

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, DC 20554**

In the Matter of )  
 )  
Advanced Television Systems )  
and Their Impact upon the )  
Existing Television Broadcast ) MB Docket No. 87-268  
Service )  
 )  
To: The Commission )

**COMMENTS**

WMYT-TV, Inc., the licensee of WMYT-TV/WMYT-DT, Rock Hill, South Carolina , Facility ID No. 20624 (“WMYT”), hereby submits these comments through counsel in response to the Commission’s *Seventh Further Notice of Proposed Rulemaking* (“*Further Notice*”) in this proceeding.<sup>1</sup> In the *Further Notice*, the Commission proposed a new digital television Table of Allotments (“DTV Table”) which provides each eligible broadcast television station with a channel allotment for DTV operations after the February 17, 2009 transition. In the *Further Notice*, the Commission anticipated that stations might seek to change their tentative channel allotments in certain circumstances.<sup>2</sup> WMYT seeks such a channel change here.

Specifically, WMYT proposes the substitution of Channel 46 in lieu of its tentative channel designation of Channel 39. The attached Engineering Statement prepared by Ross Heide of Cohen Dippell & Everist, P.C. provides full support for the proposed channel change.

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<sup>1</sup> *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Services*, Seventh Further Notice of Proposed Rulemaking, MB Docket No. 87-268, FCC 06-150, 21 FCC Rcd 12100 (rel. Oct. 20, 2006) (“*Further Notice*”). On January 9, 2007, the Commission extended the comment deadline to January 25, 2007. *See Order Granting Extension of Time for Filing Comments and Reply Comments*, MB Docket No. 87-268, DA 07-38 (MB rel. Jan. 9, 2007). Therefore, these comments are timely filed.

<sup>2</sup> *See Further Notice*, para. 25.

WMYT submits that it qualifies for a channel change because it falls under Category 1 set forth in paragraph 25 of the *Further Notice*.<sup>3</sup> WMYT had anticipated being able to construct maximized facilities of 1000 kW ERP on Channel 39 and certified on its FCC Form 381 that it would maximize its facilities. Ultimately, however, due to interference problems, WMYT's maximum ERP on Channel 39 has been determined to be only 200 kW. Therefore, WMYT submits that it is eligible under Category 1.

In the event that the Commission determines that WMYT is not eligible under Category 1 or any of the other categories described in paragraph 25 of the *Further Notice*, WMYT submits that a number of factors justify a waiver to permit WMYT to change its channel to Channel 46. First, Channel 46 is fully spaced to other stations, while Channel 39 is seriously short-spaced to 2 stations, and thus the proposal advances the Commission's goal of spectrum efficiency. Second, even though the station would be able to operate at 1000 kW ERP on Channel 46, such operations are predicted to cause *less* interference than WMYT's current 200 kW ERP operations on Channel 39. Finally, a waiver in this instance would serve the public interest by increasing the number of viewers capable of receiving an over-the-air digital service after the transition, with no increase in interference to any other broadcast station.

WMYT submits that there is a compelling public interest benefit in permitting the proposed channel change. Nearly 240,000 persons that would be denied service because of interference by WMYT-DT on Channel 39 would receive service. In addition, up to 500,000 viewers that would not receive WMYT-DT's service on Channel 39 would receive WMYT's service on Channel 46. A grant of this channel change would permit these viewers to receive critically important news, weather and public safety information that they would not otherwise

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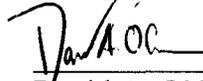
<sup>3</sup> *Id.*

receive. WMYT submits that a deferral of this proposal until after the DTV Table is finalized would be contrary to the public interest, because WMYT would be unable to maximize its service as of the February 17, 2009 deadline.

For these reasons, and the reasons set forth in the Engineering Statement, WMYT respectfully requests that the Commission assign Channel 46 to WMYT and amend the DTV Table accordingly.

Respectfully submitted,

WMYT-TV, LLC



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ENGINEERING STATEMENT  
ON BEHALF OF WMYT-TV, INC.  
IN SUPPORT OF COMMENTS TO SUBSTITUTE  
DTV CH.46 FOR CH.39 ALLOTMENT

JANUARY 2007

COHEN, DIPPELL AND EVERIST, P.C.  
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The purpose of this statement is to support comments filed in response to the 7<sup>th</sup> Further Notice of Proposed Rulemaking<sup>1</sup> (“7<sup>th</sup> FNPRM”) to substitute DTV Ch. 46 for the current WMYT-DT allotment on Ch. 39. Ch. 46 is unequivocally a better DTV channel for WMYT than Ch. 39 in terms of both WMYT’s service and the overall public interest. The advantages of Ch. 46 are listed here and the supporting analysis is described more fully in the remainder of this statement.

- Ch. 46 is fully spaced; Ch. 39 is seriously short-spaced to 2 stations
- At virtually any power equivalent to the ERP on Ch. 39 or greater, Ch. 46 provides greater service for WMYT-DT with less interference caused to other stations.
- Even at 1000 kW ERP Ch. 46 causes less than a quarter of the total interference caused by Ch. 39 at the allotted power of 200 kW.
- The two stations most significantly affected by Ch. 46 are both totally maximized (1 MW) and in the worst-case (WMYT at 1 MW omnidirectional) will suffer no more than 2.3% total interference.
- In contrast, the 2 most significantly affected stations on Ch. 39 are only at 500 and 600 kW ERP and both suffer greater than 10% total interference.

### Spacing

Section 73.623(d) of the Commission’s Rules specifies geographic spacing requirements for DTV channels not included in the initial Table of Allotments. Ch. 46 meets these requirements; Ch. 39 does not. The critical spacing situations are listed in Table 1.

### Height & ERP Levels Analyzed for on Ch. 46

All studies were conducted presuming that the Ch. 46 antenna would be mounted at the height of the current authorized CP mod for Ch. 39. An ERP of **228 kW** replicates the contour of the 200 kW Ch. 39 CP. The slightly higher power is due to the dipole factor employed in the FCC’s

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<sup>1</sup>In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, MB Docket No. 87-268, Seventh Further Notice of Proposed Rule Making, October 20, 2006.

calculations. It should be noted that although the contour is replicated by 228 kW, terrain losses predicted by Longley-Rice are approximately 0.25% greater at the higher frequency resulting in a slight service population loss (0.15%), even after accounting for less received interference on Ch. 46. The interference-free service area in km<sup>2</sup> actually increases inside the equivalent contour on Ch. 46 because of the reduction in interference. However, the areas freed from interference on Ch. 46 are on average less densely populated than the additional cells lost due to terrain. This effect is reflected in the service area values for the 228 kW entry of Table 2.

Section 73.622(f)(8)(i) specifies the maximum power allowed at a given HAAT for a UHF allotment created subsequent to the initial DTV Table. For WMYT at 592 meters HAAT this power is **336.4 kW**. The **1000 kW** ERP represents the maximum UHF DTV ERP allowed under any circumstance. 1000 kW also represents the power required to match the service area of the largest station in the DMA, WJZY-DT Ch. 47.

#### Net Service Benefits

In order to quantify the benefit of Ch. 46 vs. Ch. 39, the total service effects of changes to Ch. 46 at various power levels were combined as shown in Table 2. The 3 components are:

- Change in the WMYT-DT interference-free service area on Ch. 46 vs. Ch. 39
- Interference to other stations solely attributable to WMYT-DT Ch. 39, that is eliminated by a move to Ch. 46
- New interference to other stations that is created by a new DTV operation on Ch. 46

Note that all of the analysis described here is strictly post-transition. In other words, the only stations included in the interference analysis are the post-transition allotments as given in Appendix B of the 7<sup>th</sup> FNPRM. Analog stations are not included or considered. Therefore, the new interference shown for DTV Ch. 46 starts from a base of zero. The predicted interference shown

for DTV Ch. 46 is not masked or reduced in any way by the existing Ch. 46 analog operation of WJZY(TV).

Table 2 shows that as the ERP on Ch. 46 is increased, the WMYT-DT service population grows much more dramatically than does the interference caused to other stations. Table 3 shows the detailed predicted interference for Ch. 39 that is summarized in Table 2. Tables 4a, b and c show the same detail for the 3 power scenarios on Ch. 46.

#### Summary

Therefore, based on this engineering analysis, there is a compelling public interest benefit to change WMYT-DT's channel from the assigned Channel 39 to Channel 46. The change is dramatic in terms of interference reduction to existing Channel 39 facilities (239,216 persons) and reduces the received interference to each of these stations to less than 10% while adding up to 500,000 persons to WMYT-DT's service area.

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TABLE 1

WMYT-DT ALLOCATION SPACING STUDY

CH. 46 VS. CH.39

JANUARY 2007

<u>Adjacencies</u>	<u>Required Separation</u>	<u>Actual Separation</u>	<u>Result</u>
<u>For WMYT on Ch. 39</u>			
WHKY-DT Ch.40 Hickory, NC	110 km	44.1 km	Short Spaced by 60% of required distance
WKTC-DT Ch.39 Sumter, SC	223.7 km	142.8 km	Short Spaced by 36% of required distance
<u>For WMYT on Ch. 46</u>			
WVVA-DT Ch.46 Bluefield, WV	196.3 km	210.1 km	Fully spaced; 107% of required distance
WYCW-DT Ch.45 Asheville, NC	110 km	127.8 km	Fully spaced; 116% of required distance
WJZY-DT Ch.47 Belmont, NC	<24 km	0.0 km	Co-located

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TABLE 2  
SERVICE POPULATION AND AREA  
PUBLIC INTEREST BENEFIT OF WMYT-DT  
ON CH. 46 VS. CH.39  
JANUARY 2007

<u>WMYT-DT</u> <u>Facility</u>	<u>WMYT</u> <u>Interference-Free</u> <u>Service Area</u>	<u>WMYT</u> <u>Service</u> <u>Increase*</u>	<u>To Other Stations</u>		<u>Total</u> <u>Net</u> <u>Service</u> <u>Benefit*</u>
			<u>Interference</u> <u>Reduction</u> <u>From Ch 39*</u>	<u>Interference</u> <u>Increase</u> <u>From Ch 46*</u>	
Ch 39 200 kW (baseline)	2,789,062 [30,054 km <sup>2</sup> ]	-0-	-0-	-0-	-0-
Ch 46 228 kW (replicates Ch 39)	2,784,944 [31,578 km <sup>2</sup> ]	-4,118 [+1,524 km <sup>2</sup> ]	+239,276 [+3,878 km <sup>2</sup> ]	-25,590 [-880 km <sup>2</sup> ]	+209,568 [+4,522 km <sup>2</sup> ]
Ch 46 336.4 kW (Max facility)	2,900,241 [33,778 km <sup>2</sup> ]	+111,179 [+3,724 km <sup>2</sup> ]	+239,276 [+3,878 km <sup>2</sup> ]	-30,510 [-1,008 km <sup>2</sup> ]	+319,945 [+6,594 km <sup>2</sup> ]
Ch 46 1000 kW (match largest)	3,309,682 [40,118 km <sup>2</sup> ]	+520,620 [+10,064 km <sup>2</sup> ]	+239,276 [+3,878 km <sup>2</sup> ]	-52,894 [-1,480 km <sup>2</sup> ]	+707,002 [+12,462 km <sup>2</sup> ]

\*Note: the service and interference changes in these 4 columns are given the sign (+ or -) by which they contribute to the net overall service benefit; ie plus = increase to net service benefit, minus = reduction in net service benefit.

All population figures based on 2000 census.

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TABLE 3

POST-TRANSITION INTERFERENCE SITUATION FOR  
WMYT-DT CHANNEL 39 200 KW [CP MOD]  
JANUARY 2007

<u>Affected Station</u>	<u>Interference From All Stations %</u>	<u>Interference Population &amp; Area Caused by WMYT</u>		
		<u>Population %</u>	<u>Population</u>	<u>Area</u>
WHKY-DT Ch.40 Hickory, NC 600 kW 182 m	19.5%	16.04%	155,515	1,078 km <sup>2</sup>
WKTC-DT Ch.39 Sumter, SC 500 kW 391 m	13.9%	6.73%	83,463	2,768 km <sup>2</sup>
WUVC-DT Ch.38 Fayetteville, NC 500 kW 509 m	0.6%	0.004%	129	4 km <sup>2</sup>
WEMT Ch.38 Greenville, TN 1000 kW 795 m	0.07%	0.006%	112	20 km <sup>2</sup>
WSB-DT Ch.39 Atlanta, GA 1000 kW 301 m	0.05%	0.001%	57	4 km <sup>2</sup>
WLPX-DT Ch.39 Charleston, WV 1000 kW 350 m	2.0%	-0-	0	4 km <sup>2</sup>
Total From WMYT To All Stations			<u>239,276</u>	<u>3,878 km<sup>2</sup></u>

Note: All population figures based on 2000 census.

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TABLE 4-a

POST-TRANSITION INTERFERENCE SITUATION FOR  
WMYT-DT CHANNEL 46 228 KW (replicates Ch.39 CP Mod)  
JANUARY 2007

<u>Affected Station</u>	<u>Interference From All Stations %</u>	<u>Interference Population &amp; Area Caused by WMYT</u>		
		<u>Population %</u>	<u>Population</u>	<u>Area</u>
WYCW-DT Ch.45 Asheville, NC 1000 kW 555 m	1.19%	1.03%	20,980	552 km <sup>2</sup>
WVVA-DT Ch.46 Bluefield, WV 1000 kW 361 m	0.94%	0.67%	4,610	328 km <sup>2</sup>
Total From WMYT To All Stations			25,590	880 km <sup>2</sup>

Note: All population figures based on 2000 census.

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TABLE 4-b

POST-TRANSITION INTERFERENCE SITUATION FOR  
WMYT-DT CHANNEL 46 336.4 KW (max facility)  
JANUARY 2007

<u>Affected Station</u>	<u>Interference From All Stations %</u>	<u>Interference Population &amp; Area Caused by WMYT</u>		
		<u>Population %</u>	<u>Population</u>	<u>Area</u>
WYCW-DT Ch.45 Asheville, NC 1000 kW 555 m	1.37%	1.21%	24,657	632 km <sup>2</sup>
WVVA-DT Ch.46 Bluefield, WV 1000 kW 361 m	1.11%	0.85%	5,853	376 km <sup>2</sup>
Total From WMYT To All Stations			30,510	1,008 km <sup>2</sup>

Note: All population figures based on 2000 census.

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TABLE 4-c

POST-TRANSITION INTERFERENCE SITUATION FOR  
WMYT-DT CHANNEL 46 1 MW (match largest in DMA, WJZY-DT)  
JANUARY 2007

<u>Affected Station</u>	<u>Interference From All Stations %</u>	<u>Interference Population &amp; Area Caused by WMYT</u>		
		<u>Population %</u>	<u>Population</u>	<u>Area</u>
WYCW-DT Ch.45 Asheville, NC 1000 kW 555 m	2.31%	2.15%	43,915	932 km <sup>2</sup>
WVVA-DT Ch.46 Bluefield, WV 1000 kW 361 m	1.48%	1.21%	8,369	540 km <sup>2</sup>
WWAY Ch.46 Wilmington, NC 1000 kW 594 m	0.06%	0.06%	610	8 km <sup>2</sup>
Total From WMYT To All Stations			<u>52,894</u>	<u>1,480 km<sup>2</sup></u>

Note: All population figures based on 2000 census.