

## **Engineering Statement**

prepared for

### **Gray Television Licensee, LLC**

KAIT Jonesboro, AR

Facility ID 13988

Ch. 27 1000 kW 527 m

This engineering statement has been prepared on behalf of *Gray Television Licensee, LLC* (“*Gray*”), licensee of KAIT(DT) (Facility ID 13988, Jonesboro AR). *Gray* has submitted a *Petition for Rulemaking* (file#0000127529) to amend §73.622(i)<sup>1</sup> by changing KAIT’s digital television channel assignment. KAIT is licensed to operate on Channel 8 (BLCDT-20090803ABV). *Gray*’s petition requests substitution of Channel 27 in lieu of Channel 8 for KAIT. This statement is part of an amendment to the petition and is revised to supply additional detail regarding alternate TV service availability in the areas where service from KAIT may be lost.

The KAIT Channel 8 facility is in the VHF spectrum and has proven to be ineffective for satisfactory viewer reception as discussed herein and elsewhere in the petition. The use of Channel 27 would place KAIT in the UHF spectrum which is known to provide robust signal levels for home reception.

*Gray* has determined that many viewers experience significant difficulty in receiving KAIT’s signal. Problems with digital VHF reception by stations in many markets were widely publicized since the 2009 digital transition date. It has been established that indoor reception is difficult for digital VHF stations such as KAIT due to the longer wavelength signal’s inability to readily pass through buildings (the windows are smaller than the wavelength size), the

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<sup>1</sup>The post-incentive auction transition period ended on July 13, 2020, pursuant to the *Incentive Auction Closing and Channel Reassignment Public Notice* (DA 17-317, released April 13, 2017). The FCC’s rules have not yet been amended to reflect all new full power channel assignments in a revised Table of Allotments. Because the Table has not yet been amended, it is understood that FCC’s Media Bureau will continue to refer to the Post-Transition Table of DTV Allotments, 47 CFR § 73.622(i) (2018), for the purpose of post-auction channel change rulemaking proceedings.

ineffectiveness of many indoor antennas many of which were designed to emphasize the shorter wavelengths for UHF reception, and high levels of manmade and environmental noise.

No change in transmitting location is proposed. The KAIT tower structure corresponds to FCC Antenna Structure Registration (“ASR”) number 1064518. *Gray* proposes to implement the Channel 27 substitution with a top-mounted transmitting antenna on the existing tower structure which would replace the existing top-mounted Channel 8 antenna.

The licensed Channel 8 facility operates with 28.2 kW effective radiated power (“ERP”) nondirectional at 531 meters antenna height above average terrain. *Gray* proposes herein to utilize 1000 kW ERP directional on Channel 27 at 527 meters antenna HAAT.

A summary of the licensed Channel 8 and proposed Channel 27 technical parameters is provided in the following.

**Licensed Channel 8 Parameters (file# BLCDDT-20090803ABV)**

FacID	Call	Ch	City	St	Lat	Lon	RCAMSL	HAAT	ERP	DA
13988	KAIT	8	JONESBORO	AR	355322	905608	608	531	28.2	ND

**Proposed Channel 27 Parameters**

FacID	Call	Ch	City	St	Lat	Lon	RCAMSL	HAAT	ERP	DA
13988	KAIT	27	JONESBORO	AR	355322	905608	605	527	1000	DA

The proposed directional antenna azimuthal pattern is plotted in Figure 1. A map is supplied as Figure 2, which depicts the standard predicted coverage contours. As demonstrated thereon, the proposed facility complies with §73.625(a)(1) as the entire community of Jonesboro will be encompassed by the 48 dB $\mu$  contour.

Interference study per FCC OET Bulletin 69<sup>2</sup> shows that the proposal complies with the 0.5 percent limit of new interference caused to pertinent nearby full service and Class A television

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<sup>2</sup>FCC 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 0.1 km terrain increment.

stations and reassignments as required by §73.616. FCC processing of this proposal is requested using a 2.0 km cell size and 0.1 km terrain profile point increment. The interference study output report is provided as Table 1.

The proposed 1000 kW ERP exceeds the maximum allowed for the proposed antenna HAAT of 527 meters permitted by §73.622(f)(8)(i). Section 73.622(f)(5) permits the maximum ERP to be exceeded in order to provide the same geographic coverage area as the largest station within the same market. As demonstrated in Figure 3, the total area within the proposed KAIT noise limited service contour (“NLSC”) is 39,187 square kilometers, which does not exceed the NLSC area of the licensed KAIT Channel 8 facility (43,359 sq. km). Thus, the 1000 kW ERP specified herein complies with §73.622(f)(5) of the FCC’s Rules.

Figure 3 also shows that the proposed Channel 27 NLSC will fall short of matching that of the licensed Channel 8 facility at locations to the east, southeast, and south. These areas are in the pattern minima region of the proposed directional antenna. On Channel 27, the best available UHF channel at Jonesboro, the directional pattern is necessary to avoid causing impermissible interference to other stations, principally first-adjacent channel stations WBUY-TV (Ch. 26, Fac ID 60830, Holly Springs MS) and WREG-TV (Ch. 28, Fac ID 66174, Memphis TN).

Figure 3 depicts the proposed KAIT Channel 27 resulting NLSC loss areas along with the NLSC of alternative authorized television services that overlap a portion of loss area. The stations<sup>3</sup> providing the alternative services are listed in Table 2. Figure 3 shows that much of the KAIT NLSC area has three or fewer other television services, nearly all of which will be encompassed by the proposed Channel 27 NLSC. Areas in the southeast and southwest portions of the existing KAIT NLSC are well-served (5 or more services) by stations located in the nearby Memphis TN and Little Rock AR markets, respectively. The areas on Figure 3 that are tinted yellow represent locations where there are less than 5 other services remaining in the loss area. A summary of the number of alternative services for the loss area is provided on the map and in the following table.

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Comparisons of various results of this computer program (run on a Mac processor) to the FCCs implementation of TVStudy show excellent correlation.

<sup>3</sup>Class A television stations are included in the alternative service facility count to determine if an area is well-served, as they have the same primary status and public service obligations as full-power television stations.

**Loss Area Analysis – Standard FCC Contours**

KAIT Population Within NLSC	(2010 census)	
Licensed Ch. 8 Total	847,899	
Proposed Ch. 27 Total:	604,514	
Gain Area Population:	660	
Loss Area Population:	244,045	
Common Area Population:	603,854	
Number of Other Services	<u>Loss Pop</u>	<u>Gain Pop</u>
0	0	49
1	152	125
2	652	101
3	1,752	146
4	3,988	123
5 or more	237,501	116
Total Change	244,045	660
Total less than 5 services	6,544	544
Total less than 5 (percentage)	0.77%	0.06%

The licensed Channel 8 facility’s NLSC encompasses 847,899 persons and the proposed Channel 27 facility’s NLSC would encompass 604,514 persons. The resulting NLSC loss population is 244,045 persons, of which only 6,544 persons would have less than five other services representing 0.77 percent of the total population within the licensed KAIT Channel 8 NLSC. The loss area includes portions of the Memphis metropolitan area which has high population density and is well-served by TV stations local to Memphis.

The proposed Channel 27 facility would continue to provide NLSC coverage to considerable areas that are not well-served. As shown in the following table the proposed KAIT will provide the only TV service to 6,228 persons and a second service to 46,752 persons. Over 56 percent of the proposed KAIT Channel 27 NLSC population is in areas that have three or fewer other services, involving 340,655 persons.

<b>Service Count Population Report Proposed KAIT Ch. 27 NLSC</b>			
Within NLSC	Population	Area (sq. km)	
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0 Other Service	6,228	1670.00	
1 Other Service	46,752	5938.43	
2 Other Service	148,398	9674.48	
3 Other Service	139,277	7725.71	
4 Other Service	38,215	1678.16	
5 or more Other Service	225,644	12499.79	
Total NLSC	604,514	39186.57	
	Population	Running Total	Percent
0 Other Service	6,228	6,228	1.0 %
1 Other Service	46,752	52,980	8.8 %
2 Other Service	148,398	201,378	33.3 %
3 Other Service	139,277	340,655	56.4 %
4 Other Service	38,215	378,870	62.7 %
5 or more Other Service	225,644	604,514	100.0 %

The results of additional loss area analysis are provided in Figure 4, now to consider terrain-limited coverage predictions of the licensed Channel 8 facility and the proposed Channel 27 operation. Here, the FCC’s TVStudy computer program was used to determine terrain-limited coverage predictions at locations beyond the proposed Channel 27 NLSC. The study area was set using the “fixed geography” option to match the licensed Channel 8 NLSC. Study cell size of 2.0 km and terrain profile step increment of 0.1 km were employed, consistent with the interference analysis for the proposal. The analysis included examination of each cell that is located beyond the Channel 27 NLSC and beyond the NLSC of at least five other stations (the same, yellow-tinted area as Figure 3) as bounded by the existing Channel 8 facility’s NLSC. Cells in the NLSC loss area region were counted as lost service if they are predicted to have terrain-limited service from the licensed Channel 8 facility and not from the proposed Channel 27. The results regarding the number of alternative services for the loss areas are provided on Figure 4 and in the following table.

**Loss Area Analysis – Terrain-Limited**

KAIT Terrain-Limited Population TVStudy at Fixed Geography Area	(2010 census)
Licensed Ch. 8 Total	840,437
Number of Other Services	<u>Loss Pop</u>
0	0
1	0
2	0
3	0
4	0
5 or more	1,276
Total Loss	1,276
Total less than 5 services	0
Total less than 5 (percentage)	0.00%

This analysis shows that the terrain-limited loss population beyond the proposed Channel 27 NLSC is 1,276 persons of the KAIT licensed digital Channel 8 facility. Here, the count of other services where terrain-limited service is lost provides the number of other stations that provide NLSC coverage to each cell. There is no terrain-limited service loss to any cell that is located within the existing Channel 8 facility’s NLSC, beyond the Channel 27 NLSC, and beyond the NLSC of at least five other stations (the yellow tinted area on Figure 4). Thus, the terrain-limited analysis shows that all of the proposed Channel 27 facility’s loss population (1,276 persons) would have five or more other services.

The NLSC for WATN-TV (Ch. 25, Memphis TN) is highlighted on Figure 4. Like KAIT, WATN-TV is an ABC network affiliate and has considerable NLSC overlap with KAIT. WATN-TV’s NLSC encompasses all of the terrain-limited loss area population of 1,276 persons. There is only one terrain-limited loss cell that is beyond the WATN-TV NLSC, however that cell is unpopulated. Therefore, no population will lose ABC coverage from the KAIT Channel 27 proposal.

**Conclusion**

The proposed channel substitution complies with the FCC’s principal community coverage requirements of §73.625 and the interference protection requirements of §73.616. No area of service loss would be created that is not well-served.

List of Attachments

Figure 1	Antenna Azimuthal Pattern
Figure 2	Proposed Coverage Contours
Figure 3	Coverage Contour Comparison; Loss Area Analysis – Standard FCC Contours
Figure 4	Loss Area Analysis – Terrain-Limited Method
Table 1	TVStudy Analysis of Proposal
Table 2	Authorized Alternate Television Services

**Chesapeake RF Consultants, LLC**

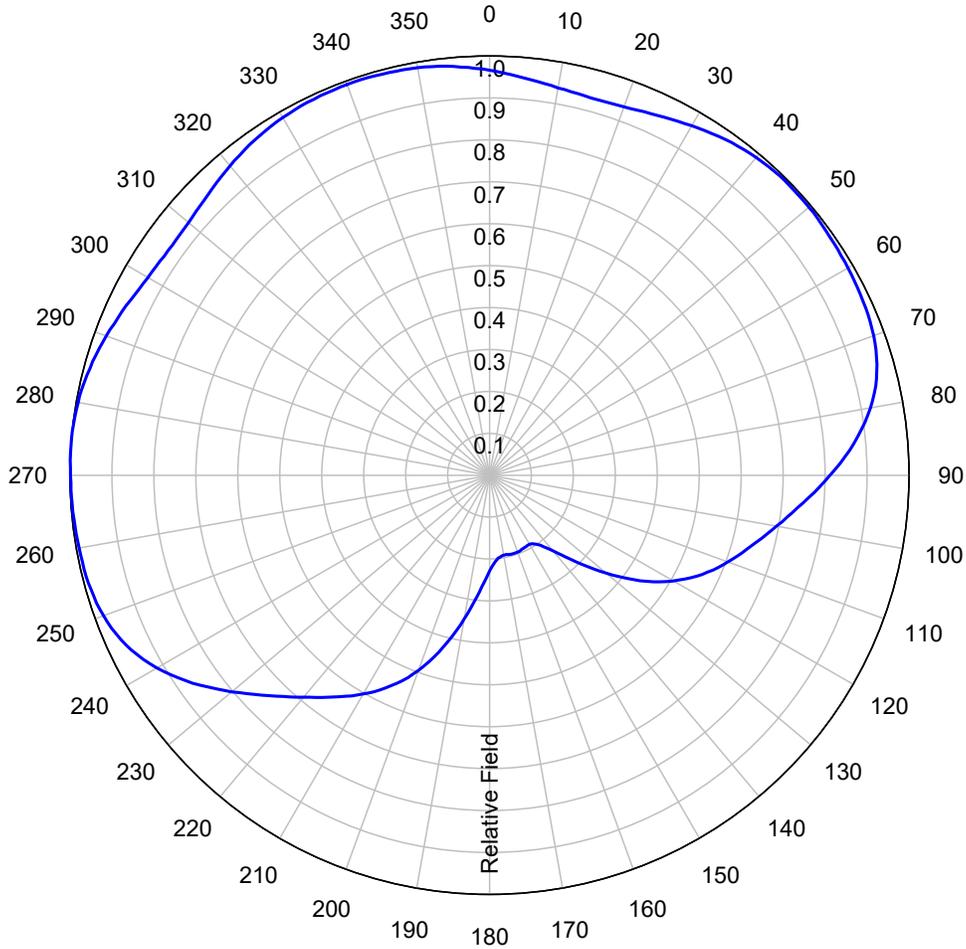
Joseph M. Davis, P.E.	January 29, 2021	
207 Old Dominion Road	Yorktown, VA 23692	703-650-9600

### AZIMUTH PATTERN

Type: ATW-C1  
 Directivity: Numeric 1.52 dBd 1.82  
 Peak(s) at: \_\_\_\_\_

Channel: 27  
 Location: Jonesboro AR  
 Polarization: Horizontal

Note: Pattern shape and directivity may vary with channel and mounting configuration.



Preliminary, subject to final design and review.

ELECTRONICS RESEARCH, INC. **ERI**



**Figure 1**  
**Antenna Azimuthal Pattern**  
**KAIT Jonesboro, AR**  
**Facility ID 13988**  
**Ch. 27 1000 kW 527 m**

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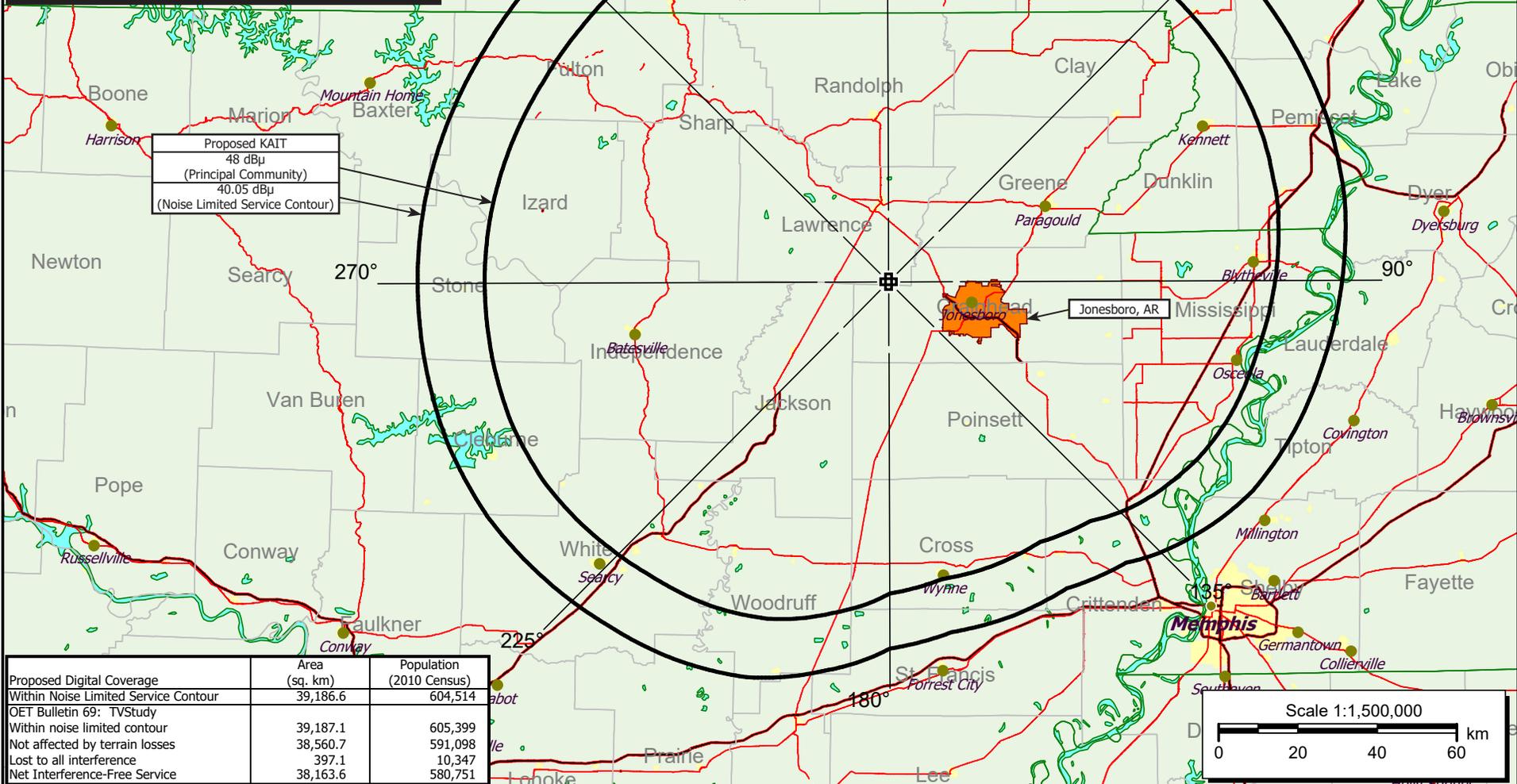
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January, 2021

**Figure 2**  
**Proposed Coverage Contours**  
**KAIT Jonesboro, AR**  
**Facility ID 13988**  
**Ch. 27 1000 kW 527 m**

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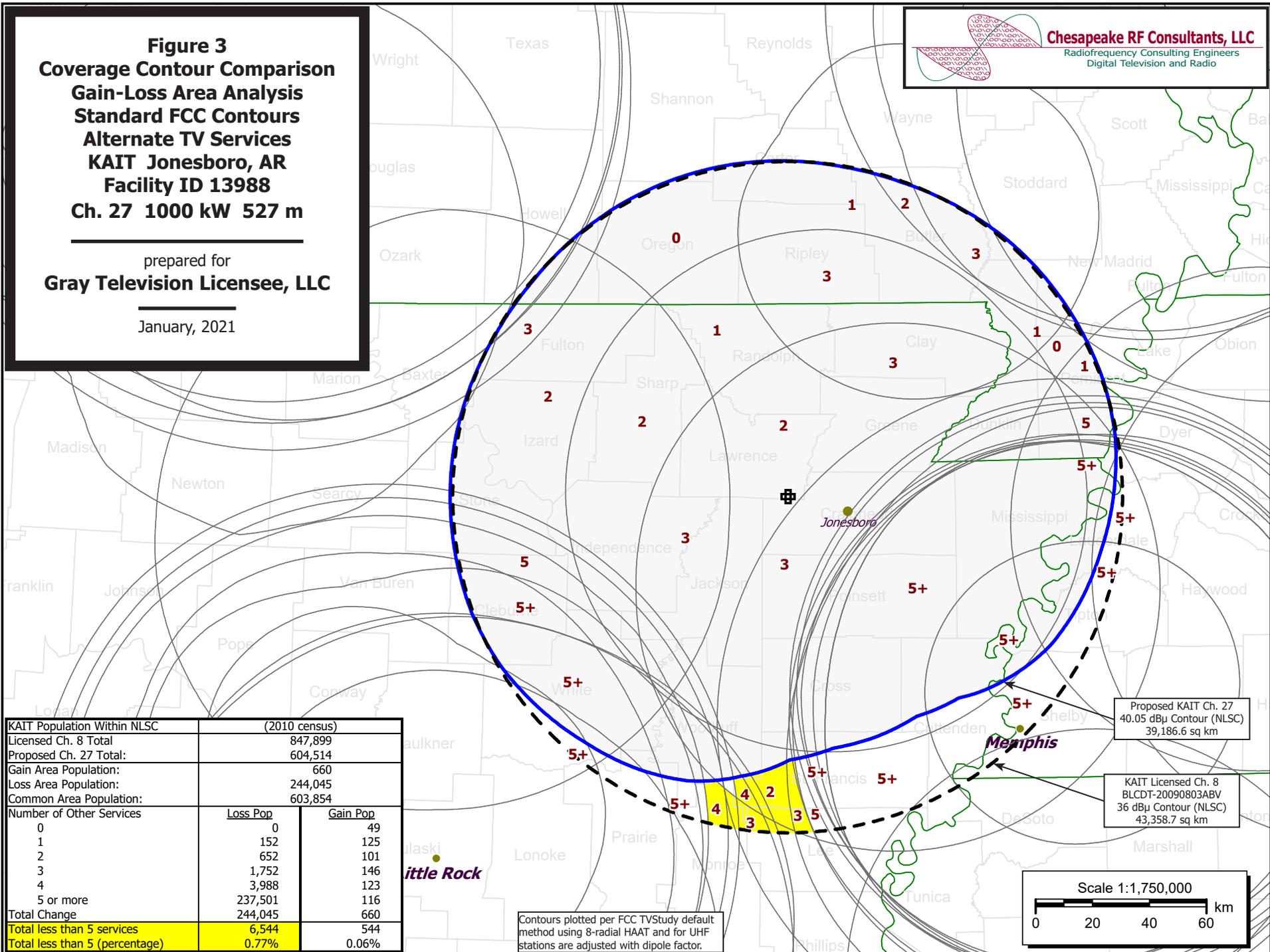
January, 2021



**Figure 3**  
**Coverage Contour Comparison**  
**Gain-Loss Area Analysis**  
**Standard FCC Contours**  
**Alternate TV Services**  
**KAIT Jonesboro, AR**  
**Facility ID 13988**  
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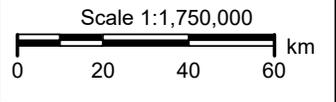


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Proposed KAIT Ch. 27  
 40.05 dBu Contour (NLSC)  
 39,186.6 sq km

KAIT Licensed Ch. 8  
 BLCDT-20090803ABV  
 36 dBu Contour (NLSC)  
 43,358.7 sq km

Contours plotted per FCC TVstudy default method using 8-radial HAAT and for UHF stations are adjusted with dipole factor.



**Figure 4**  
**Loss Area Analysis**  
**Terrain-Limited Method**  
**KAIT Jonesboro, AR**  
**Facility ID 13988**  
**Ch. 27 1000 kW 527 m**

prepared for  
**Gray Television Licensee, LLC**

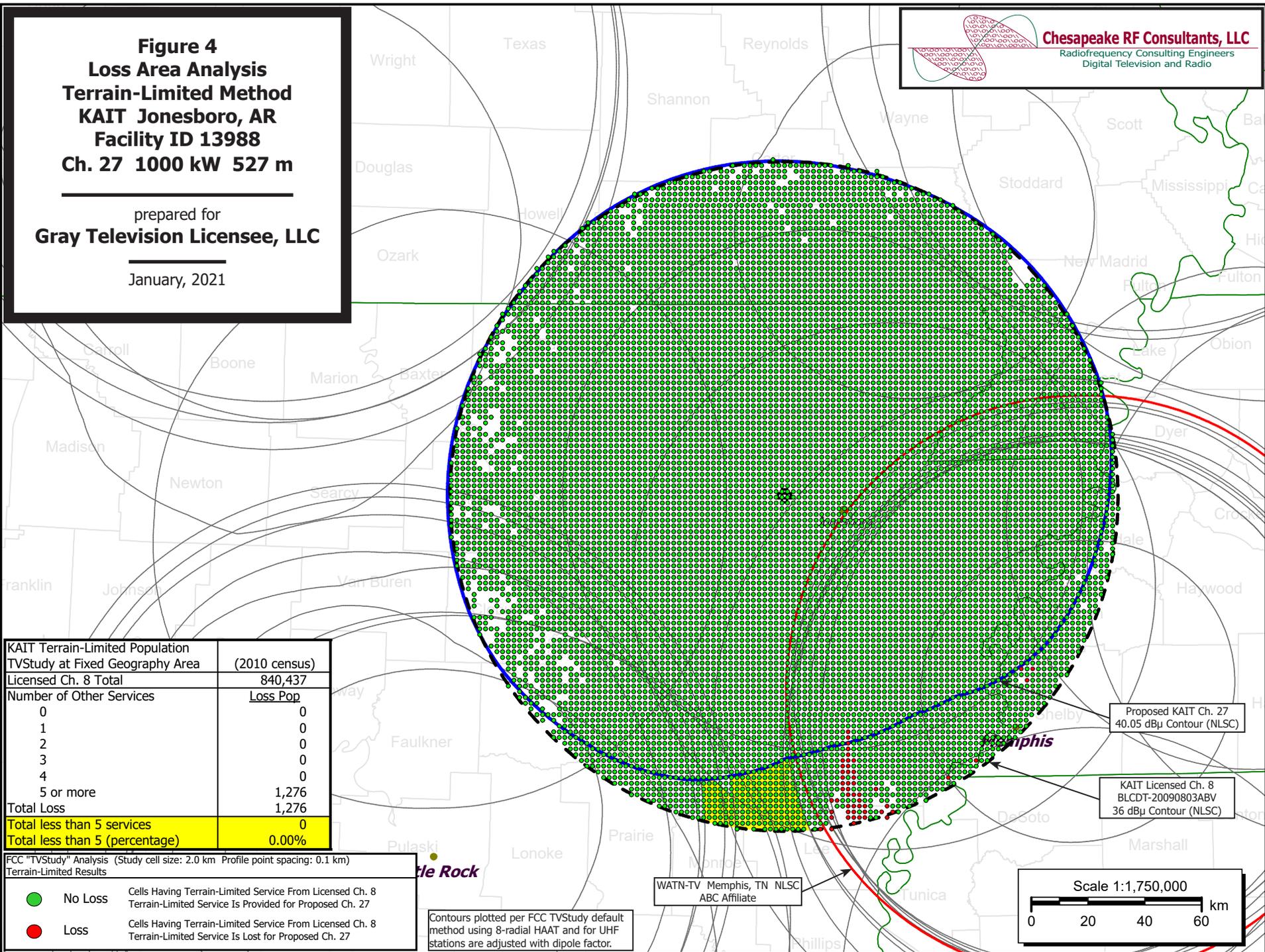
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Total less than 5 (percentage)	0.00%

FCC "TVStudy" Analysis (Study cell size: 2.0 km Profile point spacing: 0.1 km)  
Terrain-Limited Results

<span style="color: green;">●</span> No Loss	Cells Having Terrain-Limited Service From Licensed Ch. 8 Terrain-Limited Service Is Provided for Proposed Ch. 27
<span style="color: red;">●</span> Loss	Cells Having Terrain-Limited Service From Licensed Ch. 8 Terrain-Limited Service Is Lost for Proposed Ch. 27

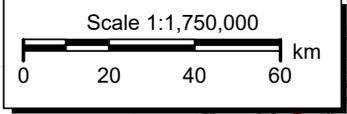
Contours plotted per FCC TVStudy default method using 8-radial HAAT and for UHF stations are adjusted with dipole factor.



Proposed KAIT Ch. 27  
40.05 dBu Contour (NLSC)

KAIT Licensed Ch. 8  
BLCDT-20090803ABV  
36 dBu Contour (NLSC)

WATN-TV Memphis, TN NLSC  
ABC Affiliate



**Table 1 KAIT TV Study Analysis of Proposal**  
(page 1 of 4)



tvstudy v2.2.5 (4uoc83)  
Database: localhost, Study: KAIT Ch27 ATW-C1\_2.0-0.1, Model: Longley-Rice  
Start: 2020.11.17 15:51:08

Study created: 2020.11.17 15:51:08

Study build station data: LMS TV 2020-11-15

Proposal: KAIT D27 DT APP JONESBORO, AR  
File number: KAIT Ch27 ATW-C1  
Facility ID: 13988  
Station data: User record  
Record ID: 3281  
Country: U.S.  
Zone: II

Search options:  
Baseline record excluded if station has CP

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
Yes	WBUY-TV	D26	DT	LIC	HOLLY SPRINGS, MS	BLANK0000063641	125.0 km
Yes	KTVE	D27	DT	LIC	EL DORADO, AR	BLCDT20070105ABH	334.1
Yes	KFTA-TV	D27	DT	LIC	FORT SMITH, AR	BLCDT20090331AEC	289.4
Yes	KOMU-TV	D27	DT	APP	COLUMBIA, MO	BLANK00000125105	353.4
Yes	WCBI-TV	D27	DT	LIC	COLUMBUS, MS	BLANK0000059851	302.8
Yes	WLJT-DT	D27	DT	LIC	LEXINGTON, TN	BLANK0000058637	211.3
Yes	WKRN-TV	D27	DT	LIC	NASHVILLE, TN	BLANK00000115874	369.7
No	KARZ-TV	D28	DT	LIC	LITTLE ROCK, AR	BLANK00000074890	186.0
No	KOZL-TV	D28	DT	LIC	SPRINGFIELD, MO	BLCDT20070213ABB	232.7
Yes	WREG-TV	D28	DT	LIC	MEMPHIS, TN	BLCDT20050513AAE	127.1

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D27  
Latitude: 35 53 22.00 N (NAD83)  
Longitude: 90 56 8.00 W  
Height AMSL: 605.0 m  
HAAT: 527.4 m  
Peak ERP: 1000 kW  
Antenna: ERI ATW-C1 340.0 deg  
Elev Pattnr: Generic  
Elec Tilt: 1.50

40.0 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	933 kW	526.3 m	117.7 km
45.0	985	529.0	118.4
90.0	658	520.7	114.0
135.0	89.4	528.0	96.5
180.0	52.0	531.0	92.2
225.0	558	529.2	113.1
270.0	998	528.5	118.4
315.0	903	526.8	117.4

ERP exceeds maximum  
ERP: 1000 kW ERP maximum: 445 kW

Distance to Canadian border: 950.1 km

Distance to Mexican border: 1181.4 km

Conditions at FCC monitoring station: Powder Springs GA  
Bearing: 109.9 degrees Distance: 609.4 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:

**Table 1 KAIT TVStudy Analysis of Proposal**  
(page 2 of 4)



Bearing: 294.9 degrees Distance: 1335.0 km

Study cell size: 2.00 km  
Profile point spacing: 0.10 km

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

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Interference to BLANK0000063641 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance			
	WBUY-TV	D26	DT	LIC	HOLLY SPRINGS, MS	BLANK0000063641				
Undesireds:	KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	125.0 km			
	WATN-TV	D25	DT	LIC	MEMPHIS, TN	BLCDT20050628AAP	0.0			
	WTJP-TV	D26	DT	LIC	GADSDEN, AL	BLCDT20110304ACB	345.3			
	KPLR-TV	D26	DT	CP	ST. LOUIS, MO	BLANK0000050068	369.9			
	WLJT-DT	D27	DT	LIC	LEXINGTON, TN	BLANK0000058637	116.4			
	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
	27864.6	1,569,254	27633.7	1,558,732	27493.8	1,555,017	27103.3	1,547,800	1.42	0.46
Undesired			Total IX	Unique IX, before	Unique IX, after					
KAIT D27 DT APP		390.5	7,217		390.5	7,217				
WATN-TV D25 DT LIC		12.0	14	12.0	14	12.0	14			
WTJP-TV D26 DT LIC		67.4	2,031	67.4	2,031	67.4	2,031			
WLJT-DT D27 DT LIC		60.5	1,670	60.5	1,670	60.5	1,670			

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Interference to BLCDT20070105ABH LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance			
	KTVE	D27	DT	LIC	EL DORADO, AR	BLCDT20070105ABH				
Undesireds:	KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	334.1 km			
	KTAL-TV	D26	DT	LIC	TEXARKANA, TX	BLANK0000073076	167.1			
	KFTA-TV	D27	DT	LIC	FORT SMITH, AR	BLCDT20090331AEC	341.1			
	WCBI-TV	D27	DT	LIC	COLUMBUS, MS	BLANK0000059851	319.4			
	KBTW-TV	D27	DT	LIC	PORT ARTHUR, TX	BLANK0000063140	365.1			
	KARZ-TV	D28	DT	LIC	LITTLE ROCK, AR	BLANK0000074890	192.9			
	KTBS-TV	D28	DT	LIC	SHREVEPORT, LA	BLANK0000053971	165.3			
	KCEB	D28	DT	LIC	LONGVIEW, TX	BLANK0000080719	165.3			
	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
	44563.0	641,139	44362.1	639,417	42922.8	611,996	42854.6	610,699	0.16	0.21
Undesired			Total IX	Unique IX, before	Unique IX, after					
KAIT D27 DT APP		84.2	1,719		68.1	1,297				
KTAL-TV D26 DT LIC		925.1	21,544	123.7	598	123.7	598			
KFTA-TV D27 DT LIC		32.1	55	28.1	18	24.1	18			
WCBI-TV D27 DT LIC		8.0	421	8.0	421	0.0	0			
KBTW-TV D27 DT LIC		80.6	2,231	44.4	56	44.4	56			
KARZ-TV D28 DT LIC		4.0	1	4.0	1	0.0	0			
KTBS-TV D28 DT LIC		1231.1	26,327	0.0	0	0.0	0			
KCEB D28 DT LIC		1231.1	26,327	0.0	0	0.0	0			

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Interference to BLCDT20090331AEC LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance			
	KFTA-TV	D27	DT	LIC	FORT SMITH, AR	BLCDT20090331AEC				
Undesireds:	KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	289.4 km			
	KOTV-DT	D26	DT	LIC	TULSA, OK	BLANK0000116553	142.8			
	KTVE	D27	DT	LIC	EL DORADO, AR	BLCDT20070105ABH	341.1			
	KFOR-TV	D27	DT	LIC	OKLAHOMA CITY, OK	BLANK0000121786	303.1			
	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
	24213.4	818,859	22799.4	806,906	22433.8	799,087	22397.8	798,286	0.16	0.10
Undesired			Total IX	Unique IX, before	Unique IX, after					
KAIT D27 DT APP		48.2	967		36.0	801				

**Table 1 KAIT TVStudy Analysis of Proposal**  
(page 3 of 4)



KOTV-DT D26 DT LIC	201.0	3,692	144.7	2,765	144.7	2,765
KTVE D27 DT LIC	40.1	494	40.1	494	28.0	328
KFOR-TV D27 DT LIC	180.8	4,560	124.5	3,633	124.5	3,633

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Interference to BLANK0000125105 APP scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance			
	KOMU-TV	D27	DT	APP	COLUMBIA, MO	BLANK0000125105				
Undesireds:	KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	353.4 km			
	KPLR-TV	D26	DT	CP	ST. LOUIS, MO	BLANK0000050068	171.5			
	KFXA	D27	DT	LIC	CEDAR RAPIDS, IA	BLCDT20050713ABD	356.1			
	KSNT	D27	DT	LIC	TOPEKA, KS	BLCDT20090910ABY	305.2			
	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
	25878.0	542,230	25710.5	539,545	25698.6	539,494	25682.6	539,411	0.06	0.02
Undesired		Total IX	Unique IX, before	Unique IX, after						
KAIT D27 DT APP		15.9	83	15.9	83					
KFXA D27 DT LIC		7.9	19	7.9	19					
KSNT D27 DT LIC		4.0	32	4.0	32					

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Interference to BLANK0000059851 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance			
	WCBI-TV	D27	DT	LIC	COLUMBUS, MS	BLANK0000059851				
Undesireds:	KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	302.8 km			
	WFNA	D27	DT	LIC	GULF SHORES, AL	BLANK0000120977	354.4			
	WAIQ	D27	DT	LIC	MONTGOMERY, AL	BLEDT20060706ACK	284.9			
	KTVE	D27	DT	LIC	EL DORADO, AR	BLCDT20070105ABH	319.4			
	WLJT-DT	D27	DT	LIC	LEXINGTON, TN	BLANK0000058637	218.4			
	WKRN-TV	D27	DT	LIC	NASHVILLE, TN	BLANK0000115874	316.1			
	WMAW-TV	D28	DT	LIC	MERIDIAN, MS	BLANK0000106235	180.4			
	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
	37837.1	680,511	37381.0	676,020	36829.8	670,584	36813.8	670,480	0.04	0.02
Undesired		Total IX	Unique IX, before	Unique IX, after						
KAIT D27 DT APP		39.8	167	15.9	104					
WFNA D27 DT LIC		36.0	566	16.0	424					
WAIQ D27 DT LIC		140.0	833	83.9	476					
KTVE D27 DT LIC		228.1	1,677	216.1	1,478					
WLJT-DT D27 DT LIC		99.5	1,965	35.8	862					
WKRN-TV D27 DT LIC		167.5	1,879	79.7	731					
WMAW-TV D28 DT LIC		4.0	36	4.0	36					

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Interference to BLANK0000058637 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance			
	WLJT-DT	D27	DT	LIC	LEXINGTON, TN	BLANK0000058637				
Undesireds:	KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	211.3 km			
	WBUY-TV	D26	DT	LIC	HOLLY SPRINGS, MS	BLANK0000063641	116.4			
	WCBI-TV	D27	DT	LIC	COLUMBUS, MS	BLANK0000059851	218.4			
	WKRN-TV	D27	DT	LIC	NASHVILLE, TN	BLANK0000115874	164.1			
	WREG-TV	D28	DT	LIC	MEMPHIS, TN	BLCDT20050513AAE	125.6			
	Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
	15720.4	385,493	15648.1	384,950	14560.3	356,317	14484.1	355,858	0.52	0.13
Undesired		Total IX	Unique IX, before	Unique IX, after						
KAIT D27 DT APP		300.7	5,644	76.2	459					
WBUY-TV D26 DT LIC		64.6	197	0.0	0					
WCBI-TV D27 DT LIC		159.7	5,458	39.8	744					
WKRN-TV D27 DT LIC		1048.0	27,889	859.5	22,875					
WREG-TV D28 DT LIC		48.4	209	0.0	0					

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Interference to BLANK0000115874 LIC scenario 1

**Table 1 KAIT TVStudy Analysis of Proposal**  
(page 4 of 4)



Call	Chan	Svc	Status	City, State	File Number	Distance			
Desired: WKRN-TV	D27	DT	LIC	NASHVILLE, TN	BLANK0000115874				
Undesireds: KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	369.7 km			
WAGA-TV	D27	DT	LIC	ATLANTA, GA	BLCDDT20060728AEL	338.0			
WTVQ-DT	D27	DT	LIC	LEXINGTON, KY	BLANK0000087240	309.0			
WCBI-TV	D27	DT	LIC	COLUMBUS, MS	BLANK0000059851	316.1			
WUNW	D27	DD	CP	CANTON, NC	BLANK0000036076	357.6			
WLJT-DT	D27	DT	LIC	LEXINGTON, TN	BLANK0000058637	164.1			
Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
37626.3	2,409,767	36728.9	2,393,314	36123.0	2,382,143	36111.0	2,381,471	0.03	0.03
Undesired	Total IX	Unique IX, before	Unique IX, after						
KAIT D27 DT APP	64.1	2,154	12.0	672					
WAGA-TV D27 DT LIC	16.1	149	4.0	54					
WTVQ-DT D27 DT LIC	76.1	1,335	56.0	739					
WCBI-TV D27 DT LIC	72.0	1,306	24.1	785					
WLJT-DT D27 DT LIC	521.7	9,593	449.7	8,476	409.7	7,060			

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Interference to BLCDDT20050513AAE LIC scenario 1

Call	Chan	Svc	Status	City, State	File Number	Distance			
Desired: WREG-TV	D28	DT	LIC	MEMPHIS, TN	BLCDDT20050513AAE				
Undesireds: KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1	127.1 km			
WLJT-DT	D27	DT	LIC	LEXINGTON, TN	BLANK0000058637	125.6			
KARZ-TV	D28	DT	LIC	LITTLE ROCK, AR	BLANK0000074890	245.9			
KOZL-TV	D28	DT	LIC	SPRINGFIELD, MO	BLCDDT20070213ABE	359.8			
WMAW-TV	D28	DT	LIC	MERIDIAN, MS	BLANK0000106235	345.0			
WKNO	D29	DT	LIC	MEMPHIS, TN	BLEDT20060627ABE	3.1			
Service area	Terrain-limited	IX-free, before	IX-free, after	Percent New IX					
30894.0	1,642,307	30642.9	1,636,429	30386.7	1,626,695	30177.5	1,625,860	0.69	0.05
Undesired	Total IX	Unique IX, before	Unique IX, after						
KAIT D27 DT APP	285.8	1,832	209.3	835					
WLJT-DT D27 DT LIC	36.3	1,031	36.3	1,031	36.3	1,031			
KARZ-TV D28 DT LIC	71.6	5,490	39.6	5,287	35.6	5,206			
KOZL-TV D28 DT LIC	76.6	926	64.5	912	0.0	0			
WMAW-TV D28 DT LIC	67.8	2,404	47.8	2,215	47.8	2,215			
WKNO D29 DT LIC	35.8	86	35.8	86	35.8	86			

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Interference to proposal scenario 1  
\*\*MX: 1.75% interference received

Call	Chan	Svc	Status	City, State	File Number	Distance	
Desired: KAIT	D27	DT	APP	JONESBORO, AR	KAIT Ch27 ATW-C1		
Undesireds: WBUY-TV	D26	DT	LIC	HOLLY SPRINGS, MS	BLANK0000063641	125.0 km	
KTVE	D27	DT	LIC	EL DORADO, AR	BLCDDT20070105ABH	334.1	
KFTA-TV	D27	DT	LIC	FORT SMITH, AR	BLCDDT20090331AEC	289.4	
KOMU-TV	D27	DT	APP	COLUMBIA, MO	BLANK0000125105	353.4	
WCBI-TV	D27	DT	LIC	COLUMBUS, MS	BLANK0000059851	302.8	
WLJT-DT	D27	DT	LIC	LEXINGTON, TN	BLANK0000058637	211.3	
WKRN-TV	D27	DT	LIC	NASHVILLE, TN	BLANK0000115874	369.7	
WREG-TV	D28	DT	LIC	MEMPHIS, TN	BLCDDT20050513AAE	127.1	
Service area	Terrain-limited	IX-free	Percent IX				
39187.1	605,399	38560.7	591,098	38163.6	580,751	1.03	1.75
Undesired	Total IX	Unique IX	Prcnt Unique IX				
WBUY-TV D26 DT LIC	88.7	1,059	20.2	332	0.05	0.06	
KTVE D27 DT LIC	76.2	7,001	52.2	6,533	0.14	1.11	
KFTA-TV D27 DT LIC	28.2	428	8.0	35	0.02	0.01	
KOMU-TV D27 DT APP	47.8	145	35.8	129	0.09	0.02	
WCBI-TV D27 DT LIC	4.0	0	0.0	0	0.00	0.00	
WLJT-DT D27 DT LIC	184.3	2,273	116.2	1,735	0.30	0.29	
WKRN-TV D27 DT LIC	36.0	432	0.0	0	0.00	0.00	
WREG-TV D28 DT LIC	100.7	758	40.3	31	0.10	0.01	

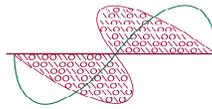


Table 2

**Authorized Alternate Television Services**

prepared for

**Gray Television Licensee, LLC**

KAIT Jonesboro, AR

Call Sign	Ch.	Facility ID	Status	File Number	Community
WMC-TV	5	19184	Lic	BLCDT-20090622ABL	Memphis, TN
KETS	7	2770	Lic	BLEDT-20090615ABT	Little Rock, AR
KOLR	10	28496	Lic	BLCDT-20090810ACN	Springfield, MO
KFVS-TV	11	592	Lic	0000115816	Cape Girardeau, MO
KTHV	12	2787	Lic	BLCDT-20041029AIX	Little Rock, AR
KEMV	13	2777	Lic	BLEDT-20100608ACU	Mountain View, AR
WHBQ-TV	13	12521	Lic	BLCDT-20100917AAC	Memphis, TN
KPOB-TV	15	73998	Lic	BLCDT-20090623ABU	Poplar Bluff, MO
W15EA-D	15	168014	Lic	0000093191	Memphis, TN
KVTJ-DT	18	2784	Lic	0000064048	Jonesboro, AR
KYTV	19	36003	Lic	0000073156	Springfield, MO
WPSD-TV	19	51991	Lic	0000116960	Paducah, KY
KTEJ	20	2769	Lic	BLEDT-20110818AAQ	Jonesboro, AR
WJKT	21	68519	Lic	0000114687	Jackson, TN
KATV	22	33543	Lic	BLCDT-20090225AAV	Little Rock, AR
KRBK	22	166319	Lic	0000063419	Osage Beach, MO
WTWV	23	81692	Lic	0000048888	Memphis, TN
WWTW	23	84214	Lic	0000048875	Senatobia, MS
KVTN-DT	24	607	Lic	BLCDT-20071231AFB	Pine Bluff, AR
WATN-TV	25	11907	Lic	BLCDT-20050628AAP	Memphis, TN
WBUY-TV	26	60830	Lic	0000063641	Holly Springs, MS
KARZ-TV	28	37005	Lic	0000074890	Little Rock, AR
KOZL-TV	28	3659	Lic	BLCDT-20070213ABB	Springfield, MO
WREG-TV	28	66174	Lic	BLCDT-20050513AAE	Memphis, TN
WKNO	29	42061	Lic	BLEDT-20060627ABE	Memphis, TN
KLRT-TV	30	11951	Lic	BLCDT-20020507AAK	Little Rock, AR
KWBM	31	78314	CP	0000036086	Harrison, AR
WLMT	31	68518	Lic	BLCDT-20050427ABN	Memphis, TN
KARK-TV	32	33440	Lic	BMLCDT-20121102ACP	Little Rock, AR
WPXX-TV	33	21726	Lic	0000063435	Memphis, TN
KASN	34	41212	Lic	0000073008	Pine Bluff, AR
WBBJ-TV	35	65204	Lic	0000116047	Jackson, TN
KBSI	36	19593	Lic	0000115700	Cape Girardeau, MO
KKAP	36	58267	Lic	BLEDT-20090522AFW	Little Rock, AR
WMAV-TV	36	43193	Lic	BLEDT-20090612AAK	Oxford, MS