ENGINEERING STATEMENT
SUPPORTING REQUEST FOR WAIVER
TELEVISION STATION WLOO(TV)
(FACILITY ID NO. 84253)
VICKSBURG, MISSISSIPPI
CHANNEL 36

Background

This statement was prepared on behalf of Tougaloo College, licensee of WLOO(TV), in support of a request for waiver of the FCC's Phase Assignment, Testing Period, and Phase Completion Date for television station WLOO, Vicksburg, Mississippi, in the Jackson, MS DMA[1]. WLOO is licensed for operation on RF Channel 41 with a maximum directional effective radiated power (ERP) of 981 kW and an antenna height above average terrain (HAAT) of 598 m.

As a result of the FCC's Incentive Auction repack process, the WLOO facility was reassigned to RF Channel 36. WLOO holds a construction permit for operation on Channel 36 with a maximum directional ERP of 950 kW and an antenna HAAT of 582 m.[2] A summary of the FCC engineering database information for the WLOO construction permit facility is attached hereto for reference.

In coordination with the wireless carrier, T-Mobile, WLOO seeks a waiver of the FCC's Phase Assignment, Testing Period, and Phase Completion Date to allow WLOO to make the transition to Channel 36 earlier than its given phase transition date. This will facilitate the early deployment of new 600 MHz band wireless broadband services.

This statement demonstrates that WLOO can transition to Channel 36 before its assigned phase date without any disruption to the FCC's transition plans by changing the assigned phase of WLOO. Specifically, it is demonstrated that the operation of WLOO on Channel 36 as authorized in its construction permit is possible by allowing WLOO to change from Phase 3 to Phase 1.

[1] Nielsen Designated Market Area abbreviated as DMA.
[2] *See* FCC File No. 0000025168.

Assigned Phase

WLOO was assigned to transition Phase 3, with a testing begin date of April 13, 2019. This is based on the latest FCC Phase Assignment spreadsheet dated August 17, 2017.

It is proposed to change WLOO to Phase 1, which is the same phase assignment as KARD, West Monroe, LA (Facility ID No. 3658). Phase 1 has a testing begin date of September 14, 2018.

Linked Station Sets and Linked Station Neighbor Stations

An inspection of the latest FCC Linked Station Set (LSS) and Linked Station Neighbor (LSN) spreadsheet databases indicates that the WLOO facility currently is not part of any LSSs or LSNs. These are based on the latest LSS and LSN spreadsheets available from the FCC, both dated July 3, 2017.

With the change of WLOO to Phase 1, WLOO would become part of a single LSS and a LSN involving station KARD. Based on the latest LSS and LSN spreadsheet, KARD currently is not a part of any LSS or LSN. Therefore, the change of WLOO to Phase 1 would involve a LSS and a LSN with respect to station KARD only.

Interference Caused Analysis Under Current Allocation Environment

An interference analysis was conducted for the WLOO Channel 36 facility utilizing the latest version[3] of the FCC's *TVStudy* coverage and interference analysis prediction software. The report of the results is attached hereto entitled 'Interference Caused Analysis for WLOO(TV) Channel 36 Facility Under Current Allocation Environment.'

The results of the analysis indicate that there are no cases of outgoing (caused) interference exceeding the normal 0.5% rounding tolerance level to any protected full-power or Class A television stations now operating other than with respect to station KARD. With respect to KARD, the total predicted interference would be 8.41%, which

[3] *TVStudy* Version 2.2.3

indicates an interference conflict and the requirement for WLOO to be in the same phase assignment as KARD.

Interference Received Analysis Under Current Allocation Environment

An interference analysis specifically for the 'received case' of interference was conducted for the WLOO Channel 36 facility utilizing the aforementioned *TVStudy* prediction software. The report of the results is attached hereto entitled 'Interference Received Analysis for WLOO(TV) Channel 36 Facility Under Current Allocation Environment.' The purpose of this study is to evaluate all current environment records in the received interference analysis.

The results of the analysis indicate that there are two cases of incoming (received) interference exceeding 0.5% to the WLOO Channel 36 facility. These are from licensed facilities of WWL-TV, New Orleans, LA (Channel 36); and, KARD, West Monroe, LA (Channel 36). As indicated in the study, the pairwise interference predicted to the WLOO facility from WWL-TV is 1.57%. This level of interference is within the FCC's permitted temporary transitional pairwise interference level of 2%. WLOO agrees to accept the additional pairwise interference to its Channel 36 facility from WWL-TV on a temporary transitional basis to facilitate the TV repack and the early move of the WLOO facility to Channel 36 in Phase 1.[4]

The predicted pairwise interference received from KARD is 6.55%. Therefore, it is proposed to move the WLOO facility into the same phase assignment as KARD, which is Phase 1.

Effects on Linked Station Sets

Based on these results, the WLOO facility can be moved to Phase 1 in coordination with a single station (KARD), which will not result in any disruption to the FCC phase assignment plan. A new linked station case is created with only KARD.

[4] It is noted that WWL-TV was assigned to Phase 7, which has a testing start date of October 19, 2019.

Conclusion

It is concluded that the WLOO Channel 36 repack facility can be moved to Phase 1 without disruption of the FCC's phase assignment plan. Coordination of the transition will be required in Phase 1 with only one station, which is KARD.

Louis R. du Treil, Jr., P.E.

du Treil, Lundin & Rackley, Inc.
3135 Southgate Circle
Sarasota, Florida 34239

September 12, 2017

TV Inquiry

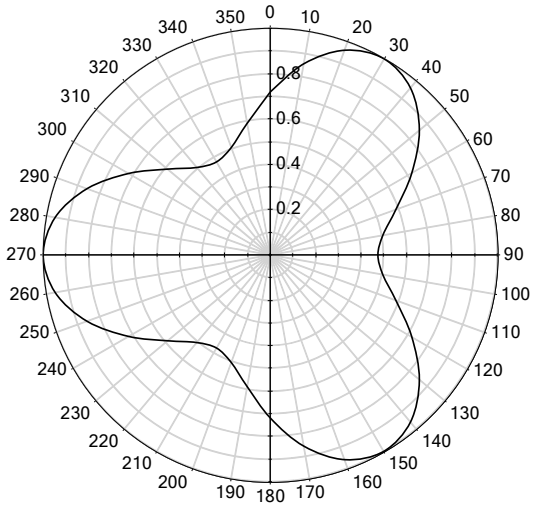
du Treil, Lundin, & Rackley, Inc., Sarasota, Florida

Callsign:	WLOO	**Service:**	DT	**Status:**	CP	**App. Status:**	GRANT	**Border Code:**	**Rec. Type:** C
Channel:	36	**Offset:**		**Zone:**	2	**Docket Number:**		**DTV Type:**	POSTTRAN
Fac. ID:	84253	**Assoc. ID:**		**Application File No.:**	BLANK-0000025168			**DT Emission Mask:**	
City:	VICKSBURG			**State:**	MS	**Country:**	US	**CP Expiration Date:**	
Party Name:	TOUGALOO COLLEGE							**Last Change Date:**	6/26/2017

Latitude (NAD 27):		**Height AGL (m):**	552	**Polarization:**	H
Longitude (NAD 27):		**Overall Height AGL (m):**	609	**Electrical Tilt (°):**	0.75
Latitude (NAD 83):		**ERP (kW):**	950	**Mechanical Tilt (°):**	
Longitude (NAD 83):		**Maximum ERP (kW):**		**Mechanical Tilt Azimuth (°):**	
RCAMSL (m):	677	**Maximum ERP (dBk):**	29.8	**Degrees True (°):**	
Site Elevation AMSL (m):	125	**Maximum ERP at any Angle (kW):**		**Antenna Make:**	
HAAT (m):	582			**Antenna Model:**	
Maximum HAAT (m):					

Antenna Type: D **Antenna ID:** 1001358 **Rotation (°):** 0

0°	0.719	**90°**	0.474	**180°**	0.719	**270°**	1.000
10°	0.857	**100°**	0.504	**190°**	0.589	**280°**	0.961
20°	0.961	**110°**	0.589	**200°**	0.504	**290°**	0.857
30°	1.000	**120°**	0.719	**210°**	0.474	**300°**	0.719
40°	0.961	**130°**	0.857	**220°**	0.504	**310°**	0.589
50°	0.857	**140°**	0.961	**230°**	0.589	**320°**	0.504
60°	0.719	**150°**	1.000	**240°**	0.719	**330°**	0.474
70°	0.589	**160°**	0.961	**250°**	0.857	**340°**	0.504
80°	0.504	**170°**	0.857	**260°**	0.961	**350°**	0.589



Standard Pattern:

Antenna Make: DIE

Antenna Model: TFU-29JSC-R 5180

Last Change Date:

Note: Rotation or tilt is not applied to the pattern shown

Type:	**ASRN:** 1210491	**FAA Study No.:**	99-ASO-3803-OE	**Structure Height (m):**	573.0
Latitude (NAD 27):	032-12-49.4	**Date Received:**	05/02/2017	**Structure Height (ft):**	1879.9
Longitude (NAD 27):	090-22-56.2	**Date Entered:**	05/02/2017	**Ground Elevation (m):**	125.0
Latitude (NAD 83):	32-12-49.9	**Date Issued:**	05/02/2017	**Ground Elevation (ft):**	410.1
Longitude (NAD 83):	090-22-56.5	**Date Constructed:**	08/02/1999	**Overall Height AGL (m):**	609.0
		Date Dismantled:		**Overall Height AGL (ft):**	1998.0
Struct. Address:	6.4 KILOMETERS SOUTHEAST OF RAYMOND			**Overall Height AMSL (m):**	734.0
	RAYMOND MS			**Overall Height AMSL (ft):**	2408.1

Entity Name: WLBT, LLC

INTERFERENCE CAUSED ANALYSIS FOR WLOO(TV) CHANNEL 36
FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

```
tvstudy v2.2.3 (Dxtpx3)
Database: localhost,  Study: wloo36pr3,  Model: Longley-Rice

Study build station data: LMS TV 2017-09-11 (50)

    Proposal: WLOO36PR3 D36 DT CP VICKSBURG, MS
 File number: wloo36pr3
 Facility ID: 84253
Station data: User record
   Record ID: 1244
     Country: U.S.
        Zone: II

Build options:
Protect records not on baseline channel

Individual records excluded:
0000025127    KBSI D36 DT CP CAPE GIRARDEAU, MO BLANK0000025127
0000025341    KLMB-CD D36z DC CP EL DORADO, AR BLANK0000025341
0000025344    WUPA D36 DT CP ATLANTA, GA BLANK0000025344
0000025695    WSES D36 DT CP TUSCALOOSA, AL BLANK0000025695
0000026801    WTVF D36 DT CP NASHVILLE, TN BLANK0000026801
0000027057    WBBJ-TV D35 DT CP JACKSON, TN BLANK0000027057
0000027133    KADO-CD D36 DC CP SHREVEPORT, LA BLANK0000027133
0000027877    KBTR-CD D36 DC CP BATON ROUGE, LA BLANK0000027877
0000028047    WBXN-CD D36 DC CP NEW ORLEANS, LA BLANK0000028047
0000028477    KGLA-DT D35 DT CP HAMMOND, LA BLANK0000028477
0000028652    WEAC-CD D35 DC CP JACKSONVILLE, AL BLANK0000028652
19593         KBSI D36 DT BL CAPE GIRARDEAU, MO DTVBL19593
21258         WSES D36 DT BL TUSCALOOSA, AL DTVBL21258
24977         KBTR-CD D36 DC BL BATON ROUGE, LA DTVBL24977
36504         WTVF D36 DT BL NASHVILLE, TN DTVBL36504
38585         KLMB-CD D36 DC BL EL DORADO, AR DTVBL38585
64338         WEAC-CD D35 DC BL JACKSONVILLE, AL DTVBL64338
65204         WBBJ-TV D35 DT BL JACKSON, TN DTVBL65204
6900          WUPA D36 DT BL ATLANTA, GA DTVBL6900
70419         WBXN-CD D36 DC BL NEW ORLEANS, LA DTVBL70419
84253         WLOO D36 DT BL VICKSBURG, MS DTVBL84253

Stations affected by proposal:

Call      Chan  Svc Status  City, State              File Number             Distance
WABM      D36   DT  LIC     BIRMINGHAM, AL           BLCDT20060406AAJ        362.5 km
WWL-TV    D36   DT  LIC     NEW ORLEANS, LA          BLCDT20080730AKH        258.5
KARD      D36   DT  LIC     WEST MONROE, LA          BLCDT20080116ABD        169.3
WMAV-TV   D36   DT  LIC     OXFORD, MS               BLEDT20090612AAK        239.3

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

    Channel: D36
   Latitude:  32 12 49.90 N (NAD83)
  Longitude:  90 22 56.50 W
Height AMSL: 677.0 m
       HAAT: 582.0 m
   Peak ERP: 950 kW
    Antenna: DIE-TFU-29JSC-R 5180 (ID 1001358) 0.0 deg
Elev Pattrn: Generic
  Elec Tilt: 0.8

40.9 dBu contour:
Azimuth      ERP       HAAT   Distance
  0.0 deg    491 kW   588.1 m  113.6 km
 45.0        785      568.1    116.8
 90.0        213      580.2    105.8
135.0        785      571.5    117.0
180.0        491      562.8    112.2
225.0        284      584.4    108.5
270.0        950      610.1    121.0
```

315.0 284 590.3 108.8

ERP exceeds maximum
ERP: 950 kW ERP maximum: 348 kW

Distance to Canadian border: 1252.4 km

Distance to Mexican border: 940.0 km

Conditions at FCC monitoring station: Powder Springs GA
Bearing: 69.3 degrees Distance: 558.1 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:
Bearing: 307.6 degrees Distance: 1592.2 km

Study cell size: 2.00 km
Profile point spacing: 1.00 km

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

Interference to BLCDT20060406AAJ LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WABM	D36	DT	LIC	BIRMINGHAM, AL	BLCDT20060406AAJ	
Undesireds:	WLOO36PR3	D36	DT	CP	VICKSBURG, MS	wloo36pr3	362.5 km
	WCBI-TV	D35	DT	LIC	COLUMBUS, MS	BLANK0000021877	194.0
	WTVY	D36	DT	LIC	DOTHAN, AL	BLCDT20090901AAL	302.2
	WMAV-TV	D36	DT	LIC	OXFORD, MS	BLEDT20090612AAK	282.1
	WNPX-TV	D36	DT	LIC	COOKEVILLE, TN	BLCDT20040401ANA	309.4

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
30003.2	1,703,202	28770.4	1,675,700	28029.2	1,662,041	28013.2	1,661,518	0.06	0.03

Undesired	Total IX		Unique IX, before		Unique IX, after	
WLOO36PR3 D36 DT CP	32.0	1,309			16.0	523
WCBI-TV D35 DT LIC	4.0	39	0.0	0	0.0	0
WTVY D36 DT LIC	701.1	11,992	701.1	11,992	693.1	11,408
WMAV-TV D36 DT LIC	12.0	241	8.0	202	0.0	0
WNPX-TV D36 DT LIC	28.0	1,426	28.0	1,426	28.0	1,426

Interference to BLCDT20080730AKH LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WWL-TV	D36	DT	LIC	NEW ORLEANS, LA	BLCDT20080730AKH	
Undesireds:	WLOO36PR3	D36	DT	CP	VICKSBURG, MS	wloo36pr3	258.5 km
	KARD	D36	DT	LIC	WEST MONROE, LA	BLCDT20080116ABD	317.2

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
30478.9	1,756,442	30478.9	1,756,442	30470.9	1,756,400	30411.0	1,755,741	0.20	0.04

Undesired	Total IX		Unique IX, before		Unique IX, after	
WLOO36PR3 D36 DT CP	67.9	701			60.0	659
KARD D36 DT LIC	8.0	42	8.0	42	0.0	0

Interference to BLCDT20080116ABD LIC, scenario 1
**IX: 8.41% interference

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	KARD	D36	DT	LIC	WEST MONROE, LA	BLCDT20080116ABD	
Undesireds:	WLOO36PR3	D36	DT	CP	VICKSBURG, MS	wloo36pr3	169.3 km
	KALB-TV	D35	DT	LIC	ALEXANDRIA, LA	BLCDT20090924AAC	121.4

INTERFERENCE CAUSED ANALYSIS FOR WLOO(TV) CHANNEL 36 FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

	KKAP	D36	DT	LIC	LITTLE ROCK, AR	BLEDT20090522AFW	302.0
	WWL-TV	D36	DT	LIC	NEW ORLEANS, LA	BLCDT20080730AKH	317.2

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX
42555.0	703,234	42406.4	700,670	41170.1	648,879	35733.0	594,281	13.21	8.41

Undesired	Total IX		Unique IX, before		Unique IX, after	
WLOO36PR3 D36 DT CP	5584.2	56,133			5437.1	54,598
KALB-TV D35 DT LIC	1109.1	49,903	1109.1	49,903	1053.6	49,898
KKAP D36 DT LIC	4.0	24	4.0	24	0.0	0
WWL-TV D36 DT LIC	123.2	1,864	123.2	1,864	35.7	358

Interference to BLEDT20090612AAK LIC, scenario 1

	Call	Chan	Svc	Status	City, State	File Number	Distance
Desired:	WMAV-TV	D36	DT	LIC	OXFORD, MS	BLEDT20090612AAK	
Undesireds:	WLOO36PR3	D36	DT	CP	VICKSBURG, MS	wloo36pr3	239.3 km

Service area		Terrain-limited		IX-free, before		IX-free, after		Percent New IX	
24241.2	1,008,339	24217.3	1,008,208	24217.3	1,008,208	24036.4	1,006,666	0.75	0.15

Undesired	Total IX		Unique IX, before		Unique IX, after	
WLOO36PR3 D36 DT CP	180.9	1,542			180.9	1,542

INTERFERENCE RECEIVED ANALYSIS FOR WLOO(TV) CHANNEL 36 FACILITY UNDER CURRENT ALLOCATION ENVIRONMENT

```
tvstudy v2.2.3 (Dxtpx3)

    Database: localhost
Station Data: LMS TV 2017-09-11 (50)
       Study: A_LMS_17Sep12
       Model: Longley-Rice
    Scenario: wloo36pr2r1
```

Desired station / Undesired station	Service area		Terrain-limited		Interference-free	
	Total interference		Unique interference			
WLOO36PR2 D36 DT CP VICKSBURG, MS	40177.4	913,960	40041.8	912,674	32581.5	847,169
WABM D36 DT LIC BIRMINGHAM, AL	16.1	267	0.0	0		
WWL-TV D36 DT LIC NEW ORLEANS, LA	818.9	14,321	290.0	5,666	(Pairwise 1.57%)	
KARD D36 DT LIC WEST MONROE, LA	7162.3	59,799	6617.3	51,039	(Pairwise 6.55%)	
WMAV-TV D36 DT LIC OXFORD, MS	16.0	40	8.0	40		

Note: The total interference received to the WLOO Channel 36 facility is 65,505, which is 7.18% of the terrain-limited service area baseline.