

ENGINEERING STATEMENT

Request for Special Temporary Authorization

prepared for

Barrington Traverse City License LLC
WPBN-DT Traverse City, MI
Facility ID 21253

Barrington Traverse City License LLC (“*BTCL*”) is the licensee of television station WPBN-TV, analog Channel 7 and pre-transition digital Channel 50, Traverse City, MI. An application for construction permit (BPCDT-20080321ACW) is pending for WPBN-DT to operate its post-transition digital facility on Channel 7, the current WPBN-DT analog channel. This channel was established in Appendix B of the Seventh Report and Order in MB Docket 87-278. This statement supports *BTCL*’s request for Special Temporary Authority (“STA”) to operate the post-transition WPBN-DT with digital facilities on both Channels 7 and Channel 50.

The licensed pre-transition Channel 50 facility (BLCDDT-20030721ACJ) is located at the WPBN-DT main studio (adjacent to Traverse City, MI), 55.7 km to the north of the licensed analog Channel 7 site. The pending application for post-transition digital operation on Channel 7 (BPCDT-20080321ACW) specifies use of the same site and antenna currently licensed for analog Channel 7, with an effective radiated power (“ERP”) of 15.4 kW. The Appendix B parameters for WPBN-DT specify the analog Channel 7 antenna site and height, at 19.1 kW ERP.

BTCL seeks to temporarily operate WPBN-DT with the Channel 50 facility as currently licensed for pre-transition use. Simultaneously, the proposed STA would also permit *BTCL* to operate WPBN-DT on its post-transition Channel 7 using its existing analog antenna, 55.7 km south of the Channel 50 site. The Channel 7 facility would utilize technical parameters as specified in BPCDT-20080321ACW except that the ERP is reduced to 0.5 kW.

A contour comparison map is supplied as **Figure 1**, showing that Traverse City will be encompassed by the principal community contour of both proposed STA facilities. **Figure 1** also supplies the coverage contours associated with the current analog Channel 7 and the digital Channel 7 Appendix B and application facilities.

A detailed interference study per OET Bulletin 69 shows that the use of the pre-transition Channel 50 facility complies with the 0.5 percent limit of new interference caused to pertinent nearby post-transition stations and their Appendix B facilities. The interference study output report is provided as **Table 1**. Protection requirements towards authorized Class A stations are also satisfied.

Regarding Channel 7, no interference study is necessary since the STA request specifies use of the Appendix B site and antenna height at a power level much reduced from Appendix B. The proposed 0.5 kW ERP Channel 7 STA facility's coverage contour would be totally encompassed by that of Appendix B by a large margin.

Population counts for the various WPBN-DT facilities are summarized below as determined using OET Bulletin 69¹ procedures.

Population Summary

WPBN-DT Facility	Interference-Free Population (2000 Census)
Appendix B Ch. 7 19.1 kW	393,875
Proposed STA Digital Ch. 7 0.5 kW	274,804
Proposed STA Digital Ch. 50	211,104

Although there is substantial overlap in service area, each STA facility would provide some level of unduplicated service. Analysis of the interference-free coverage data shows that the net (unduplicated) population achieved by the combination of Channel 7 and Channel 50 is

¹FCC Office of Engineering and Technology Bulletin number 69, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, February 6, 2004 ("OET-69"). A standard cell size of 2 km was employed. Comparisons of various results of this computer program (run on a Sun Sparc processor) to the Commission's implementation of OET-69 show excellent correlation.

322,934 persons. Some of the population attributable to the Channel 50 facility is located beyond the analog Grade B contour. Considering the population only within the analog Grade B contour area, the net population achieved by the proposed digital Channel 7 and Channel 50 STA facilities is 311,134 persons.

The proposed STA operations will comply with the FCC's limits concerning human exposure to RF energy. Based on OET-65 equation (10), and assuming 20 percent antenna relative field in downward elevations, the calculated signal density near the tower at two meters above ground level attributable to the Channel 50 facility is $6.0 \mu\text{W}/\text{cm}^2$, which is 1.3 percent of the general population/uncontrolled maximum permitted exposure limit. Using the worst-case of 100 percent downward relative field, the proposed Channel 7 facility would result in $0.2 \mu\text{W}/\text{cm}^2$ signal density at two meters above ground level near its tower structure, which is 0.1 percent of the general population/uncontrolled limit. These levels are 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 applicant will coordinate exposure procedures with all pertinent stations and will reduce power or cease operation as necessary to protect persons having access to each site, tower or antenna from RF electromagnetic field exposure in excess of FCC guidelines.

The undersigned hereby certifies that the foregoing statement and associated attachments were prepared by him or under his direction, and that they are true and correct to the best of his knowledge and belief.

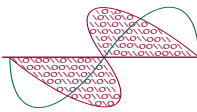
A handwritten signature in blue ink, appearing to read "Joseph M. Davis".

Joseph M. Davis, P.E.
December 30, 2008

Chesapeake RF Consultants, LLC
11993 Kahns Road
Manassas, VA 20112
703-650-9600

List of Attachments

Figure 1	STA Coverage Contour Comparison
Table 1	Channel 50 OET Bulletin 69 Interference Study



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

Figure 1
Coverage Contour Comparison
WPBN-DT Traverse City, MI
Facility ID 21253

prepared for
Barrington Traverse City
License LLC

December, 2008

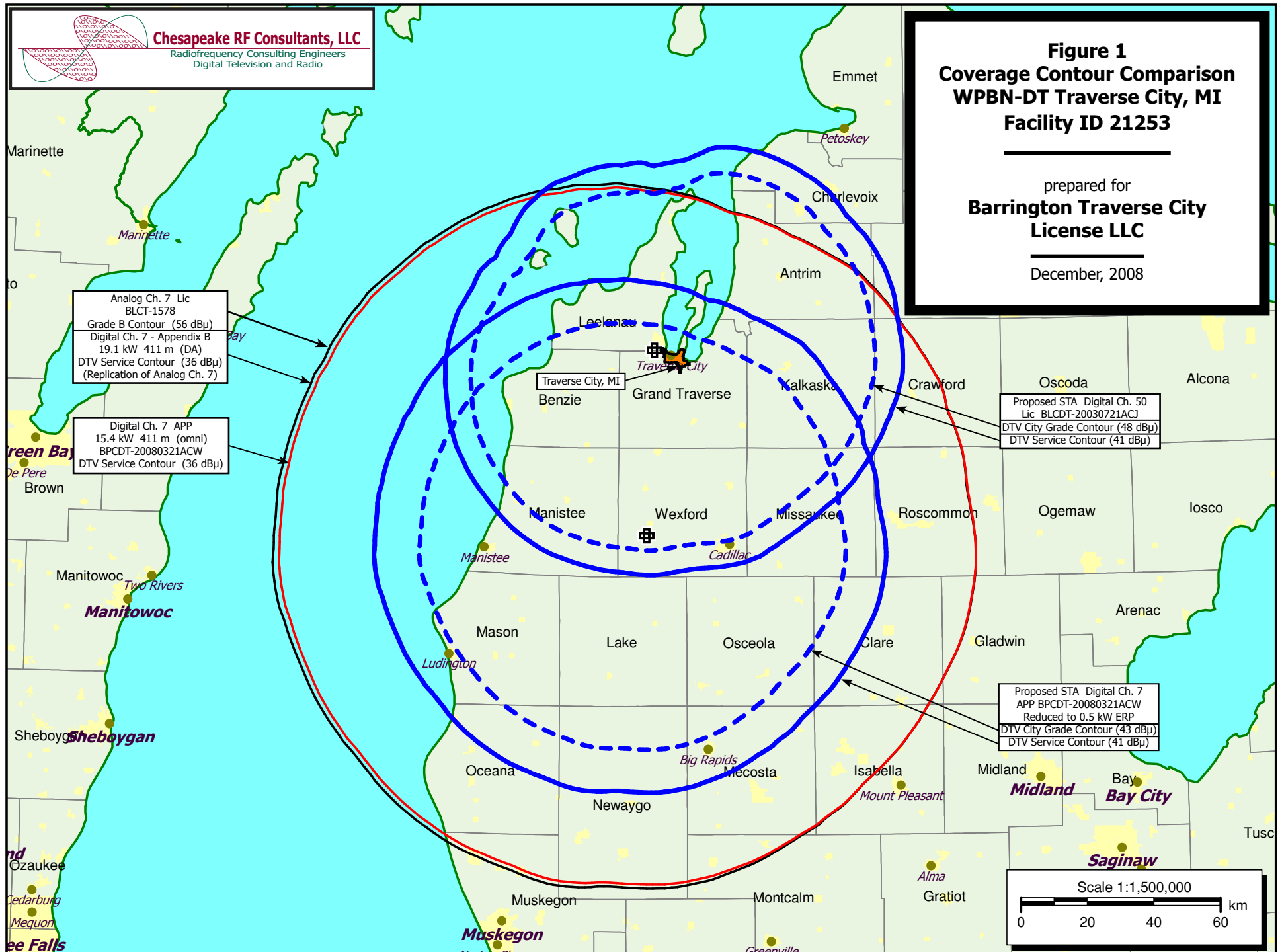


Table 1 WPBN-DT Channel 50 OET Bulletin 69 Interference Study
(worst-case scenarios shown page 1 of 6)

TW Census data selected 2000
Post Transition Data Base Selected /space/software/cdbs/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 12-21-2008 Time: 20:56:20

Record Selected for Analysis

WPBN-DT USERRECORD-01 TRAVERSE CITY MI US
Channel 50 ERP 78. kW HAAT 230. m RCAMSL 00462 m
Latitude 044-46-36 Longitude 0085-41-02
Status APP Zone 2 Border
Dir Antenna Make CDB Model 00000000042896 Beam tilt N Ref Azimuth 0.
Last update Cutoff date Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility meets maximum height/power limits

Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	2.936	233.8	55.1
45.0	32.299	283.7	70.8
90.0	76.912	278.0	75.0
135.0	64.521	220.4	69.9
180.0	69.214	185.9	67.8
225.0	63.531	193.1	67.8
270.0	19.267	192.7	61.9
315.0	3.278	253.5	56.9

Evaluation toward Class A Stations

No Spacing violations or contour overlap to Class A stations

Class A Evaluation Complete

Proposed facility OK to FCC Monitoring Stations

Proposed facility OK toward West Virginia quiet zone

Proposed facility OK toward Table Mountain

Proposed facility is within the Canadian coordination distance
Distance to border = 197.0km

Proposed facility is beyond the Mexican coordination distance

Table 1 WPBN-DT Channel 50 OET Bulletin 69 Interference Study
(worst-case scenarios shown page 2 of 6)

Proposed station is OK toward AM broadcast stations

Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN
50	WPBN-DT	TRAVERSE CITY MI	USERRECORD01

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
50	WXFT-TV	AURORA IL	358.6	APP	BMPCDT	-20080616ACK
50	WXFT-TV	AURORA IL	358.6	PLN	DTVPLN	-DTVPI766
50	WXFT-TV	AURORA IL	358.6	CP	BPCDT	-20080425ABK
50	WOKZ-CA	KALAMAZOO MI	275.7	LIC	BLTTA	-20021213ABP
50	WISC-TV	MADISON WI	362.8	CP	BPCDT	-19991027ABG
50	WISC-TV	MADISON WI	362.8	PLN	DTVPLN	-DTVPI783
50	WISC-TV	MADISON WI	362.8	APP	BLCDT	-20050701ABU

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
50	WXFT-TV	AURORA IL	BMPCDT	-20080616ACK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
49	WMSN-DR	MADISON WI	203.4	APP	BPRM	-20080620AOW
50	WEIU-TV	CHARLESTON IL	262.7	LIC	BLEDT	-20060504AAW
50	WEIU-TV	CHARLESTON IL	262.7	PLN	DTVPLN	-DTVPI767
50	WEIU-TV	CHARLESTON IL	262.7	CP MOD	BMPEDT	-20050510ACW
50	WDTN	DAYTON OH	372.1	LIC	BLCDT	-20050629AAL
50	WDTN	DAYTON OH	372.1	PLN	DTVPLN	-DTVPI774
50	WISC-TV	MADISON WI	203.4	CP	BPCDT	-19991027ABG
50	WISC-TV	MADISON WI	203.4	PLN	DTVPLN	-DTVPI783
50	WISC-TV	MADISON WI	203.4	APP	BLCDT	-20050701ABU
51	WPWR-TV	GARY IN	0.0	LIC	BLCDT	-20050425ACE
51	WPWR-TV	GARY IN	0.0	PLN	DTVPLN	-DTVPI795
50	WPBN-DT	TRAVERSE CITY MI	358.6	APP	USERRECORD-01	

Proposal causes no interference

Analysis of Interference to Affected Station 2

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
50	WXFT-TV	AURORA IL	DTVPLN	-DTVPI766

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
49	WMSN-DR	MADISON WI	203.4	APP	BPRM	-20080620AOW

Table 1 WPBN-DT Channel 50 OET Bulletin 69 Interference Study
(worst-case scenarios shown page 3 of 6)

50	WEIU-TV	CHARLESTON IL	262.7	LIC	BLEDT	-20060504AAW
50	WEIU-TV	CHARLESTON IL	262.7	PLN	DTVPLN	-DTVPI767
50	WEIU-TV	CHARLESTON IL	262.7	CP MOD	BMPEDT	-20050510ACW
50	WDTN	DAYTON OH	372.1	LIC	BLCDT	-20050629AAL
50	WDTN	DAYTON OH	372.1	PLN	DTVPLN	-DTVPI774
50	WISC-TV	MADISON WI	203.4	CP	BPCDT	-19991027ABG
50	WISC-TV	MADISON WI	203.4	PLN	DTVPLN	-DTVPI783
50	WISC-TV	MADISON WI	203.4	APP	BLCDT	-20050701ABU
51	WPWR-TV	GARY IN	0.0	LIC	BLCDT	-20050425ACE
51	WPWR-TV	GARY IN	0.0	PLN	DTVPLN	-DTVPI795
50	WPBN-DT	TRAVERSE CITY MI	358.6	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
50	WXFT-TV	AURORA IL	BPCDT -20080425ABK

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
49	WMSN-DR	MADISON WI	203.4	APP	BPRM -20080620AOW
50	WEIU-TV	CHARLESTON IL	262.7	LIC	BLEDT -20060504AAW
50	WEIU-TV	CHARLESTON IL	262.7	PLN	DTVPLN -DTVPI767
50	WEIU-TV	CHARLESTON IL	262.7	CP MOD	BMPEDT -20050510ACW
50	WDTN	DAYTON OH	372.1	LIC	BLCDT -20050629AAL
50	WDTN	DAYTON OH	372.1	PLN	DTVPLN -DTVPI774
50	WISC-TV	MADISON WI	203.4	CP	BPCDT -19991027ABG
50	WISC-TV	MADISON WI	203.4	PLN	DTVPLN -DTVPI783
50	WISC-TV	MADISON WI	203.4	APP	BLCDT -20050701ABU
51	WPWR-TV	GARY IN	0.0	LIC	BLCDT -20050425ACE
51	WPWR-TV	GARY IN	0.0	PLN	DTVPLN -DTVPI795
50	WPBN-DT	TRAVERSE CITY MI	358.6	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application Ref. No.
50	WOKZ-CA	KALAMAZOO MI	BLTTA -20021213ABP

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
42	WNDU-TV	SOUTH BEND IN	90.2	LIC	BLCDT -20060717AAG
42	WNDU-TV	SOUTH BEND IN	90.2	PLN	DTVPLN -DTVPI502
42	WNDU-TV	SOUTH BEND IN	90.2	APP	BPCDT -20080619AAB
43	WZPX	BATTLE CREEK MI	63.5	LIC	BLCT -19961017KE
46	WHME-DR	SOUTH BEND IN	89.0	APP	BPRM -20080619AET
48	WHME-TV	SOUTH BEND IN	89.0	LIC	BLCDT -20060109ABG
48	WHME-TV	SOUTH BEND IN	89.0	PLN	DTVPLN -DTVPI709
48	WHME-TV	SOUTH BEND IN	89.0	APP	BPCDT -20080619ABC
49	W21BS	BATTLE CREEK MI	39.2	APP	BPTTL -20011220ABD

Table 1 WPBN-DT Channel 50 OET Bulletin 69 Interference Study
(worst-case scenarios shown page 4 of 6)

50	WXFT-TV	AURORA IL	170.9	APP	BMPCDT	-20080616ACK
50	WXFT-TV	AURORA IL	170.9	PLN	DTVPLN	-DTVPI766
50	WXFT-TV	AURORA IL	170.9	CP	BPCDT	-20080425ABK
50	WEIU-TV	CHARLESTON IL	376.7	LIC	BLEDT	-20060504AAW
50	WEIU-TV	CHARLESTON IL	376.6	PLN	DTVPLN	-DTVPI767
50	WEIU-TV	CHARLESTON IL	376.7	CP MOD	BMPEDT	-20050510ACW
50	WPWR-TV	GARY IN	171.0	LIC	BLCT	-19870128KL
50	WKBD	DETROIT MI	192.3	LIC	BLCT	-2092
50	WEAO	AKRON OH	358.9	APP	BPEDT	-20080620AAD
50	WEAO	AKRON OH	358.9	PLN	DTVPLN	-DTVPI773
50	WEAO	AKRON OH	358.9	LIC	BLEDT	-20040928AQT
50	WDTN	DAYTON OH	309.2	LIC	BLCDT	-20050629AAL
50	WDTN	DAYTON OH	309.2	PLN	DTVPLN	-DTVPI774
50	NEW	GREEN BAY WI	311.7	ADD	BPRM	-20000717ACL
50	WISC-TV	MADISON WI	329.1	CP	BPCDT	-19991027ABG
50	WISC-TV	MADISON WI	329.1	PLN	DTVPLN	-DTVPI783
50	WISC-TV	MADISON WI	329.1	APP	BLCDT	-20050701ABU
51	WLAJ	LANGING MI	92.8	LIC	BLCDT	-20040422ABI
51	WLAJ	LANGING MI	92.8	PLN	DTVPLN	-DTVPI798
64	WLLA	KALAMAZOO MI	33.3	APP	BSTA	-20080211AEE
64	WLLA	KALAMAZOO MI	33.3	LIC	BLCT	-19960809KG
50	WPBN-DT	TRAVERSE CITY MI	275.7	APP	USERRECORD-01	

Proposal causes no interference

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel	Call	City/State	Application Ref. No.
50	WISC-TV	MADISON WI	BPCDT -19991027ABG

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
49	KLJB-TV	DAVENPORT IA	205.9	LIC	BLCDT -20050713ADL
49	KLJB-TV	DAVENPORT IA	205.9	PLN	DTVPLN -DTVPI737
49	WMSN-DR	MADISON WI	0.0	APP	BPRM -20080620AOW
50	WXFT-TV	AURORA IL	203.4	APP	BMPCDT -20080616ACK
50	WXFT-TV	AURORA IL	203.4	PLN	DTVPLN -DTVPI766
50	WXFT-TV	AURORA IL	203.4	CP	BPCDT -20080425ABK
50	WEIU-TV	CHARLESTON IL	400.7	LIC	BLEDT -20060504AAW
50	WEIU-TV	CHARLESTON IL	400.7	PLN	DTVPLN -DTVPI767
50	WEIU-TV	CHARLESTON IL	400.7	CP MOD	BMPEDT -20050510ACW
51	KGAN	CEDAR RAPIDS IA	206.8	CP MOD	BMPCDT -20020911AAM
51	KGAN	CEDAR RAPIDS IA	206.8	PLN	DTVPLN -DTVPI794
51	WPWR-TV	GARY IN	203.3	LIC	BLCDT -20050425ACE
51	WPWR-TV	GARY IN	203.3	PLN	DTVPLN -DTVPI795
50	WPBN-DT	TRAVERSE CITY MI	362.8	APP	USERRECORD-01

Proposal causes no interference

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Analysis of Interference to Affected Station 6

Analysis of current record

Channel	Call	City/State	Application Ref. No.
50	WISC-TV	MADISON WI	DTVPLN -DTVPI783

Table 1 WPBN-DT Channel 50 OET Bulletin 69 Interference Study
(worst-case scenarios shown page 5 of 6)

Stations Potentially Affecting This Station							
Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.	
49	KLJB-TV	DAVENPORT IA	205.9	LIC	BLCDT	-20050713ADL	
49	KLJB-TV	DAVENPORT IA	205.9	PLN	DTVPLN	-DTVP1737	
49	WMSN-DR	MADISON WI	0.0	APP	BPRM	-20080620AOW	
50	WXFT-TV	AURORA IL	203.4	APP	BMPCDT	-20080616ACK	
50	WXFT-TV	AURORA IL	203.4	PLN	DTVPLN	-DTVP1766	
50	WXFT-TV	AURORA IL	203.4	CP	BPCDT	-20080425ABK	
50	WEIU-TV	CHARLESTON IL	400.7	LIC	BLEDT	-20060504AAW	
50	WEIU-TV	CHARLESTON IL	400.7	PLN	DTVPLN	-DTVP1767	
50	WEIU-TV	CHARLESTON IL	400.7	CP MOD	BMPEDT	-20050510ACW	
51	KGAN	CEDAR RAPIDS IA	206.8	CP MOD	BMPCDT	-20020911AAM	
51	KGAN	CEDAR RAPIDS IA	206.8	PLN	DTVPLN	-DTVP1794	
51	WPWR-TV	GARY IN	203.3	LIC	BLCDT	-20050425ACE	
51	WPWR-TV	GARY IN	203.3	PLN	DTVPLN	-DTVP1795	
50	WPBN-DT	TRAVERSE CITY MI	362.8	APP	USERRECORD-01		
Proposal causes no interference							

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Analysis of Interference to Affected Station 7

Analysis of current record					
Channel	Call	City/State	Application	Ref. No.	
50	WISC-TV	MADISON WI	BLCDT	-20050701ABU	

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.	
49	KLJB-TV	DAVENPORT IA	205.9	LIC	BLCDT	-20050713ADL	
49	KLJB-TV	DAVENPORT IA	205.9	PLN	DTVPLN	-DTVP1737	
49	WMSN-DR	MADISON WI	0.0	APP	BPRM	-20080620AOW	
50	WXFT-TV	AURORA IL	203.4	APP	BMPCDT	-20080616ACK	
50	WXFT-TV	AURORA IL	203.4	PLN	DTVPLN	-DTVP1766	
50	WXFT-TV	AURORA IL	203.4	CP	BPCDT	-20080425ABK	
50	WEIU-TV	CHARLESTON IL	400.7	LIC	BLEDT	-20060504AAW	
50	WEIU-TV	CHARLESTON IL	400.7	PLN	DTVPLN	-DTVP1767	
50	WEIU-TV	CHARLESTON IL	400.7	CP MOD	BMPEDT	-20050510ACW	
51	KGAN	CEDAR RAPIDS IA	206.8	CP MOD	BMPCDT	-20020911AAM	
51	KGAN	CEDAR RAPIDS IA	206.8	PLN	DTVPLN	-DTVP1794	
51	WPWR-TV	GARY IN	203.3	LIC	BLCDT	-20050425ACE	
51	WPWR-TV	GARY IN	203.3	PLN	DTVPLN	-DTVP1795	
50	WPBN-DT	TRAVERSE CITY MI	362.8	APP	USERRECORD-01		
Proposal causes no interference							

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Analysis of Interference to Affected Station 8

Analysis of current record					
Channel	Call	City/State	Application	Ref. No.	
50	WPBN-DT	TRAVERSE CITY MI	USERRECORD-01		

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.	
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Table 1 WPBN-DT Channel 50 OET Bulletin 69 Interference Study
(worst-case scenarios shown page 6 of 6)

50	WXFT-TV	AURORA IL	358.6	APP	BMPCDT	-20080616ACK	
50	WXFT-TV	AURORA IL	358.6	PLN	DTVPLN	-DTVP1766	
50	WXFT-TV	AURORA IL	358.6	CP	BPCDT	-20080425ABK	
50	WISC-TV	MADISON WI	362.8	CP	BPCDT	-19991027ABG	
50	WISC-TV	MADISON WI	362.8	PLN	DTVPLN	-DTVP1783	
50	WISC-TV	MADISON WI	362.8	APP	BLCDT	-20050701ABU	

Total scenarios = 1

Result key: 1
Scenario 1 Affected station 8
Before Analysis

Results for: 50A MI TRAVERSE CITY				USERRECORD01	APP
HAAT	230.0 m,	ATV ERP	78.0 kW		
		POPULATION	AREA (sq km)		
within Noise Limited Contour		215546	13272.7		
not affected by terrain losses		211104	12896.2		
lost to NTSC IX		0	0.0		
lost to additional IX by ATV		0	0.0		
lost to ATV IX only		0	0.0		
lost to all IX		0	0.0		

Potential Interfering Stations Included in above Scenario 1

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