

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
 )  
Advanced Television Systems )  
And Their Impact Upon The Existing ) MB Docket No. 87-268  
Television Broadcast Service )

To: The Commission

**LIMITED OPPOSITION TO PETITION FOR RECONSIDERATION AND  
SUPPLEMENT BY GANNETT CO., INC.**

Sonshine Family Television, Inc. (“SFTI”), licensee of digital television broadcast station WBPH-DT, Channel 9, Bethlehem, Pennsylvania, through counsel and pursuant to Section 1.429(f) of the Rules, hereby submits this limited Opposition to the Petition for Reconsideration filed in this proceeding by Gannett Co., Inc. (“Gannett”), licensee of WUSA-DT, Washington, D.C., on October 25, 2007 (the “Gannett Petition”), as supplemented by a subsequent engineering statement.<sup>1</sup>

Previously, SFTI opposed a Joint Petition for Reconsideration by Allbritton Communications Company (licensee of WJLA-DT, Washington, D.C.) and Gannett, filed October 10, 2007, requesting modification of the Final Table of Digital Television Allotments<sup>2</sup> to reflect use of an existing shared analog antenna for post-transition operations on Channels 7 and 9, respectively. In its Opposition to the Joint Petition, filed November 6, 2007, SFTI showed that operation of WUSA-DT, as proposed in the Joint

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<sup>1</sup> Notice of the Gannett Petition was published at 72 *Fed. Reg.* 64628 (November 16, 2007).

<sup>2</sup> Appendix B to the *Seventh Report and Order and Eighth Further Notice of Proposed Rule Making* in MM Docket No. 87-268, FCC 07-138, released August 6, 2007.

Petition, would result in significant additional post-transition interference to WBPH-DT, in violation of FCC procedures and in excess of current and even proposed limits on additional interference.

The Gannett Petition alleged, without supporting engineering exhibits, that WUSA-DT could not return to its analog channel for post-transition operation and at the same time replicate its analog service area with the facilities allotted in the *Seventh Report and Order*. In a Reply (filed November 16, 2007) to SFTI's Opposition to the Joint Petition ("*Gannett Reply*"), Gannett for the first time provided an engineering exhibit in support of its request for relief, but the engineering statement modified the position taken in the Joint Petition. The engineering statement conceded that "replication of the authorized Grade B contour [would] cause[ ] interference [to WBPH-DT] in excess of current Commission policy."<sup>3</sup> Accordingly, it proposed a "revised set of certification parameters" involving "the use of the existing Channel 9 *non-directional* pattern operating with 8.7 kW ERP at 235 m HAAT." (Emphasis added.) This proposal would allegedly result in new post-transition interference to 5,587 persons within the WBPH-DT service area, or 0.1 percent of the baseline population for WBPH-DT. This, assertedly, would comply with FCC policy while permitting WUSA-DT to operate with the existing Channel 9 antenna.

SFTI supports the general premise that additional interference to WBPH-DT should be limited to no more than 0.1 percent of the baseline population, and, to that extent, the modification of the WUSA-DT allotment so that it complies with that objective. However,

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<sup>3</sup> See *Gannett Reply*, p. 2 ("Gannett . . . always understood . . . the FCC's allotment program would only modify WUSA's post-transition DTV allotment . . . if the requested change complied with the applicable 0.1 percent standard to nearby stations").

as shown in the attached engineering statement by WBPH-DT's consulting engineer, Larry H. Will, P.E. (Pages 2-3), the existing WUSA-TV analog antenna is hardly non-directional. This appears to be conceded in the Gannett engineering statement (Page 2) ("There is, of course, a corresponding directional antenna pattern.") If the WUSA antenna was truly omni-directional, then the radiation in all directions would be uniform and the uniform gain of the antenna would be derived from an average of antenna gains at the various radials. This is manifestly not the case. Moreover, the calculated ERP of 8.7 kW appears to be derived from a methodology common in analyzing the performance of analog antennas but inconsistent with the FCC's program for computing predicting coverage and interference for digital stations. (Will Engineering Statement, p. 3).<sup>4</sup> Using the RMS [root mean squared] methodology, the higher-gain portions of the antenna (including the azimuths in the direction of WBPH-DT) are averaged down to a lower gain number, while other lower-gain portions of the antenna are averaged to a higher value. The resulting calculation of ERP as 8.7 kW thereby ignores the increase in antenna gain in the direction of WBPH-DT and allows additional power, above 8.7kw, to be directed at WBPH-DT. This will inevitably result in additional interference to WBPH-DT above the allowable ceiling of 0.1 percent.

Specifically, Mr. Will states that (1) a Longley-Rice study shows potential interference to WBPH-DT along an arc from 21 through 55 degrees true, referenced from the WUSA transmitter site (Page 3); (2) the supplied plot for the existing WUSA antenna "exceeds the standard RMS value from approximately 33 through 54 degrees" (Page 3, n.

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<sup>4</sup> Gannett agrees that "the FCC's DTV allotment program is the last word on the specific parameters of a post-transition, replication operation for WUSA-DT." *Gannett Reply*, p. 3.

5); and (3) the actual ERP in the direction of WBPH-DT over that portion of the WUSA antenna pattern would be greater than the proposed ERP “by upwards of 130 percent” (Page 3). If WUSA-DT’s actual ERP was to exceed 8.7 kW at any azimuth pertinent to WBPH-DT, significant additional interference to WBPH-DT’s baseline population above and beyond the 0.1 percent limit would result.

Accordingly, SFTI supports the modified Gannett proposal if and only if actual measured power on any and all azimuths pertinent to WBPH-DT does not exceed 8.7 kW. In the absence of such a condition, SFTI continues to oppose the requested modification of the Final DTV Table of Allotments, and the Gannett Petition should be denied.

Respectfully submitted,

SONSHINE FAMILY TELEVISION, INC.

By /s/ J. Geoffrey Bentley  
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December 3, 2007

**Larry H. Will, P.E.**

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**SONSHINE FAMILY TELEVISION CORPORATION**

**LICENSEE OF WBPH-DT**

**DTV CHANNEL 9**

**BETHLEHEM, PENNSYLVANIA**

**FAC ID# 60850**

**FCC FILE # BLCDT-20060609AAH**

**ENGINEERING EXHIBIT IN SUPPORT OF COMMENTS ON SUPPLIMENT TO A  
PETITION FOR RECONSIDERATION BY GANNETT INCORPORATED**

**November 30, 2007**

**SONSHINE FAMILY TELEVISION CORPORATION**

**LICENSEE OF WBPH-DT**

**DTV CHANNEL 9**

**BETHLEHEM, PENNSYLVANIA**

**FAC ID# 60850**

**FCC FILE # BLCDT-20060609AAH**

**ENGINEERING STATEMENT**

Sonshine Family Television Corporation (“SFTI”) is submitting this response to a Reply in Support of a Petition for Reconsideration filed by Gannett, Incorporated with regards to the substitution of the transmitting antenna for WUSA-DT, Channel 9 in Washington D.C.

This office has reviewed the Engineering Statement provided by Gannett in the above proceeding and has the following comments. As outlined beginning on Page 2 of the Engineering Statement attached to the Reply, Gannett is now proposing to substitute a non-directional antenna pattern with an effective radiated power of 8.7 kW at all azimuths and with a center of radiation of 235 meters<sup>1</sup>. SFTI has reviewed the technical details outlined by Gannett and has no objection to WUSA-DT operating on Channel 9 with the parameters as specified therein.

However, we note that in the original Petition filed jointly by Gannett and Allbritton Communications Company, the “Joint Petition for Reconsideration in Docket MM 87-268 filed jointly by ALBRITTON COMMUNICATIONS COMPANY and GANNETT CO., INC. on October 10, 2007 (the “Joint Petitioners”)”, the petitioners noted that the existing antenna was a Dielectric Communications antenna with an actual pattern that is not truly omni-directional as

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<sup>1</sup> See “ENGINEERING STATEMENT SUPPORTING A PETITION FOR RECONSIDERATION” prepared by Cavell, Mertz & Associates, Inc. for Gannett, Incorporated at Page 2 and Table II.

provided on Page 6 of the original petition and attached hereto for reference. It was common practice in the NTSC era to routinely call many somewhat directional practical patterns omnidirectional and specify the gain as simply the root mean square or RMS value of the actual antenna azimuth pattern values. Using this convention results in a transmitted ERP at some azimuths being greater than the RMS value while the ERP at other azimuths is actually less than the RMS value. Figure 1 attached hereto shows the stock actual pattern of the Dielectric “deltawing®” antenna<sup>2</sup> without regard to a specific channel<sup>3</sup>. During the DTV proceeding, the staff has continually utilized antenna azimuth field patterns for every degree<sup>4</sup> and detailed out to the 3<sup>rd</sup> decimal place and has always relied on this level of computational accuracy to determine both coverage and interference populations. SFTI is concerned that since Gannett is proposing to use the already existing Dielectric antenna with the obviously non uniform azimuth pattern, that the 8.7 kW proposed would be set utilizing the measured RMS field thus causing the ERP in some of the azimuths toward WBPH-DT (and possibly other stations) to be greater by upwards of 130 percent thus resulting in an actual calculated interference to WBPH-DT in excess of the 5,587 persons outlined in the Engineering Statement at Table III<sup>5</sup>.

Accordingly, SFTI believes that over the pertinent arcs towards the WBPH-DT coverage area, the actual allowable ERP should not be permitted to exceed 8.7 kW at any azimuth. Based on the detailed cell data from the Longley-Rice study performed for SFTI by MSW, the included angles range from 21 through 55 degrees true rounded to the nearest degree and referenced from the WUSA-DT transmitter site.

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<sup>2</sup> Gannett has not provided the actual antenna model number but the Dielectric DASP antenna calculation software indicates the supplied pattern is from a 4 bay panel design.

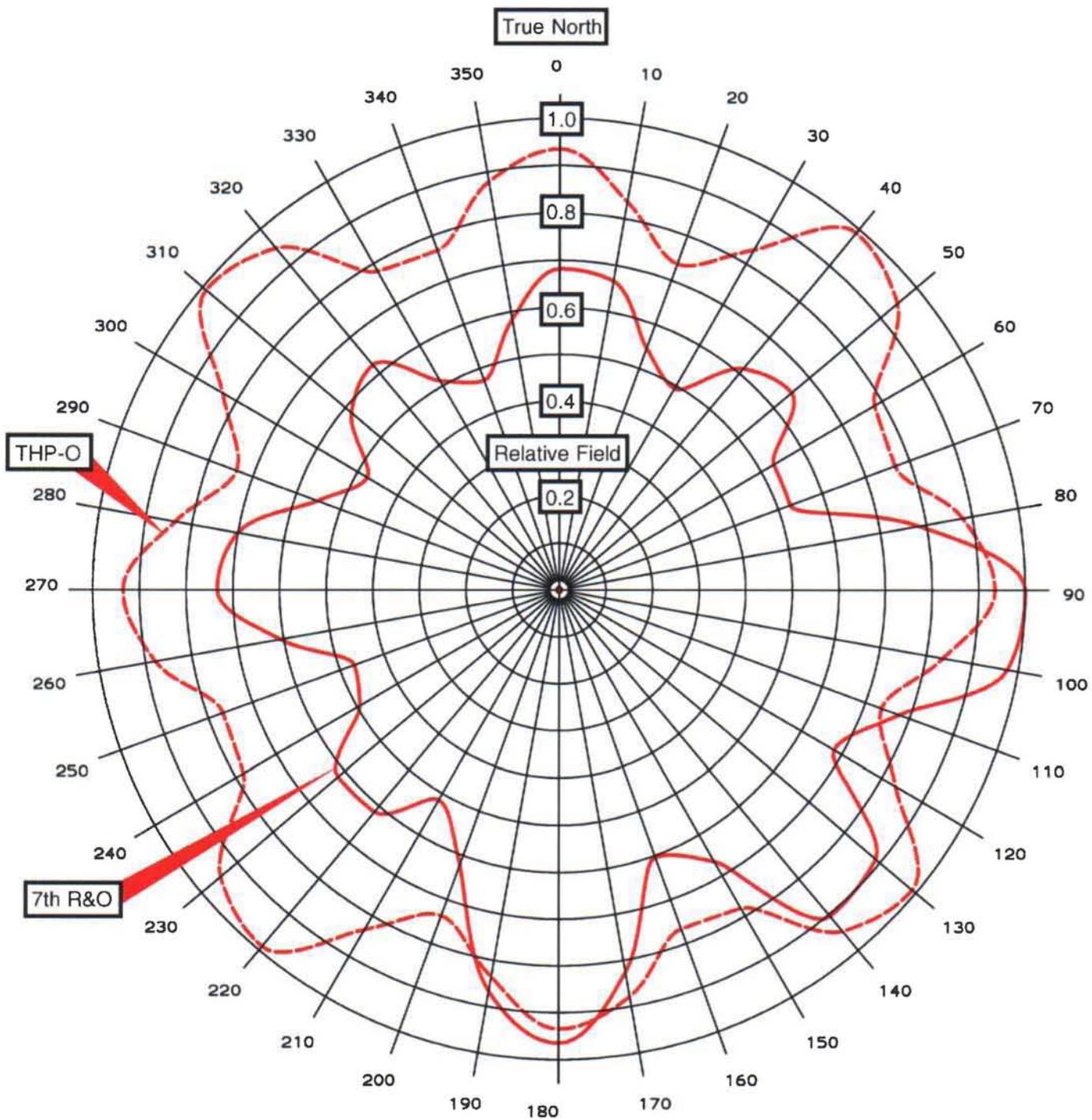
<sup>3</sup> The pattern provided by the Joint Petitioners shows amplitude variations somewhat in excess of those of the standard pattern.

<sup>4</sup> The FCC directional antenna database records azimuth pattern data every 10 degrees with up to ten special azimuths permitted and normally uses interpolation to determine the pattern electrical field for all azimuths in between the pattern data file values.

<sup>5</sup> The published Dielectric Pattern shows an RMS power gain of 1.30, which results in an RMS field of approximately 0.87. The WUSA-DT pattern supplied by Gannett shows a somewhat greater variation in peak-to-peak divergence from the RMS and possibly a slight variation from the standard RMS. Based on the supplied plot, the existing WUSA azimuth pattern exceeds the standard RMS value from approximately 33 through 54 degrees.

## CONCLUSIONS

In summary SFTI will accept proposed modified facilities that, using actual measured, WUSA azimuth pattern data, result in the WUSA-DT9 ERP not exceeding 8.7 kW with an HAAT of 235 meters over the arc from 21 through 55 degrees as referenced from the WUSA-DT transmitter site. This limitation will therefore be expected result in a calculated increase in interference to WBPH-DT to comply with the FCC 0.1% standard.



### WUSA ANTENNA PATTERN COMPARISON

prepared September 2007 for  
**Detroit Free Press, Inc.**  
 WUSA-DT Washington, DC

**Cavell, Mertz & Associates, Inc.**  
 Manassas, Virginia



Date  
Call Letters  
Location  
Customer  
Antenna Type

**30 Nov 2007**

Channel **9**

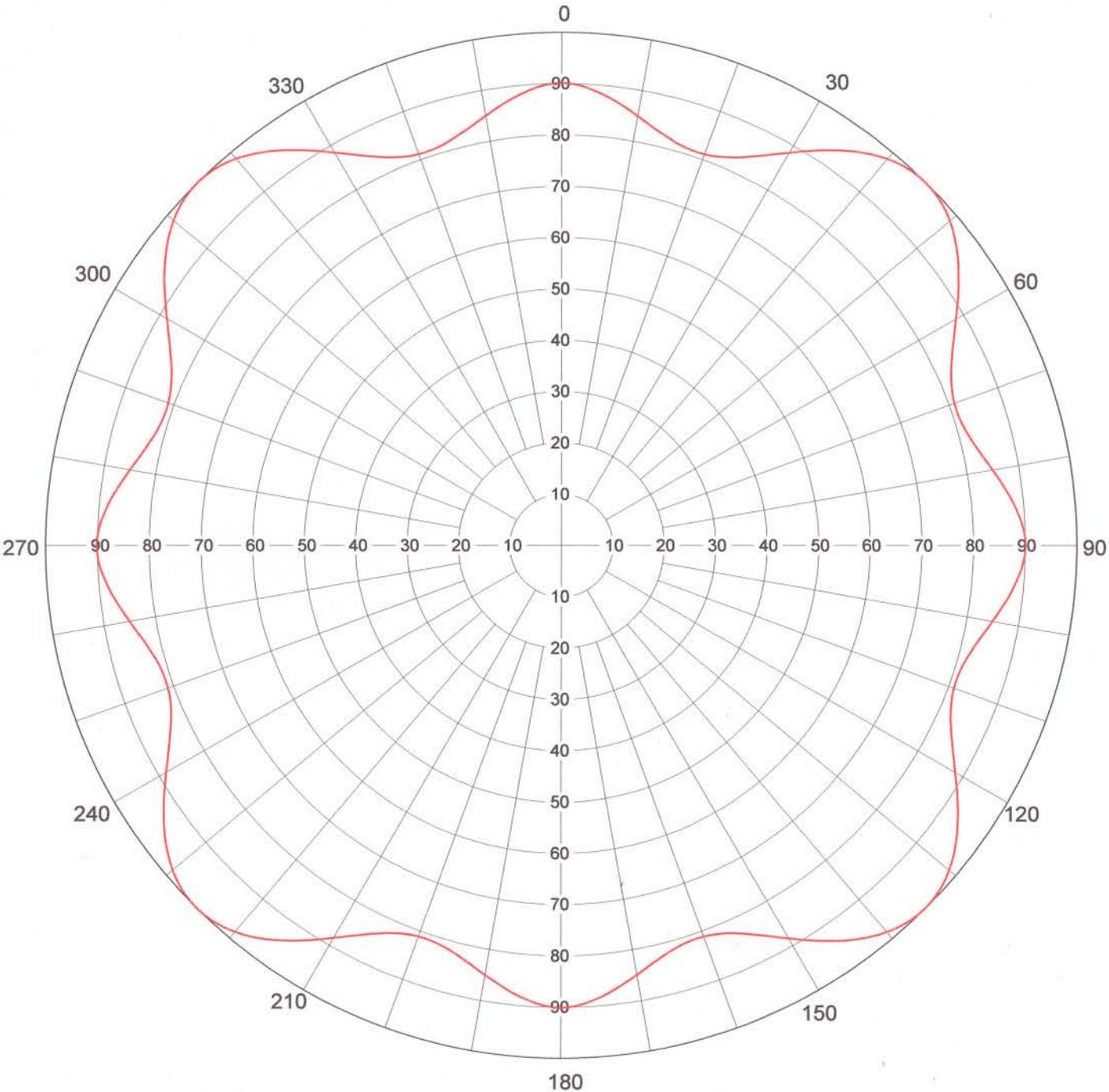
**AZIMUTH PATTERN**

Gain  
Calculated / Measured

**1.30 (1.14 dB)**  
**Calculated**

Frequency  
Drawing #

**189 MHz**  
**THA-O4**



Remarks: **STANDARD DIELECTRIC COMM HIGH BAND V PATTERN**

## CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Limited Opposition to Petition for Reconsideration were served, by first-class United States mail, postage prepaid, this 3d day of December 2007, on:

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