 082.88	-5.39
NEW-DT AP	36	Springfield	IL 273.64	317.8	> 273.55	0.09
WVUT LI	22-	Vincennes	IN 84.96	3.9	> 072.75	12.21
AL941 AL	21Z	Vandalia	IL 180.45	311.9	> 133.05	47.40
WBNA LI	21-	Louisville	KY 158.06	83.6	> 093.73	64.33
WBNA CP	21-	Louisville	KY 159.27	69.9	> 093.50	65.77
WKMU LI	21+	Murray	KY 159.22	213.7	> 086.33	72.89

## INTERFERENCE SUMMARY

PROPOSED W56DN  
CHANNEL 36 - EVANSVILLE, INDIANA

<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>
WNPX-DT BMPCDT-20020315AAH	Ap.	Cookeville, TN	36	1,480,859	427	< 0.1
WNPX-DT BLCDT-20030130ACD	Lic.	Cookeville, TN	36	1,481,409	291	< 0.1
WNPX-DT BDSTA-20030226ACN	STA	Cookeville, TN	36	1,464,752	498	< 0.1
WTWO-DT BPCDT-19991029AGM	CP	Terre Haute, IN	36	311,811	0	0
WKMU-DT BLEDT-20020304ALG	Lic.	Murray, KY	36	297,748	4	< 0.1
WTWO-DT BDSTA-20030129AMX	STA	Terre Haute, IN	36	243,279	0	0
New-DT BPEDT-19960129KH	Ap.	Springfield, IL	36	385,494	0	0
WKMA-TV BLET-19840420KR	Lic.	Madisonville, KY	35	296,305	1,136	0.4