

WMBC-TV (DTS), Newton, NJ, OET-69 Interference Analysis (worst-case scenarios)

Percent allowed new interference: 0.500
Percent allowed new interference to Class A: 0.500
TW Census data selected 2000
Post Transition Data Base Selected /export/home/cdbs/pt_tvdb.sff

TV INTERFERENCE and SPACING ANALYSIS PROGRAM

Date: 11-24-2009

Record Selected for Analysis (Record is a DTS)

WMBC-TV BDTS -30000101AAA NEWTON NJ US
Channel 18 ERP 1000.0 kW HAAT 250 m RCAMSL 313 m
Latitude 40 -51-53 Longitude 074 -12-03
Status APP Zone 1 Border Site number: 01
Dir Antenna Make CDB Model 0000000093900 Beam tilt N Ref Azimuth 0.0
Last update Cutoff date 40000101 Docket
Comments
Applicant

WMBC-TV BDTS -30000101AAA NEWTON NJ US
Channel 18 ERP 90.0 kW HAAT 309 m RCAMSL 323 m
Latitude 40 -44-54 Longitude 073 -59-10
Status APP Zone 1 Border Site number: 02
Dir Antenna Make CDB Model 00000000071631 Beam tilt N Ref Azimuth 110.0
Last update Cutoff date 40000101 Docket
Comments
Applicant

Cell Size for Service Analysis 2.0 km/side

Distance Increments for Longley-Rice Analysis 1.00 km

Facility (site # 01) meets maximum height/power limits

Facility (site # 02) meets maximum height/power limits

Site number 1			
Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	199.809	189.2	73.3
45.0	9.900	281.0	64.3
90.0	55.696	290.7	74.2
135.0	28.056	297.4	71.0
180.0	95.481	261.1	74.8
225.0	277.202	189.4	75.1
270.0	876.096	234.4	85.8
315.0	775.280	255.8	87.5

Site number 2			
Azimuth (Deg)	ERP (kW)	HAAT (m)	41.0 dBu F(50,90) (km)
0.0	1.521	287.4	54.8
45.0	20.093	313.7	70.3
90.0	77.841	310.6	77.9
135.0	72.092	312.0	77.6
180.0	15.129	308.1	68.3
225.0	0.380	323.0	49.2
270.0	0.225	312.3	45.8
315.0	0.203	309.3	45.1

Evaluation toward Class A Stations from site # 01

WMBC-TV (DTS), Newton, NJ, OET-69 Interference Analysis (worst-case scenarios)

Contour overlap to Class A station
 WEBR-CD 17 MANHATTAN NY BLTTL 19960116JC *

Evaluation toward Class A Stations from site # 02

Station inside contour of Class A station
 WEBR-CD 17 MANHATTAN NY BLTTL 19960116JC *

Class A Evaluation Complete

*Pursuant to settlement between WMBC-TV and WEBR-CA, and pursuant to the condition on WEBR-CD construction permit, BDFCDTA-20090512AAT, the licensee of WEBR-CA/CD agrees to accept any interference resulting from WMBC-TV's operations.

Checks to Site Number 01

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 = 374.8km
 Proposed facility is beyond the Mexican coordination distance
 Proposed station is 2.24km from AM station
 PATERSON NJ WPAT Status: L Antenna: DA2
 Proposed station is 2.24km from AM station
 NEWARK NJ WNSW Status: Antenna: DA2

Checks to Site Number 02

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 = 395.7km
 Proposed facility is beyond the Mexican coordination distance
 Proposed station is OK toward AM broadcast stations

 Start of Interference Analysis

Channel	Proposed Station Call	City/State	ARN	
18	WMBC-TV	NEWTON NJ	BDTS	30000101AAA

Stations Potentially Affected by Proposed Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	WPHL-TV	PHILADELPHIA PA	126.8	CP MOD	BMPCDT	20080619ALB
17	WPXQ-TV	BLOCK ISLAND RI	213.9	LIC	BLCDDT	20050811AAT
18	WMFP	LAWRENCE MA	294.9	LIC	BLCDDT	20061219ACO
18	WETM-TV	ELMIRA NY	261.7	CP	BPCDDT	20080307ACY

%%%

WMBC-TV (DTS), Newton, NJ, OET-69 Interference Analysis (worst-case scenarios)

Analysis of Interference to Affected Station 1

Analysis of current record

Channel	Call	City/State	Application Ref. No.
17	WPHL-TV	PHILADELPHIA PA	BMPCDT -20080619ALB

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
17	WSYR-TV	SYRACUSE NY	329.2	LIC	BLCDT -20030812ABK
17	WSYR-TV	SYRACUSE NY	329.2	PLN	DTVPLN -DTVP0601
17	WPXQ-TV	BLOCK ISLAND RI	332.6	LIC	BLCDT -20050811AAT
17	WPXQ	BLOCK ISLAND RI	332.6	PLN	DTVPLN -DTVP0608
18	WMBC-TV	NEWTON NJ	126.8	PLN	DTVPLN -DTVP0636
18	WMBC-TV	NEWTON NJ	126.8	APP	BDTS -30000101AAA
18	WMBC-TV	NEWTON NJ	132.0	APP	BDTS -30000101AAA

Total scenarios = 2

Result key: 3
 Scenario 1 Affected station 2
 Before Analysis

Results for: 17A PA PHILADELPHIA BMPCDT 20080619ALB CP

HAAT 324.0 m, ATV ERP 645.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	9807514	31054.3
not affected by terrain losses	9697490	30150.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	49155	76.6
lost to ATV IX only	49155	76.6
lost to all IX	49155	76.6

Potential Interfering Stations Included in above Scenario 1

17A RI BLOCK ISLAND	BLCDT	20050811AAT	LIC
18A NJ NEWTON	DTVPLN	DTVP0636	PLN

After Analysis

Results for: 17A PA PHILADELPHIA BMPCDT 20080619ALB CP

HAAT 324.0 m, ATV ERP 645.0 kW	POPULATION	AREA (sq km)
within Noise Limited Contour	9807514	31054.3
not affected by terrain losses	9697490	30150.9
lost to NTSC IX	0	0.0
lost to additional IX by ATV	49155	76.6
lost to ATV IX only	49155	76.6
lost to all IX	49155	76.6

Potential Interfering Stations Included in above Scenario 1

17A RI BLOCK ISLAND	BLCDT	20050811AAT	LIC
18A NJ NEWTON	BDTS	30000101AAA	APP

Percent new IX = 0.0000%

Worst case new IX 0.0000% Scenario 1

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Analysis of Interference to Affected Station 3

Analysis of current record

Channel	Call	City/State	Application Ref. No.
17	WPXQ-TV	BLOCK ISLAND RI	BLCDT -20050811AAT

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
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WMBC-TV (DTS), Newton, NJ, OET-69 Interference Analysis (worst-case scenarios)

17	WSYR-TV	SYRACUSE NY	384.3	LIC	BLCDT	-20030812ABK
17	WSYR-TV	SYRACUSE NY	384.3	PLN	DTVPLN	-DTVP0601
17	WPHL-TV	PHILADELPHIA PA	332.6	CP MOD	BMPCDT	-20080619ALB
17	WPHL-TV	PHILADELPHIA PA	332.4	PLN	DTVPLN	-DTVP0606
18	WMFP	LAWRENCE MA	101.6	PLN	DTVPLN	-DTVP0632
18	WMFP	LAWRENCE MA	101.6	LIC	BLCDT	-20061219ACO
18	WMBC-TV	NEWTON NJ	213.9	PLN	DTVPLN	-DTVP0636
18	WMBC-TV	NEWTON NJ	213.9	APP	BDS	-30000101AAA
18	WMBC-TV	NEWTON NJ	202.1	APP	BDS	-30000101AAA

Proposed station is beyond the site to nearest cell evaluation distance

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Analysis of Interference to Affected Station 4

Analysis of current record

Channel	Call	City/State	Application	Ref. No.
18	WMFP	LAWRENCE MA	BLCDT	-20061219ACO

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	WPXQ-TV	BLOCK ISLAND RI	101.6	LIC	BLCDT	-20050811AAT
17	WPXQ	BLOCK ISLAND RI	101.6	PLN	DTVPLN	-DTVP0608
18	WMBC-TV	NEWTON NJ	294.9	PLN	DTVPLN	-DTVP0636
18	WVTB	ST. JOHNSBURY VT	257.3	LIC	BLEDT	-20060703ABN
18	WVTB	ST. JOHNSBURY VT	257.3	PLN	DTVPLN	-DTVP0649
18	WVTB	ST. JOHNSBURY VT	257.3	CP	BPEDT	-20071026ABW
19	WGBH-TV	BOSTON MA	1.1	LIC	BLEDT	-20021219AAM
19	WGBH-TV	BOSTON MA	1.1	PLN	DTVPLN	-DTVP0671
18	WMBC-TV	NEWTON NJ	294.9	APP	BDS	-30000101AAA
18	WMBC-TV	NEWTON NJ	287.8	APP	BDS	-30000101AAA

Total scenarios = 12

Result key: 18
Scenario 1 Affected station 7
Before Analysis

Results for: 18A MA LAWRENCE BLCDT 20061219ACO LIC

HAAT 289.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6905954	26343.2
not affected by terrain losses	6853127	25614.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	386160	1015.2
lost to ATV IX only	386160	1015.2
lost to all IX	386160	1015.2

Potential Interfering Stations Included in above Scenario 1

17A RI	BLOCK ISLAND	BLCDT	20050811AAT	LIC
18A VT	ST. JOHNSBURY	BLEDT	20060703ABN	LIC
19A MA	BOSTON	BLEDT	20021219AAM	LIC

After Analysis

Results for: 18A MA LAWRENCE BLCDT 20061219ACO LIC

HAAT 289.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	6905954	26343.2
not affected by terrain losses	6853127	25614.0
lost to NTSC IX	0	0.0
lost to additional IX by ATV	386160	1015.2
lost to ATV IX only	386160	1015.2
lost to all IX	386160	1015.2

Potential Interfering Stations Included in above Scenario 1

17A RI	BLOCK ISLAND	BLCDT	20050811AAT	LIC
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WMBC-TV (DTS), Newton, NJ, OET-69 Interference Analysis (worst-case scenarios)

18A VT ST. JOHNSBURY BLEDT 20060703ABN LIC
 19A MA BOSTON BLEDT 20021219AAM LIC
 18A NJ NEWTON BDTS 30000101AAA APP

Percent new IX = 0.0000%

Worst case new IX 0.0000% Scenario 1

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Analysis of Interference to Affected Station 5

Analysis of current record

Channel Call City/State Application Ref. No.
 18 WETM-TV ELMIRA NY BPCDT -20080307ACY

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application	Ref. No.
17	WSYR-TV	SYRACUSE NY	116.2	LIC	BLCDT	-20030812ABK
17	WSYR-TV	SYRACUSE NY	116.2	PLN	DTVPLN	-DTVP0601
18	WMBC-TV	NEWTON NJ	261.7	PLN	DTVPLN	-DTVP0636
19	WSYT	SYRACUSE NY	102.2	LIC	BLCDT	-20050705AAM
19	WSYT	SYRACUSE NY	102.2	PLN	DTVPLN	-DTVP0683
18	WMBC-TV	NEWTON NJ	261.7	APP	BDTS	-30000101AAA
18	WMBC-TV	NEWTON NJ	283.9	APP	BDTS	-30000101AAA

Total scenarios = 4

Result key: 34
 Scenario 1 Affected station 9
 Before Analysis

Results for: 18A NY ELMIRA BPCDT 20080307ACY CP
 HAAT 376.0 m, ATV ERP 45.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	714695	18572.3
not affected by terrain losses	633833	16345.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	26906	571.8
lost to ATV IX only	26906	571.8
lost to all IX	26906	571.8

Potential Interfering Stations Included in above Scenario 1

17A NY SYRACUSE BLCDT 20030812ABK LIC
 19A NY SYRACUSE BLCDT 20050705AAM LIC
 18A NJ NEWTON DTVPLN DTVP0636 PLN

After Analysis

Results for: 18A NY ELMIRA BPCDT 20080307ACY CP
 HAAT 376.0 m, ATV ERP 45.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	714695	18572.3
not affected by terrain losses	633833	16345.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	27167	587.8
lost to ATV IX only	27167	587.8
lost to all IX	27167	587.8

Potential Interfering Stations Included in above Scenario 1

17A NY SYRACUSE BLCDT 20030812ABK LIC
 19A NY SYRACUSE BLCDT 20050705AAM LIC
 18A NJ NEWTON BDTS 30000101AAA APP

Percent new IX = 0.0430%

Worst case new IX 0.0430% Scenario 1

WMBC-TV (DTS), Newton, NJ, OET-69 Interference Analysis (worst-case scenarios)

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Analysis of Interference to Affected Station 6

Analysis of current record

DTS STATION
 Channel Call City/State Application Ref. No.
 18 WMBC-TV NEWTON NJ BDTS -30000101AAA

Stations Potentially Affecting This Station

Chan	Call	City/State	Dist(km)	Status	Application Ref. No.
18	WMFP	LAWRENCE MA	287.8	PLN	DTVPLN -DTVP0632
18	WMFP	LAWRENCE MA	287.8	LIC	BLCDT -20061219ACO
18	WETM-TV	ELMIRA NY	283.9	PLN	DTVPLN -DTVP0637
18	WETM-TV	ELMIRA NY	283.9	CP	BPCDT -20080307ACY

DTS fails to cover non-DTS served area
 19 Cells unserved

Total scenarios = 2

Result key: 38
 Scenario 1 Affected station 12
 Before Analysis

Results for: 18A NJ NEWTON BDTS 30000101AAA APP
 HAAT 250.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	18190173	23389.6
not affected by terrain losses	18017874	22535.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	1957	20.1
lost to ATV IX only	1957	20.1
lost to all IX	1957	20.1

Potential Interfering Stations Included in above Scenario 1

18A MA LAWRENCE	DTVPLN	DTVP0632	PLN
18A NY ELMIRA	DTVPLN	DTVP0637	PLN

Result key: 39
 Scenario 2 Affected station 12
 Before Analysis

Results for: 18A NJ NEWTON BDTS 30000101AAA APP
 HAAT 250.0 m, ATV ERP 1000.0 kW

	POPULATION	AREA (sq km)
within Noise Limited Contour	18190173	23389.6
not affected by terrain losses	18017874	22535.2
lost to NTSC IX	0	0.0
lost to additional IX by ATV	333	12.1
lost to ATV IX only	333	12.1
lost to all IX	333	12.1

Potential Interfering Stations Included in above Scenario 2

18A MA LAWRENCE	BLCDT	20061219ACO	LIC
18A NY ELMIRA	DTVPLN	DTVP0637	PLN

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