

***APPLICATION FOR CONSTRUCTION PERMIT***

**WPYM-LD – LITTLE ROCK, ARKANSAS  
FACILITY ID: 129503  
CHANNEL 16 – 2.0 kW ERP DA**

**DIGITAL NETWORKS–SOUTHEAST, LLC**

**AUGUST 2021**

## **APPLICATION FOR CONSTRUCTION PERMIT**

The following engineering statement and attached exhibits have been prepared for **Digital Networks-Southeast, LLC** ("Southeast"), licensee of digital low power television station WPYM-LD at Little Rock, Arkansas, and are in support of their application for construction permit to modify that facility.<sup>1</sup> This application seeks to modify the current license for the facility, which is assigned LMS File No. 0000120410.

WPYM-LD is licensed to operate on television channel 16 with a maximum effective radiated power of 2.5 kW at a center of radiation of 96.7 meters above mean sea level, 42.7 meters above ground level, utilizing a composite directional antenna. The proposed facility would operate on television channel 16 with a maximum effective radiated power of 2.0 kW. The proposed center of radiation is 92.5 meters above mean sea level, or 30 meters above ground level. The proposed tower is assigned 1038827 as its Antenna Structure Registration Number. A composite directional antenna consisting of two Kathrein-Scala PR-TV antennas is proposed for use. One element is to be oriented at 90 degrees true, with the other at 290 degrees true. Equal power division will be employed.

The map in Exhibit E-1 is a comparison between the licensed and proposed technical parameters, and illustrates the 51 dBu F(50,90) service contour for each set of parameters. This application proposes a relocation of the transmitter; however, the relocation distance is less than 30 miles as indicated on the map. This map also demonstrates that there is overlap between the two contours. The proposed change to the license is a minor change to the facility.

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<sup>1</sup> The Facility ID for WPYM-LD at Little Rock, Arkansas is 129503.

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P.O. Box 415  
Canton, IL 61520

Tel: 309.647.1200  
Fax: 855.332.9537  
jeremyruck.com

Exhibit E-2 is the output from *TVStudy* for the proposed technical parameters. This study demonstrates that the proposed technical parameters would not fail interference checks to other relevant proposed and authorized facilities. This study was completed using a cell size of 1.0 km at a profile spacing of 1.0 kilometer.

The proposed facility is not located within the West Virginia quiet zone and is located at a significant distance from both the Table Mountain receiving zone, and the Commission's Powder Springs, Georgia station. Additionally, the proposed facility would not constitute a significant environmental impact and is exempt from environmental processing. The proposed antenna would be mounted to an existing tower that is registered with the Commission. The addition of the antenna to this tower would not increase the already existing environmental impact present from the tower.

In addition, the proposed facility would not result in human exposure at ground level to radiofrequency radiation in excess of the Commission's safety standards. Using the equations in Supplement A of *OET Bulletin 65*, the calculated worst-case power density at ground level assuming a downward radiation relative field of 0.3 is  $7.67 \mu\text{W}/\text{cm}^2$ . This value is less than the upper limit of the uncontrolled environment condition. Southeast certifies it will coordinate with all other users of the site to ensure that workers and other personnel are not exposed to levels of radiofrequency radiation in excess of the applicable safety standards. Coordination activities will include, but are not necessarily limited to, a reduction in transmitter power or cessation of operation.

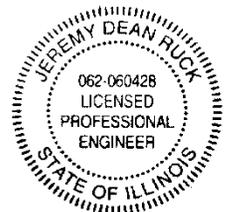
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Canton, IL 61520

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jeremyruck.com

The proposed facility complies with the provisions of Section 74.709 of the Commission's Rules. No land mobile protection issues have been identified based on the tables in that section of the rules, or on the output of *TVStudy*. The proposed facility also complies with Sections 74.793(e)-(h) and 74.793(h) of the Commission's Rules.

The preceding statement and attached exhibits have been prepared by me, or under my direction, and are true and accurate to the best of my belief and knowledge.



Above signature is digitized copy of actual signature  
License Expires November 30, 2021

Jeremy D. Ruck, PE  
August 20, 2021

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P.O. Box 415  
Canton, IL 61520

Tel: 309.647.1200  
Fax: 855.332.9537  
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8.20.2021

**WPYM-LD.X**

0000120410  
Latitude: 34-28-32.90 N  
Longitude: 091-27-02.90 W  
ERP: 2.00 kW  
Channel: 16  
Frequency: 485.0 MHz  
AMSL Height: 92.5 m  
Horiz. Pattern: Directional  
Vert. Pattern: Yes  
Elec Tilt: 0.75

**WPYM-LD**

0000120410  
Latitude: 34-30-04.10 N  
Longitude: 090-59-32.20 W  
ERP: 2.50 kW  
Channel: 16  
Frequency: 485.0 MHz  
AMSL Height: 96.7 m  
Horiz. Pattern: Directional  
Prop Model: FCC Contour

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- Licensed 51 dBu F(50,90) Service Contour
- Proposed 51 dBu F(50,90) Service Contour
- Area of Contour Overlap
- Licensed Site 30-mile Radius

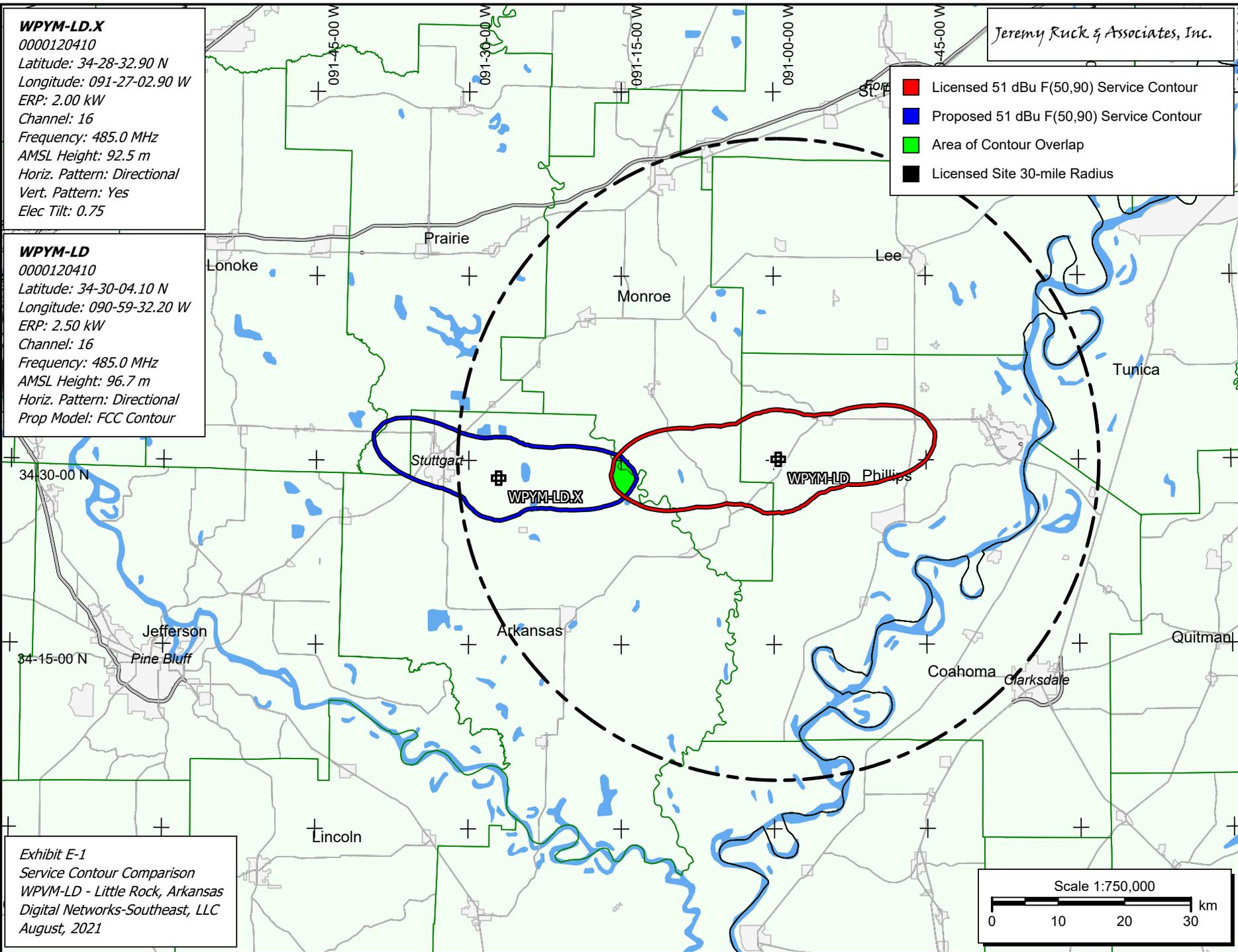
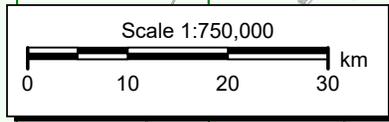


Exhibit E-1  
Service Contour Comparison  
WPYM-LD - Little Rock, Arkansas  
Digital Networks-Southeast, LLC  
August, 2021



## Exhibit E-2 - TVStudy Interference Study

tvstudy v2.2.5 (4uoc83)

Database: 127.0.0.1, Study: WPYM CH16 ASRN 1038827 92.5 m AMSL 2 kW PR-TV x2 1@90 1@290, Model: Longley-Rice

Start: 2021.08.20 16:12:49

Study created: 2021.08.20 16:12:49

Study build station data: LMS TV 2021-08-20

Proposal: WPYM-LD D16 LD LIC Little Rock, AR  
File number: BLANK0000120410  
Facility ID: 129503  
Station data: User record  
Record ID: 362  
Country: U.S.

Build options:

Protect pre-transition records not on baseline channel

Stations potentially affected by proposal:

IX	Call	Chan	Svc	Status	City, State	File Number	Distance
No	K27JP-D	D15	LD	CP	LITTLE ROCK, AR	BLANK0000051762	84.8 km
No	KPOB-TV	D15	DT	LIC	POPLAR BLUFF, MO	BLCDT20090623ABU	273.8
No	WFXW	D15	DT	LIC	GREENVILLE, MS	BLCDT20090612ACI	114.0
No	W15EA-D	D15	DC	LIC	MEMPHIS, TN	BLANK0000093191	176.6
No	K16IP-D	D16	LD	LIC	BONNERDALE, AR	BLDTL20130613ABF	165.5
No	KAJL-LD	D16	LD	LIC	FAYETTEVILLE, AR	BLANK0000112285	310.0
Yes	KVTH-DT	D16	DT	LIC	HOT SPRINGS, AR	BLANK0000064046	146.8
No	KJNB-LD	D16	LD	CP	JONESBORO, AR	BLANK0000148869	181.8
No	KADN-TV	D16	DT	LIC	LAFAYETTE, LA	BLCDT20060630AFZ	462.8
No	KSHV-TV	D16	DT	LIC	SHREVEPORT, LA	BLANK0000074895	305.5
No	K16NP-D	D16	LD	CP	CAPE GIRARDEAU, MO	BLANK0000071876	337.0
No	KOZK	D16	DT	LIC	SPRINGFIELD, MO	BLANK0000096081	328.6
No	WMAH-TV	D16	DT	LIC	BILOXI, MS	BLEDT20110404AGM	475.4
No	DDW47EM-D	D16	LD	APP	GREENVILLE, MS	BLANK0000053058	176.3
No	WLOV-TV	D16	DT	LIC	WEST POINT, MS	BLCDT20070405ABC	230.2
No	KWHB	D16	DT	LIC	TULSA, OK	BLANK0000067852	444.2
No	WNBJ-LD	D16	LD	LIC	JACKSON, TN	BLDTL20141216ABU	272.0
No	WWWN-LD	D16	LD	CP	MEMPHIS, TN	BLANK0000054141	169.9
No	WWWN-LD	D16	LD	LIC	MEMPHIS, TN	BLANK0000156897	169.9
No	K17LV-D	D17	LD	CP	PARAGOULD, AR	BNPDTL20101019AAN	219.0
No	WXVT-LD	D17	LD	LIC	CLEVELAND, MS	BLANK0000025210	114.0
No	WEPH	D17	DT	LIC	TUPELO, MS	BLANK0000062855	230.2

No non-directional AM stations found within 0.8 km

No directional AM stations found within 3.2 km

Record parameters as studied:

Channel: D16  
Mask: Full Service  
Latitude: 34 28 32.90 N (NAD83)  
Longitude: 91 27 2.90 W  
Height AMSL: 92.5 m  
HAAT: 31.3 m  
Peak ERP: 2.00 kW  
Antenna: SCA PR-TV x2 Array 1@90 1@290 0.0 deg  
Elev Patrn: Generic

48.9 dBu contour:

Azimuth	ERP	HAAT	Distance
0.0 deg	0.018 kW	29.9 m	7.0 km
45.0	0.026	31.3	7.7
90.0	2.00	33.4	23.1
135.0	0.018	33.2	7.3
180.0	0.017	33.1	7.1
225.0	0.015	31.8	6.9
270.0	0.391	29.9	14.9

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## Exhibit E-2 - TVStudy Interference Study

315.0      0.181      27.9      12.3

Distance to Canadian border: 1099.2 km

Distance to Mexican border: 1055.8 km

Conditions at FCC monitoring station: Powder Springs GA  
 Bearing: 94.4 degrees    Distance: 622.3 km

Proposal is not within the West Virginia quiet zone area

Conditions at Table Mountain receiving zone:  
 Bearing: 301.3 degrees    Distance: 1367.8 km

No land mobile station failures found

Proposal is not within the Offshore Radio Service protected area

Study cell size: 1.00 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%

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 Interference to BLANK0000064046 LIC scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance	
	KVTH-DT	D16	DT	LIC	HOT SPRINGS, AR	BLANK0000064046		
Undesireds:	WPYM-LD	D16	LD	LIC	Little Rock, AR	BLANK0000120410	146.8 km	
	KSHV-TV	D16	DT	LIC	SHREVEPORT, LA	BLANK0000074895	206.6	
	KOZK	D16	DT	LIC	SPRINGFIELD, MO	BLANK0000096081	311.6	
	Service area		Terrain-limited		IX-free, before	IX-free, after	Percent New IX	
	15280.2	303,327	14637.8	301,280	14467.3	298,939	14465.3    298,578	0.01    0.12
Undesired				Total IX	Unique IX, before	Unique IX, after		
	WPYM-LD D16 LD LIC		5.0	366	2.0	361		
	KSHV-TV D16 DT LIC		155.5	2,341	145.5	2,341	143.5    2,336	
	KOZK D16 DT LIC		25.0	0	15.0	0	15.0    0	

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 Interference to proposal scenario 1

Desired:	Call	Chan	Svc	Status	City, State	File Number	Distance
	WPYM-LD	D16	LD	LIC	Little Rock, AR	BLANK0000120410	
Undesireds:	WWWN-LD	D16	LD	CP	MEMPHIS, TN	BLANK0000054141	169.9 km
	Service area		Terrain-limited		IX-free	Percent IX	
	454.6	10,414	454.6	10,414	454.6	10,414	0.00    0.00

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