

ENGINEERING EXHIBIT

Incentive Auction Channel Reassignment

Application for Digital Television Station Construction Permit

prepared for

Ohio/Oklahoma Hearst Television Inc.

WLWT(DT) Cincinnati, OH

Facility ID 46979

Ch. 20 790 kW 309 m

Ohio/Oklahoma Hearst Television Inc. (“Hearst”) is the licensee of digital television station WLWT(DT), Channel 35, Facility ID 46979, Cincinnati, OH. *Hearst* herein proposes construction of the WLWT post-auction facility on Channel 20. Reassignment of WLWT from Channel 35 to Channel 20 was specified in the *Incentive Auction Closing and Channel Reassignment Public Notice (“CCRPN”, DA 17-317, released April 13, 2017)*.

The proposed Channel 20 operation will employ a new horizontally polarized nondirectional antenna system as part of a top-mounted stack on the WLWT tower in lieu of the existing Channel 35 antenna. As with the existing configuration, the WLWT transmitting antenna will be situated in a stack beneath the transmitting antenna for WCET(DT) (Fac ID 65666, Cincinnati, OH).¹ *Hearst* proposes to operate WLWT with an effective radiated power (“ERP”) of 790 kW at 309 meters antenna height above average terrain (“HAAT”). The existing tower structure corresponds to FCC Antenna Structure Registration number 1038226. No change to the overall structure height will result.

A map is supplied as Figure 1 which depicts the standard predicted coverage contours. This map includes the location of Cincinnati, WLWT’s principal community. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire principal community will be encompassed by the 48 dBμ contour.

¹WCET presently operates on Channel 34 and has been reassigned to Channel 17.

The proposed noise limited service contour (“NLSC”) extends slightly beyond that of the CCRPN parameters of 722 kW ERP and 310 meters HAAT.² The proposal complies with §73.3700(b)(ii) as described in the following.

WLWT’s reassignment facility suffers from a 0.11 percent loss of interference-free population³ when compared to that of its baseline⁴ pre-auction facility. Therefore WLWT qualifies under §73.3700(b)(ii)(A) for a contour extension due to the loss of coverage area resulting from the new channel assignment. A population summary is provided below.

WLWT Interference-Free Service Population

November 2015 Pre-Auction Baseline (Ch. 35):	3,283,841
April 2017 Reassignment Baseline (Ch. 20):	3,280,296
Change:	-0.11%

Interference study per FCC OET Bulletin 69⁵ shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby post-auction full service and Class A television stations and reassignments as required by §73.616. The interference study output report is provided as Table 1. This satisfies §73.3700(b)(ii)(C) for the proposed NLSC extension.

The amount of NLSC extension does not exceed one percent in any direction. Figure 2 supplies a coverage contour comparison of the proposed WLWT facility to the reassignment facility’s contour and a one percent extension distance of the reassignment facility’s contour. Here, the contour level is adjusted with the dipole factor to match FCC application processing.

²The antenna height above ground and above mean sea level is increased by 0.3 meters from licensed values. The proposed WLWT antenna HAAT is recalculated to be 309.2 meters, based on FCC 30 meter terrain data developed by OET.

³CCRPN “Coverage Baseline for Post-Auction Table of Allotments”.

⁴“Final Digital Television Baseline Coverage Area And Population Served Information Related To Incentive Auction Repacking,” DA 15-1296, Public Notice, Released November 12, 2015.

⁵FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 (“OET-69”). This analysis employed the FCC’s current “TVStudy” software with the default application processing template settings, 2 km cell size, and 1 km terrain increment. Comparisons of various results of this computer program (run on a Mac processor) to the FCC’s implementation of TVStudy show excellent correlation.

Table 1's results also demonstrate that the proposed contour is within the baseline contour plus one percent. Therefore the proposed contour extension complies with §73.3700(b)(ii)(B).

The proposed WLWT facility's terrain-limited population provides a 100.9 percent match of the *CCRPN* baseline facility, as detailed in the following table. The OET Bulletin 69 report summary in Table 1 also concludes that the proposed service area population is more than 95 percent of the baseline population.

Terrain Limited Population - Match of Reassignment

Population Summary (2010 Census) OET Bulletin 69: TVStudy	Reassignment Parameters	Proposed
Within Noise Limited Contour	3,319,556	3,348,284
Not affected by terrain losses	3,308,350	3,336,775
Match of Reassignment	---	100.86%

The nearest FCC monitoring station is 405 km distant at Allegan, MI. This exceeds by a large margin the threshold minimum distance specified in §73.1030(c)(3) that would suggest consideration of the monitoring station. The site is not located within the areas requiring coordination with "quiet" zones specified in §73.1030(a) and (b). There are no authorized nondirectional AM stations within 0.5 kilometer and no authorized directional AM stations within 3 kilometers of the site.

The site location is within the Canadian coordination zone (324 km to the Canada border) however due to the large distance from the border and compliance with the one percent contour extension limit, further international coordination should not be necessary beyond that which established *CCRPN* parameters.⁶

Human Exposure to Radiofrequency Electromagnetic Field (Environmental)

The proposed operation was evaluated for human exposure to RF energy using the procedures outlined in the FCC's OET Bulletin Number 65. Based on OET-65 equation (10),

⁶See "Incentive Auction Task Force and Media Bureau Announce Procedures for the Post-Incentive Auction Broadcast Transition," Public Notice, DA 17-106, released January 27, 2017, at para 38. "Applications in the U.S.-Canada border zone may not require additional coordination if they do not expand the noise-limited contour by more than one percent in any direction beyond that predicted by the technical parameters listed in the *Closing and Reassignment Public Notice*, provided that the proposed facilities would not cause more than 0.5 percent new station-to-station interference to Canadian assignments or allotments."

and considering 10 percent antenna relative field in downward elevations (pattern data shows less than 10 percent relative field at angles 10 to 90 degrees below the antenna), the calculated signal density near the tower at two meters above ground level attributable to the proposed facility is $3.8 \mu\text{W}/\text{cm}^2$, which is 1.1 percent of the general population/uncontrolled maximum permitted exposure limit. This is well below the five percent threshold limit described in §1.1307(b) regarding sites with multiple emitters, categorically excluding the applicant from responsibility for taking any corrective action in the areas where the proposal's contribution is less than five percent.

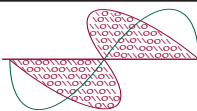
The general public will not be exposed to RF levels attributable to the proposal in excess of the FCC's guidelines. RF exposure warning signs will continue to be posted. With respect to worker safety, the applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines. This exhibit is limited to the evaluation of exposure to RF electromagnetic field. No increase in structure height is proposed.

List of Attachments

Figure 1	Proposed Coverage Contours
Figure 2	Proposed Contour Expansion
Table 1	OET Bulletin 69 Interference Study
Form 2100	Saved Version of Engineering Sections from FCC Form at Time of Upload

Chesapeake RF Consultants, LLC

Joseph M. Davis, P.E.	May 8, 2017	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600

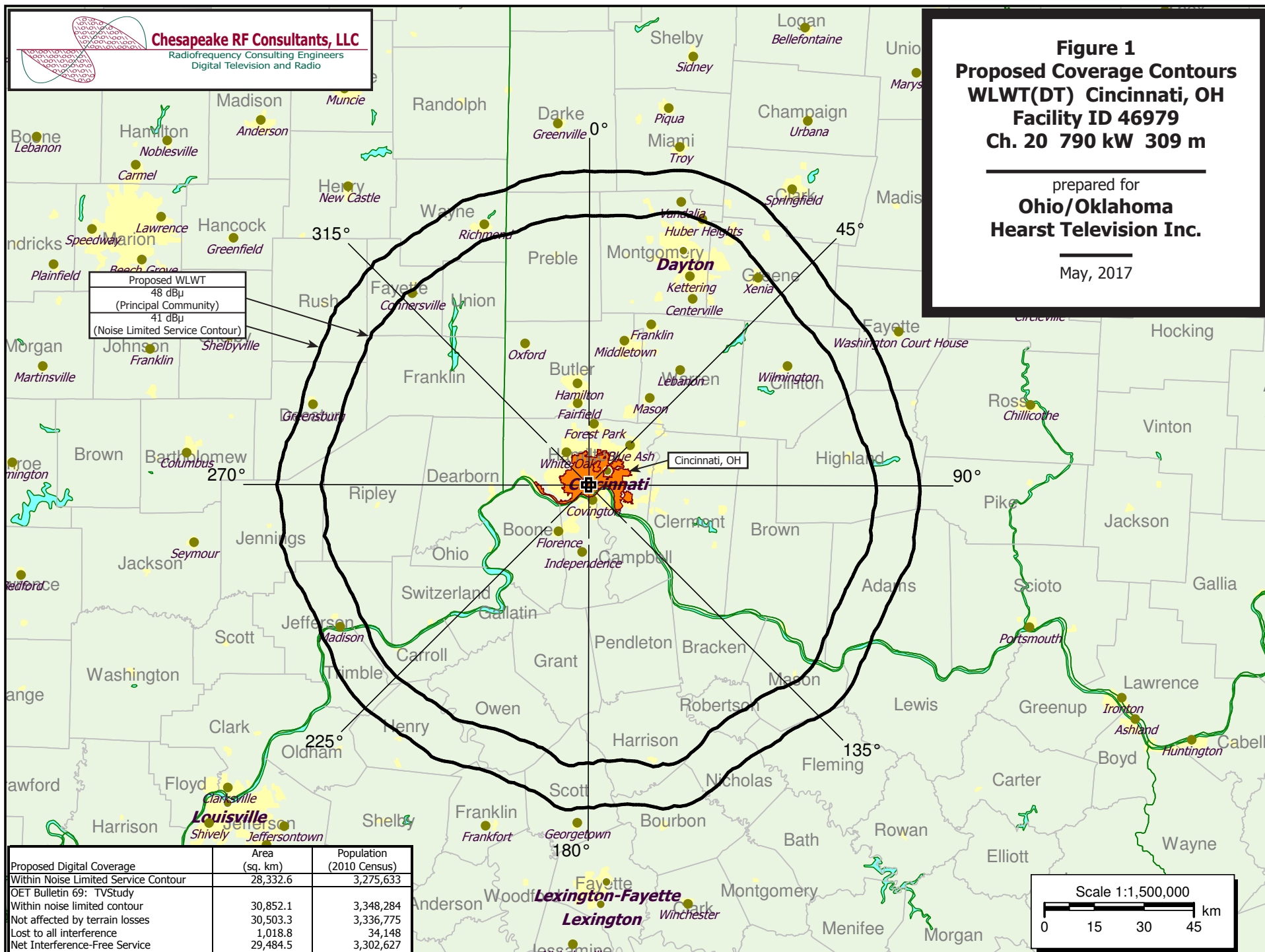


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Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 1
Proposed Coverage Contours
WLWT(DT) Cincinnati, OH
Facility ID 46979
Ch. 20 790 kW 309 m

prepared for
Ohio/Oklahoma
Hearst Television Inc.

May, 2017





Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Figure 2
Proposed Contour Expansion
WLWT(DT) Cincinnati, OH
Facility ID 46979
Ch. 20 790 kW 309 m

prepared for
Ohio/Oklahoma
Hearst Television Inc.

May, 2017

Proposed WLWT
39.36 dBμ Contour
(Blue - Solid)

WLWT Reassignment
722 kW 311 m HAAT
39.36 dBμ Contour
(Red - Solid)
39.36 dBμ Distance plus 1%
(Red - Dashed)

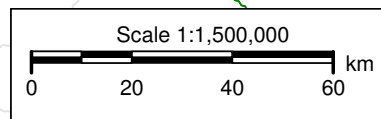


Table 1 WLWT(DT) OET Bulletin 69 Interference Study
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tvstudy v2.2.1

Database: localhost, Study: WLWT 790KW (331), Model: Longley-Rice
Start: 2017.05.07 20:55:36

Study created: 2017.05.07 20:55:25

Study build station data: LMS TV 2017-05-04 (8)

Proposal: WLWT D20 DT BL CINCINNATI, OH
File number: WLWT 790KW
Facility ID: 46979
Station data: User record
Record ID: 87
Country: U.S.

Records before 2017-04-13 excluded if not on baseline channel

Stations potentially affected:

Call	Chan	Svc	Status	City, State	File Number	Distance
WIPB	D19	DT	BL	MUNCIE, IN	DTVBL3646	131.0 km
WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	139.3
WCLL-CD	D19	DC	LIC	COLUMBUS, OH	BLDTA20110616AAM	158.9
WWME-CD	D20	DC	BL	CHICAGO, IL	DTVBL71425	403.7
WAND	D20	DT	BL	DECATUR, IL	DTVBL70852	380.8
WTSN-CD	D20	DC	LIC	EVANSVILLE, IN	BLDTL20120328AJA	270.2
WFFT-TV	D20	DT	BL	FORT WAYNE, IN	DTVBL25040	227.9
WTVS	D20	DT	BL	DETROIT, MI	DTVBL16817	386.4
WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	439.7
WOHZ-CD	D20	DC	BL	MANSFIELD, OH	DTVBL41892	244.0
WPGH-TV	D20	DT	BL	PITTSBURGH, PA	DTVBL73875	414.6
WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	375.5
WVPB-TV	D20	DT	BL	HUNTINGTON, WV	DTVBL71657	212.8
WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	167.8
WRLW-CD	D21	DC	BL	SALEM, IN	DTVBL55315	147.6
WKYT-TV	D21	DT	BL	LEXINGTON, KY	DTVBL24914	121.0
WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	158.9

No AM stations found within 2.0 km

Record parameters as studied:

Channel: D20
Latitude: 39 7 27.00 N (NAD83)
Longitude: 84 31 18.00 W
Height AMSL: 520.2 m
HAAT: 309.2 m
Peak ERP: 790 kW
Antenna: Omnidirectional

39.4 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	790 kW	296.8 m	97.8 km
45.0	790	302.2	98.4
90.0	790	345.9	102.7
135.0	790	331.5	101.4
180.0	790	319.1	100.2
225.0	790	302.5	98.4
270.0	790	293.0	97.3
315.0	790	282.6	96.0

Proposal service area is within baseline plus 1.0%
Proposal service area population is more than 95.0% of baseline

Distance to Canadian border: 323.7 km

Distance to Mexican border: 1851.1 km

Conditions at FCC monitoring station: Allegan MI
Bearing: 343.2 degrees Distance: 405.3 km

Proposal is not within the West Virginia quiet zone area

Table 1 WLWT(DT) OET Bulletin 69 Interference Study
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Conditions at Table Mountain receiving zone:
Bearing: 280.3 degrees Distance: 1771.8 km

No land mobile station failures found

Study cell size: 2.00 km
Profile resolution: 1.0 points/km

Maximum new IX to full-service and Class A: 0.50%
Maximum new IX to LPTV: 2.00%

Interference to DTVBL3646 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WIPB	D19	DT	BL	MUNCIE, IN	DTVBL3646	
Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	131.0 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	131.0
	WFWA	D18	DT	BL	FORT WAYNE, IN	DTVBL22108	113.5
	WSTR-TV	D18	DT	BL	CINCINNATI, OH	DTVBL11204	124.1
	WGN-TV	D19	DT	LIC	CHICAGO, IL	BMLCDT20080201APP	273.5
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	262.8
	WXMI	D19	DT	LIC	GRAND RAPIDS, MI	BLCDT20030117ABD	288.5
	WKYC	D19	DT	BL	CLEVELAND, OH	DTVBL73195	343.3
	WCLL-CD	D19	DC	LIC	COLUMBUS, OH	BLDTA20110616AAM	201.7
	WFFT-TV	D20	DT	BL	FORT WAYNE, IN	DTVBL25040	114.1
	CICO-DT-32D19	DT	BL		WINDSOR, ON	DTVBL703975	306.8
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
20483.6		1,965,353		20459.8		1,961,749	0.02 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WLWT D20 DT BL		27.7		782		4.0 136	
WLWT D20 DT BL		31.7		837		7.9 191	
WSTR-TV D18 DT BL		31.7		726		7.9 80	
WDKY-TV D19 DT BL		31.8		391		23.9 317	
WFFT-TV D20 DT BL		83.7		2,246		83.7 2,246	

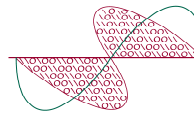
Interference to DTVBL64017 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	
Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	139.3 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	139.3
	WKYI-CD	D18	DC	BL	LOUISVILLE, KY	DTVBL25078	143.3
	WSTR-TV	D18	DT	BL	CINCINNATI, OH	DTVBL11204	147.7
	WIPB	D19	DT	BL	MUNCIE, IN	DTVBL3646	262.8
	WCLL-CD	D19	DC	LIC	COLUMBUS, OH	BLDTA20110616AAM	257.8
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	306.4
	WKPZ-CD	D19	DC	LIC	KINGSPORT, TN	BLANK0000001584	215.0
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
27332.5		1,159,019		26327.2		1,126,863	0.00 0.00
Undesired		Total IX		Unique IX, before		Unique IX, after	
WLWT D20 DT BL		100.4		1,793		72.3 1,410	
WLWT D20 DT BL		100.4		1,793		72.3 1,410	
WKYI-CD D18 DC BL		75.1		1,918		63.3 1,714	
WSTR-TV D18 DT BL		12.0		125		0.0 0	
WIPB D19 DT BL		104.1		1,067		72.2 605	
WKPZ-CD D19 DC LIC		8.0		44		8.0 44	

Interference to DTVBL64017 BL, scenario 2

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	

Table 1 WLWT(DT) OET Bulletin 69 Interference Study
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Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	139.3 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	139.3
	WKYI-CD	D18	DC	BL	LOUISVILLE, KY	DTVBL25078	143.3
	WSTR-TV	D18	DT	BL	CINCINNATI, OH	DTVBL11204	147.7
	WIPB	D19	DT	BL	MUNCIE, IN	DTVBL3646	262.8
	WCLL-CD	D19	DC	LIC	COLUMBUS, OH	BLDTA20110616AAM	257.8
	WPDP-CD	D19	DC	BL	CLEVELAND, TN	DTVBL52078	306.4
	WKPZ-CD	D19	DC	LIC	KINGSPORT, TN	BLANK0000001597	215.0

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
27332.5 1,159,019	26327.2 1,131,223	26071.5 1,126,863	26071.5 1,126,863	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL	100.4 1,793	72.3 1,410	
WLWT D20 DT BL	100.4 1,793	72.3 1,410	
WKYI-CD D18 DC BL	75.1 1,918	63.3 1,714	
WSTR-TV D18 DT BL	12.0 125	0.0 0	
WIPB D19 DT BL	104.1 1,067	72.2 605	
WKPZ-CD D19 DC LIC	8.0 44	8.0 44	

Interference to BLDTA20110616AAM LIC, scenario 1
Proposal causes no interference.

Interference to BLDTA20110616AAM LIC, scenario 2
Proposal causes no interference.

Interference to DTVBL71425 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL70852 BL, scenario 1
Proposal causes no interference.

Interference to BLDTL20120328AJA LIC, scenario 1
Proposal causes no interference.

Interference to DTVBL25040 BL, scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WFFT-TV	D20	DT	BL	FORT WAYNE, IN	DTVBL25040	
Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	227.9 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	227.9
	WIPB	D19	DT	BL	MUNCIE, IN	DTVBL3646	114.1
	WXMI	D19	DT	LIC	GRAND RAPIDS, MI	BLCDT20030117ABD	177.6
	WWME-CD	D20	DC	BL	CHICAGO, IL	DTVBL71425	220.5
	WAND	D20	DT	BL	DECATUR, IL	DTVBL70852	333.1
	WTVS	D20	DT	BL	DETROIT, MI	DTVBL16817	224.1
	WCMW	D20	DT	BL	MANISTEE, MI	DTVBL9913	341.6
	WOHZ-CD	D20	DC	BL	MANSFIELD, OH	DTVBL41892	219.8
	WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	159.1
	WZPX-TV	D21	DT	BL	BATTLE CREEK, MI	DTVBL71871	174.8

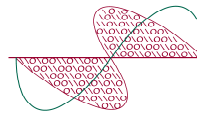
Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
19662.7 1,088,489	19654.7 1,088,354	19562.3 1,086,225	19550.2 1,085,868	0.06 0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL	28.1 557	8.1 176	
WLWT D20 DT BL	40.2 914	20.1 533	
WIPB D19 DT BL	68.2 1,402	56.2 1,074	
WTVS D20 DT BL	16.1 551	8.0 498	

Interference to DTVBL16817 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL69300 BL, scenario 1

Table 1 WLWT(DT) OET Bulletin 69 Interference Study
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Proposal causes no interference.

Interference to DTVBL69300 BL, scenario 2
Proposal causes no interference.

Interference to DTVBL41892 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WOHZ-CD	D20	DC	BL	MANSFIELD, OH	DTVBL41892	
Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	244.0 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	244.0
	WKYC	D19	DT	BL	CLEVELAND, OH	DTVBL73195	104.1
	WCLL-CD	D19	DC	LIC	COLUMBUS, OH	BLDTA20110616AAM	94.7
	WFFT-TV	D20	DT	BL	FORT WAYNE, IN	DTVBL25040	219.8
	WTVS	D20	DT	BL	DETROIT, MI	DTVBL16817	192.8
	WPGH-TV	D20	DT	BL	PITTSBURGH, PA	DTVBL73875	222.5
	WVPB-TV	D20	DT	BL	HUNTINGTON, WV	DTVBL71657	254.7
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	94.7

	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	5939.5	296,955	5851.6	294,987	5663.2	289,967	5659.2 289,902 0.07 0.02

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL	28.0 1,095	0.0 0	
WLWT D20 DT BL	32.0 1,160		4.0 65
WKYC D19 DT BL	20.1 279	20.1 279	
WFFT-TV D20 DT BL	51.9 1,149	28.0 480	28.0 480
WTVS D20 DT BL	124.2 3,725	88.3 2,566	88.3 2,566
WBNS-TV D21 DT LIC	20.0 753	12.0 505	12.0 505

Interference to DTVBL73875 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL418 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	
Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	375.5 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	375.5
	WHNT-TV	D19	DT	LIC	HUNTSVILLE, AL	BLCDT20111118COZ	171.2
	WABM	D20	DT	BL	BIRMINGHAM, AL	DTVBL16820	308.9
	KTEJ	D20	DT	LIC	JONESBORO, AR	BLCDT20110818AAQ	359.4
	WANN-CD	D20	DC	BL	ATLANTA, GA	DTVBL168812	352.8
	WDNN-CD	D20	DC	BL	DALTON, GA	DTVBL49236	234.1
	WTSN-CD	D20	DC	LIC	EVANSVILLE, IN	BLDTL20120328AJA	196.1
	WBII-CD	D20	DC	LIC	HOLLY SPRINGS, MS	BLDTA20090513AFM	267.5
	WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	375.5
	WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	0.0

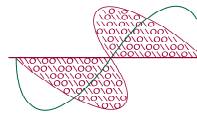
	Service area	Terrain-limited		IX-free, before		IX-free, after	Percent New IX
	32319.8	2,290,387	31649.9	2,280,286	31565.6	2,278,565	31565.6 2,278,565 0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL	4.0 84	4.0 84	
WLWT D20 DT BL	4.0 84		4.0 84
WHNT-TV D19 DT LIC	20.2 346	20.2 346	
WABM D20 DT BL	8.1 39	8.1 39	
KTEJ D20 DT LIC	12.0 37	12.0 37	
WTSN-CD D20 DC LIC	32.0 179	32.0 179	
WUXP-TV D21 DT LIC	8.0 1,036	8.0 1,036	

Interference to DTVBL71657 BL, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WVPB-TV	D20	DT	BL	HUNTINGTON, WV	DTVBL71657	

Table 1 WLWT(DT) OET Bulletin 69 Interference Study
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Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	212.8 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	212.8
	WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	344.7
	WOHZ-CD	D20	DC	BL	MANSFIELD, OH	DTVBL41892	254.7
	WPGH-TV	D20	DT	BL	PITTSBURGH, PA	DTVBL73875	291.4
	WHSV-TV	D20	DT	BL	HARRISONBURG, VA	DTVBL4688	310.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
17692.9 780,238	17001.2 756,439	16458.1 741,510	16446.2 741,209	0.07 0.04

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL 523.1	14,715	503.1 14,550	
WLWT D20 DT BL 535.0	15,016		515.1 14,851
WUNF-TV D20 DD BL 4.0	0	0.0 0	0.0 0
WPGH-TV D20 DT BL 36.0	379	20.0 214	20.0 214

Interference to DTVBL71657 BL, scenario 2

Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WVPB-TV	D20	DT	BL	HUNTINGTON, WV	DTVBL71657	
Undesireds: WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	212.8 km
WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	212.8
WUNF-TV	D20	DD	BL	ASHEVILLE, NC	DTVBL69300	344.7
WOHZ-CD	D20	DC	BL	MANSFIELD, OH	DTVBL41892	254.7
WPGH-TV	D20	DT	BL	PITTSBURGH, PA	DTVBL73875	291.4
WHSV-TV	D20	DT	BL	HARRISONBURG, VA	DTVBL4688	310.4

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
17692.9 780,238	17001.2 756,439	16458.1 741,510	16446.2 741,209	0.07 0.04

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL 523.1	14,715	503.1 14,550	
WLWT D20 DT BL 535.0	15,016		515.1 14,851
WUNF-TV D20 DD BL 4.0	0	0.0 0	0.0 0
WPGH-TV D20 DT BL 36.0	379	20.0 214	20.0 214

Interference to BLEDT20100803ADB LIC, scenario 1
Proposal causes no interference.

Interference to DTVBL55315 BL, scenario 1
Proposal causes no interference.

Interference to DTVBL24914 BL, scenario 1

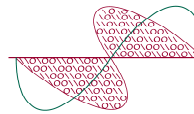
Call	Chan	Svc	Status	City, State	File Number	Distance
Desired: WKYT-TV	D21	DT	BL	LEXINGTON, KY	DTVBL24914	
Undesireds: WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	121.0 km
WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	121.0
WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	258.5
WRLW-CD	D21	DC	BL	SALEM, IN	DTVBL55315	159.6
WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	245.3
WUXP-TV	D21	DT	LIC	NASHVILLE, TN	BLCDT20060414AAU	289.5
WCVN-TV	D22	DT	BL	COVINGTON, KY	DTVBL34204	110.5

Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX
27005.2 1,138,109	26220.0 1,123,315	25544.9 1,106,229	25544.9 1,106,229	0.00 0.00

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL 60.2	1,075	24.1 412	
WLWT D20 DT BL 60.2	1,075		24.1 412
WFYI D21 DT LIC 68.3	3,049	40.2 1,358	40.2 1,358
WBNS-TV D21 DT LIC 316.2	5,215	264.1 3,603	264.1 3,603
WUXP-TV D21 DT LIC 306.6	11,037	282.7 9,208	282.7 9,208

Interference to BLCDT20021025ABK LIC, scenario 1

Table 1 WLWT(DT) OET Bulletin 69 Interference Study
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Chesapeake RF Consultants, LLC
Radiofrequency Consulting Engineers
Digital Television and Radio

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	
Undesireds:	WLWT	D20	DT	BL	CINCINNATI, OH	DTVBL46979	158.9 km
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	158.9
	WOHZ-CD	D20	DC	BL	MANSFIELD, OH	DTVBL41892	94.7
	WVPB-TV	D20	DT	BL	HUNTINGTON, WV	DTVBL71657	178.9
	WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	270.5
	WRLW-CD	D21	DC	BL	SALEM, IN	DTVBL55315	304.2
	WKYT-TV	D21	DT	BL	LEXINGTON, KY	DTVBL24914	245.3
	WZPX-TV	D21	DT	BL	BATTLE CREEK, MI	DTVBL71871	345.7
	WWJ-TV	D21	DT	BL	DETROIT, MI	DTVBL72123	275.6
	WSEE-TV	D21	DT	BL	ERIE, PA	DTVBL49711	344.0
	WPNT	D21	DT	BL	PITTSBURGH, PA	DTVBL73907	263.1
	WCVN-TV	D22	DT	BL	COVINGTON, KY	DTVBL34204	164.3
	WVPX-TV	D22	DT	BL	AKRON, OH	DTVBL70491	172.3
	WBGU-TV	D22	DT	BL	BOWLING GREEN, OH	DTVBL6568	149.3
	WSAZ-TV	D22	DT	BL	HUNTINGTON, WV	DTVBL36912	176.7
Service area		Terrain-limited		IX-free, before		IX-free, after	Percent New IX
29747.3		2,847,721		28835.8		2,721,680	0.03
				2,784,795		27518.2	0.03

Undesired	Total IX	Unique IX, before	Unique IX, after
WLWT D20 DT BL	7.9	748	4.0
WLWT D20 DT BL	15.9	1,665	11.9
WOHZ-CD D20 DC BL	103.7	11,536	59.9
WFYI D21 DT LIC	446.1	28,279	257.4
WKYT-TV D21 DT BL	371.5	17,615	207.3
WZPX-TV D21 DT BL	8.0	499	0.0
WWJ-TV D21 DT BL	256.2	14,561	51.9
WSEE-TV D21 DT BL	4.0	34	4.0
WPNT D21 DT BL	472.7	16,533	365.0
WBGU-TV D22 DT BL	40.0	484	12.0
WSAZ-TV D22 DT BL	23.9	267	12.0

Interference to proposal, scenario 1
1.02% interference

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WLWT	D20	DT	BL	CINCINNATI, OH	WLWT 790KW	
Undesireds:	WIPB	D19	DT	BL	MUNCIE, IN	DTVBL3646	131.0 km
	WDKY-TV	D19	DT	BL	DANVILLE, KY	DTVBL64017	139.3
	WCLL-CD	D19	DC	LIC	COLUMBUS, OH	BLDTA20110616AAM	158.9
	WAND	D20	DT	BL	DECATUR, IL	DTVBL70852	380.8
	WTSN-CD	D20	DC	LIC	EVANSVILLE, IN	BLDTL20120328AJA	270.2
	WFFT-TV	D20	DT	BL	FORT WAYNE, IN	DTVBL25040	227.9
	WTVS	D20	DT	BL	DETROIT, MI	DTVBL16817	386.4
	WOHZ-CD	D20	DC	BL	MANSFIELD, OH	DTVBL41892	244.0
	WZTV	D20	DT	BL	NASHVILLE, TN	DTVBL418	375.5
	WVPB-TV	D20	DT	BL	HUNTINGTON, WV	DTVBL71657	212.8
	WFYI	D21	DT	LIC	INDIANAPOLIS, IN	BLEDT20100803ADB	167.8
	WRLW-CD	D21	DC	BL	SALEM, IN	DTVBL55315	147.6
	WKYT-TV	D21	DT	BL	LEXINGTON, KY	DTVBL24914	121.0
	WBNS-TV	D21	DT	LIC	COLUMBUS, OH	BLCDT20021025ABK	158.9

Service area	Terrain-limited	IX-free	Percent IX
30852.1	3,348,284	30503.3	3,336,775
		29484.5	3,302,627
Undesired	Total IX	Unique IX	Prcnt Unique IX
WIPB D19 DT BL	23.8	137	0.0
WDKY-TV D19 DT BL	232.8	11,325	7.9
WAND D20 DT BL	8.0	93	0.0
WFFT-TV D20 DT BL	331.5	15,082	295.7
WTVS D20 DT BL	4.0	377	0.0
WZTV D20 DT BL	7.9	2,187	0.0
WVPB-TV D20 DT BL	15.9	2,313	12.0
WKYT-TV D21 DT BL	584.0	17,789	359.1
WBNS-TV D21 DT LIC	83.3	1,057	83.3

Channel and Facility Information

Section	Question	Response
Proposed Community of License	Facility ID	46979
	State	Ohio
	City	CINCINNATI
	DTV Channel	20
Facility Type	Facility Type	Commercial
	Station Type	Main
Zone	Zone	1

Antenna Location Data

Section	Question	Response
Antenna Structure Registration	Do you have an FCC Antenna Structure Registration (ASR) Number?	Yes
	ASR Number	1038226
Coordinates (NAD83)	Latitude	39° 07' 27.0" N+
	Longitude	084° 31' 18.0" W-
	Structure Type	LTOWER-Lattice Tower
	Overall Structure Height	289.6 meters
	Support Structure Height	273.1 meters
	Ground Elevation (AMSL)	255.4 meters
Antenna Data	Height of Radiation Center Above Ground Level	264.8 meters
	Height of Radiation Center Above Average Terrain	309.2 meters
	Height of Radiation Center Above Mean Sea Level	520.2 meters
	Effective Radiated Power	790 kW

Antenna
Technical Data

Section	Question	Response
Antenna Type	Antenna Type	Non-Directional
	Do you have an Antenna ID?	
	Antenna ID	
Antenna Manufacturer and Model	Manufacturer:	DIE
	Model	TFU-26GBH-R O6
	Rotation	
	Electrical Beam Tilt	0.75
	Mechanical Beam Tilt	Not Applicable
	toward azimuth	
	Polarization	Horizontal
DTV and DTS: Elevation Pattern	Does the proposed antenna propose elevation radiation patterns that vary with azimuth for reasons other than the use of mechanical beam tilt?	No
	Uploaded file for elevation antenna (or radiation) pattern data	

Construction
Permit
Certifications

Section	Question	Response
Post-Incentive Auction Expedited Processing	It will operate on the DTV channel for this station as established in the post-incentive auction channel reassignment public notice.	Yes
	It will operate post-incentive auction facilities that do not expand the noise-limited service contour in any direction beyond that established by the post-incentive auction channel reassignment public notice.	No
	It will operate post-incentive auction facilities that match or reduce by no more than five percent with respect to predicted population from those defined in the post-incentive auction channel reassignment public notice.	Yes
	The antenna structure to be used by this facility has been registered by the Commission and will not require re-registration to support the proposed antenna, OR the FAA has previously determined that the proposed structure will not adversely affect safety in air navigation and this structure qualifies for later registration under the Commission's phased registration plan, OR the proposed installation on this structure does not require notification to the FAA pursuant to 47 C.F.R. Section 17.7.	Yes
Environmental Effect	Would a Commission grant of Authorization for this location be an action which may have a significant environmental effect? (See Section 1.1306 of 47 C.F.R.)	No
Broadcast Facility	The proposed facility complies with the applicable engineering standards and assignment requirements of 47 C. F.R. Sections 73.616, 73.622(i), 73.623(e), 73.625, 73.1030, and 73.1125.	Yes