

TECHNICAL EXHIBIT  
APPLICATION FOR DTV CONSTRUCTION PERMIT  
NEW DTV STATION  
FACILITY ID: 158818  
MOBILE, ALABAMA  
CH 18 300 KW (MAX-DA) 574 M

Technical Narrative

This Technical Exhibit supports an application for DTV construction permit for a new digital operation on channel 18 at Mobile, Alabama. In MB Docket No. 04-281, RM-11041 the FCC allotted DTV channel 18 to Mobile, Alabama and ordered that within 45 days of the effective date (December 20, 2004) a minor change be submitted specifying DTV Channel 18 at Mobile. Therefore, in response to the Report and Order, this application has been prepared to propose a new DTV operation on channel 18 with a maximum directional effective radiated power (ERP) of 300 kW and an antenna radiation center height above average terrain (HAAT) of 574 meters.

Freeze Compliance

This application can be accepted for filing as it does not request a change which is considered "frozen" by the FCC's Public Notice (DA 04-2446) released August 3, 2004, *Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes*.

Proposed Operation

It is proposed to operate on DTV channel 18 from the allotment site, N 30°36'45" W 87°38'43". Specifically, it is proposed to top-mount a Dielectric TFU-28GTH 6T120 directional antenna and operate with a maximum directional ERP of 300 kW and an HAAT of 574 meters. The proposed facilities (ERP 300 kW/HAAT 574 meters) comply with the nominal maximum permitted pursuant to Section 73.622(f)(8)(i). The antenna structure registration number (ASRN) for the existing tower is 1212516.

Response to Certification Checklist Question 1(c)

It is noted that question 1(c) of the checklist certification has been answered "no" due to the fact the proposed HAAT is 22 meters greater than the reference HAAT allotted in MB Docket No. 04-281, RM-11041. However, the ERP has been reduced such that the proposed facilities will not exceed the allotted facilities and will therefore comply with the FCC's Public Notice (DA 04-2446) released August 3, 2004, *Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes*. The contours for both the proposed and allotted facilities are shown in Figure 2.

Response to Paragraph 10 - Directional Antenna Data

Figure 1 provides graphs of the horizontal and vertical relative field patterns for the proposed Dielectric TFU-28GTH 6T120 antenna.

Response to Paragraph 12 - City Coverage

Figure 2 is a map showing the DTV predicted coverage contours. The map provides the predicted 41 dBu f(50,90) noise-limited contour and 48 dBu f(50,90) city grade contour. The extent of the contours has been calculated using the normal FCC prediction method and a 3-second digitized terrain database. The Mobile city limits were derived from information contained in the 2000 U.S. Census for Alabama. As shown, the 48 dBu contour encompasses the entire city limits of Mobile.

In addition, the 41 dBu noise-limited contour for the Mobile allotment is also shown on the map. As can be seen, the proposed 41 dBu (noise-limited) contour is fully encompassed by the 41 dBu contour of the allotment, and therefore there is no increase in service area.

NTSC/DTV/Class A Allocation Considerations

Figure 3 is a DTV channel 18 separation study toward other NTSC and DTV allotments based on a 50 kilometer "buffer".

Although the separation requirements are only applicable to new DTV allotments, they can be used as an indication of which stations have the potential of receiving interference from the proposed channel 18 DTV operation.

An interference analysis has been conducted using the procedures outlined in the FCC's OET-69 bulletin, which demonstrates that the proposal complies with the interference protection provisions of Section 73.623(c)(2).<sup>1</sup> Interference calculations for the proposed operation are summarized below with respect to all authorized NTSC, DTV, and Class A facilities.

Station	Facility	Ch.	City	State	FCC Service Population	Proposed Interference Population	% of Baseline
WPMI-TV	APP	15	MOBILE	AL	--	--	None
WPMI-TV	LIC	15	MOBILE	AL	--	--	None
WEAR-DT	PLN	17	PENSACOLA	FL	1,108,105	1072	0.097
WEAR-TV	CP	17	PENSACOLA	FL	--	--	None
WDBB	CP	18	BESSEMER	AL	1,305,190	837	0.064
WDBB-DT	PLN	18	BESSEMER	AL	1,305,190	338	0.026
WDHN	LIC	18	DOTHAN	AL	291,249	2,820	0.968
WBXN-CA	LIC	18	NEW ORLEANS	LA	--	--	None
WMAU-DT	PLN	18	BUDE	MS	223,709	31	0.014
WMAU-TV	CP	18	BUDE	MS	223,709	3,145	1.406
WIIQ	CP	19	DEMOPOLIS	AL	--	--	None
WIIQ-DT	PLN	19	DEMOPOLIS	AL	--	--	None
WMBB	CP	19	PANAMA CITY	FL	--	--	None
WMBB-DT	PLN	19	PANAMA CITY	FL	--	--	None
WMAH-TV	LIC	19	BILOXI	MS	--	--	None
WMPV-TV	CP	21	MOBILE	AL	--	--	None
WMPV-TV	LIC	21	MOBILE	AL	--	--	None
WXXV-TV	LIC	25	GULFPORT	MS	--	--	None

The study indicated that the proposed operation will not be involved in prohibited contour overlap to any Class A stations. It is also apparent that the proposal on channel 18

<sup>1</sup> The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is based on the program and procedures outlined by the FCC in the Sixth Report and Order; subsequent Memorandum Opinion and Order; and FCC OET Bulletin No. 69. A nominal grid size resolution of 2 km was employed. A Sun based processor computer system was employed.

complies with the FCC's interference standards towards all authorized NTSC and DTV assignments.

Objectionable Interference

There are no known authorized full service AM stations within 5 kilometers (3 miles) of the proposed transmitter site. Figure 4 is a list of authorized full service NTSC, DTV, & FM stations within 16 kilometers (10 miles) of the proposed DTV site. Although no adverse electromagnetic impact is expected, the applicant recognizes its responsibility to correct problems, which are a result of its proposed DTV operation.

The proposed transmitter site is more than 1,300 kilometers from the Canadian border. The proposed transmitter site is more than 1000 kilometers from the US/Mexican border area. The closest FCC monitoring is at Power Springs, Georgia, located 454 kilometers to the northeast. The proposed DTV site is outside the National Radio Quiet Zone (VA/WVA), the closest point being more than 1,000 kilometers to the northeast. The closest point of the Table Mountain Radio Quiet Zone (CO) is more than 1,900 kilometers to the northwest. The closest radio astronomy site operating on TV channel 37 is at Green Bank, WV, located approximately 1125 kilometers to the northeast. These separations are sufficient to not be a concern for coordination purposes.

Response to Paragraph 13 - Environmental Protection Act

The proposed facility has been evaluated in terms of potential radiofrequency electromagnetic field exposure at ground level in accordance with OET Bulletin No. 65, Evaluating Compliance with FCC Specified Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields<sup>2</sup>. The power density at the base of the tower was calculated using the appropriate procedures contained in the Bulletin.

The proposed antenna will be top-mounted on an existing tower. The antenna center of radiation is located 571

meters above ground level. The calculated power density at 2 meters above ground level (AGL) was calculated using the appropriate equation contained in the Bulletin. A graph of the vertical plane relative field pattern proposed antenna is shown in Figure 1. The maximum vertical relative field value towards the tower base (-60 to -90 elevation) is less than 0.1. Therefore, using a "worst-case" vertical relative field value of 0.1, the calculated power density at 2 meters above the ground is 0.0003 milliwatts per square centimeter ( $\text{mW}/\text{cm}^2$ ), which is 0.09% of the Commission's recommended limit of  $0.33 \text{ mW}/\text{cm}^2$  for channel 18, applicable to uncontrolled exposure areas. Therefore, based on the responsibility threshold of 5%, the proposal will comply with the RF emission rules.

The site is appropriately marked with RFR warning signs. Furthermore, as this is a multi-user site procedures are in place in the event that workers or other authorized personal climb the tower to ensure that appropriate measure will be taken to assure worker safety with respect to radio frequency radiation exposure. Such measures include reducing the average exposure by spreading out the work over a longer period of time, wearing "accepted" RFR protective clothing and/or RFR exposure

Finally, it is noted that this technical exhibit only addresses the potential for radio frequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already has been provided to the FCC by the tower owner as part of the tower registration process.

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<sup>2</sup> OET Bulletin 65, Second Edition 97-01, August, 1997.

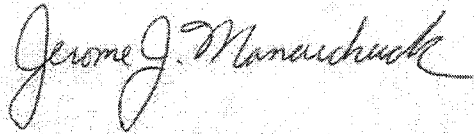
***du Treil, Lundin & Rackley, Inc.***

Consulting Engineers

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Mobile, Alabama

If there are questions concerning the technical portion of this application, please contact the office of the undersigned.



Jerome J. Manarchuck

du Treil, Lundin & Rackley, Inc.  
201 Fletcher Ave.  
Sarasota, California 34237  
(941) 329-6000  
JERRY@DLR.COM

February 2, 2005

# Dielectric

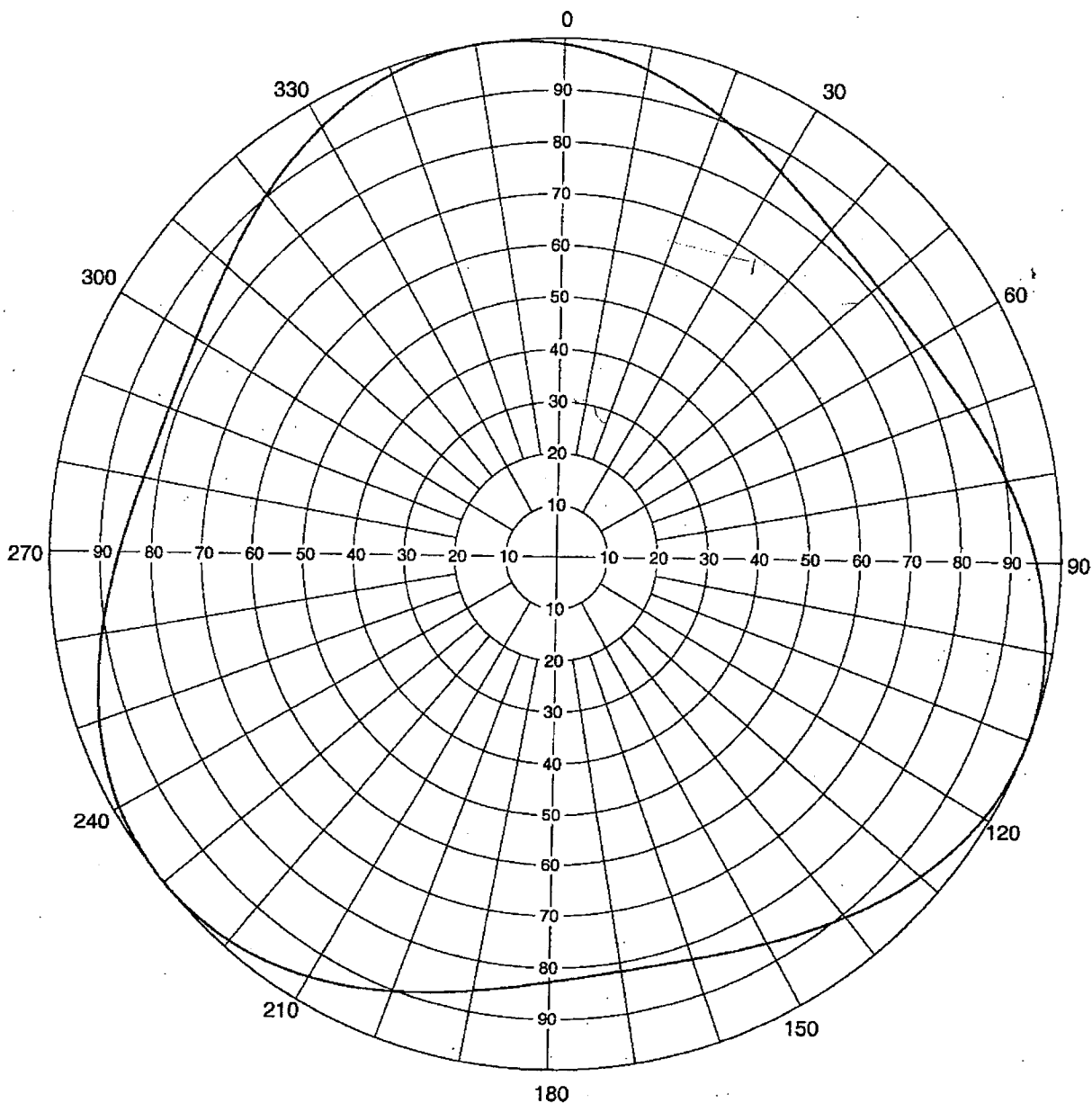
Date	14 Dec 2004	
Call Letters	NEW	Channel 18
Location	Mobile	
Customer	Paxson	
Antenna Type	TFU-28GTH 6T120	

## AZIMUTH PATTERN

Gain  
Calculated / Measured

1.20 (0.79 dB)  
Calculated

Frequency 497 MHz  
Drawing # TFU-6T120



# Dielectric

Date 14 Dec 2004  
 Call Letters NEW Channel 18  
 Location MOBILE  
 Customer PAXSON  
 Antenna Type TFU-28GTH 6T120

## TABULATION OF AZIMUTH PATTERN

Azimuth Pattern Drawing # TFU-6T120

Angle	Field	ERP (kW)	ERP (dBk)
0	0.988	292.8	24.67
10	0.954	273.0	24.36
20	0.908	247.3	23.93
30	0.863	223.4	23.49
40	0.830	206.7	23.15
50	0.817	200.2	23.02
60	0.828	205.7	23.13
70	0.859	221.4	23.45
80	0.903	244.6	23.88
90	0.950	270.8	24.33
100	0.986	291.7	24.65
110	1.000	300.0	24.77
120	0.988	292.8	24.67
130	0.954	273.0	24.36
140	0.908	247.3	23.93
150	0.863	223.4	23.49
160	0.830	206.7	23.15
170	0.817	200.2	23.02
180	0.828	205.7	23.13
190	0.859	221.4	23.45
200	0.903	244.6	23.88
210	0.950	270.8	24.33
220	0.986	291.7	24.65
230	1.000	300.0	24.77
240	0.988	292.8	24.67
250	0.954	273.0	24.36
260	0.908	247.3	23.93
270	0.863	223.4	23.49
280	0.830	206.7	23.15
290	0.817	200.2	23.02
300	0.828	205.7	23.13
310	0.859	221.4	23.45
320	0.903	244.6	23.88
330	0.950	270.8	24.33
340	0.986	291.7	24.65
350	1.000	300.0	24.77

### Maxima

Angle	Field	ERP (kW)	ERP (dBk)
0	0.988	292.8	24.67
111	1.000	300.0	24.77
231	1.000	300.0	24.77
351	1.000	300.0	24.77

### Minima

Angle	Field	ERP (kW)	ERP (dBk)
51	0.817	200.2	23.02
171	0.817	200.2	23.02
291	0.817	200.2	23.02

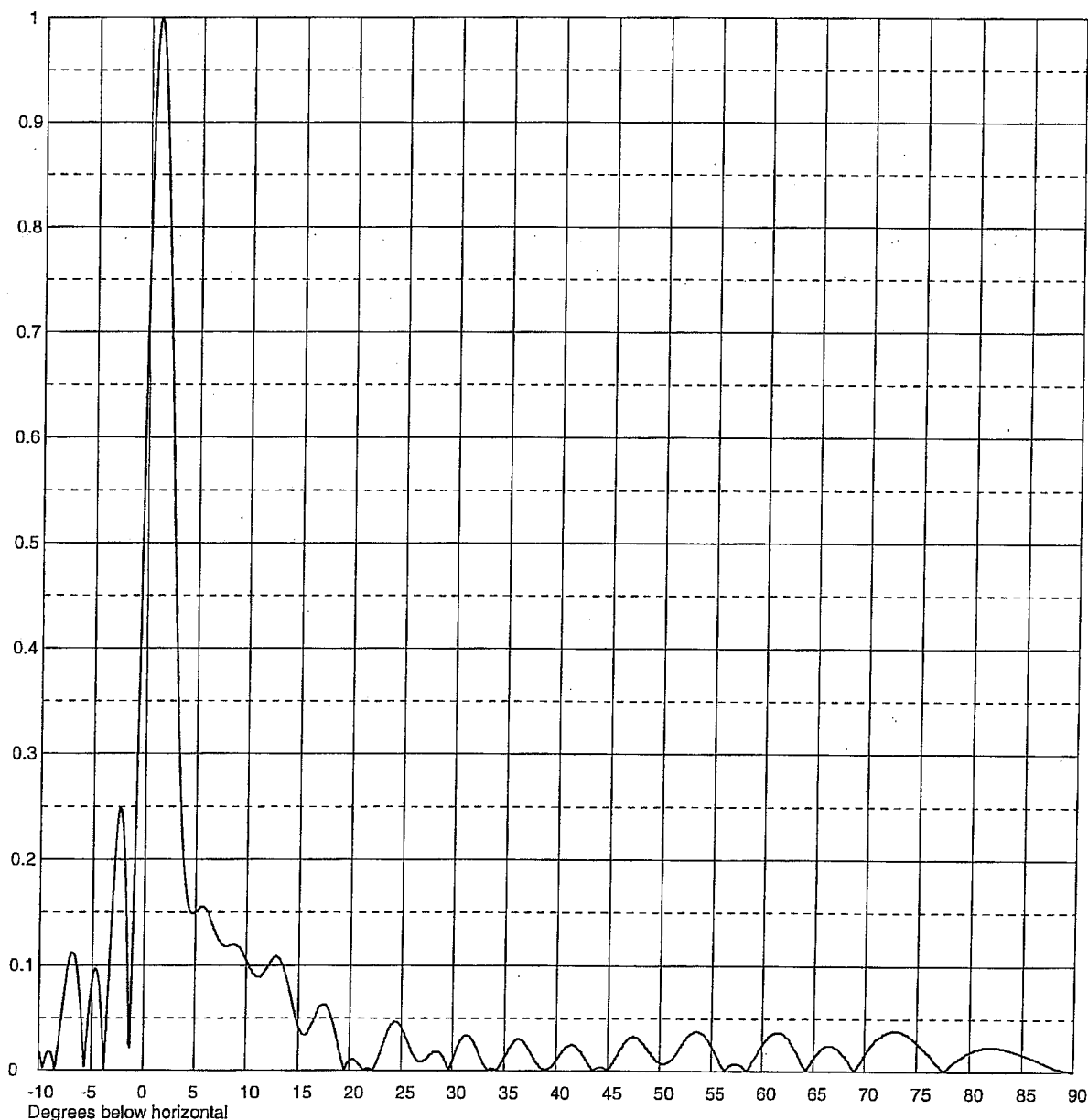


# Dielectric

Date	14 Dec 2004	
Call Letters	NEW	Channel 18
Location	MOBILE	
Customer	PAXSON	
Antenna Type	TFU-28GTH 6T120	

## ELEVATION PATTERN

RMS Gain at Main Lobe	24.0 (13.80 dB)	Beam Tilt	1.00 Degrees
RMS Gain at Horizontal	13.6 (11.34 dB)	Frequency	497.00 MHz
Calculated / Measured	Calculated	Drawing #	28G240100-90



# Dielectric

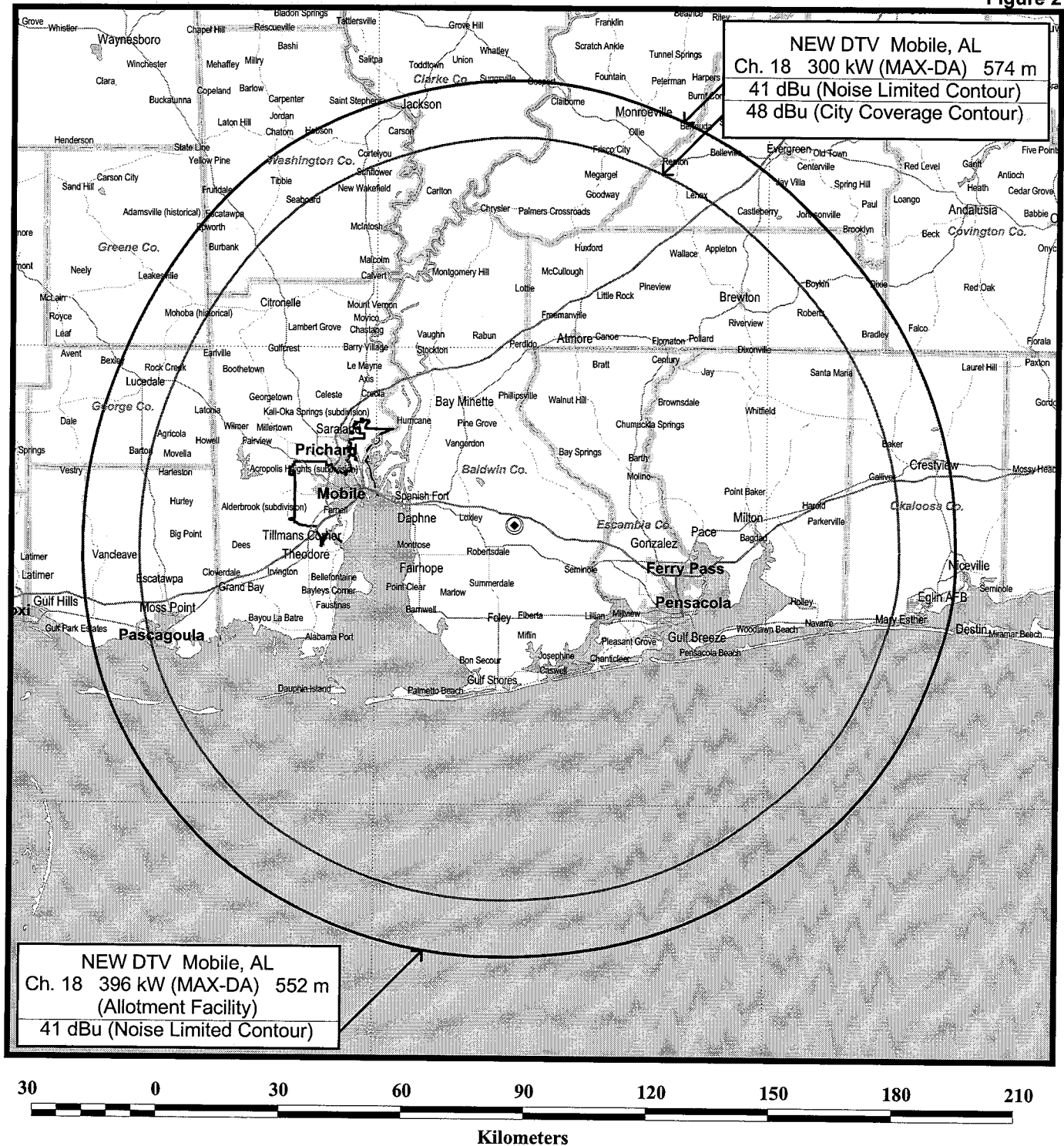
Date **14 Dec 2004**  
 Call Letters **NEW** Channel **18**  
 Location **MOBILE**  
 Customer **PAXSON**  
 Antenna Type **TFU-28GTH 6T120**

## TABULATION OF ELEVATION PATTERN

Elevation Pattern Drawing # **28G240100-90**

Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field	Angle	Field
-10.0	0.024	2.4	0.616	10.6	0.093	30.5	0.023	51.0	0.010	71.5	0.033
-9.5	0.007	2.6	0.536	10.8	0.091	31.0	0.032	51.5	0.016	72.0	0.037
-9.0	0.018	2.8	0.460	11.0	0.089	31.5	0.033	52.0	0.023	72.5	0.039
-8.5	0.001	3.0	0.391	11.5	0.091	32.0	0.028	52.5	0.030	73.0	0.039
-8.0	0.040	3.2	0.329	12.0	0.099	32.5	0.017	53.0	0.036	73.5	0.038
-7.5	0.086	3.4	0.277	12.5	0.107	33.0	0.007	53.5	0.038	74.0	0.035
-7.0	0.112	3.6	0.235	13.0	0.108	33.5	0.001	54.0	0.036	74.5	0.032
-6.5	0.098	3.8	0.202	13.5	0.100	34.0	0.002	54.5	0.031	75.0	0.027
-6.0	0.046	4.0	0.178	14.0	0.082	34.5	0.003	55.0	0.024	75.5	0.022
-5.5	0.026	4.2	0.163	14.5	0.060	35.0	0.012	55.5	0.015	76.0	0.017
-5.0	0.084	4.4	0.153	15.0	0.042	35.5	0.022	56.0	0.006	76.5	0.011
-4.5	0.093	4.6	0.149	15.5	0.034	36.0	0.028	56.5	0.002	77.0	0.006
-4.0	0.039	4.8	0.149	16.0	0.038	36.5	0.030	57.0	0.006	77.5	0.001
-3.5	0.066	5.0	0.150	16.5	0.049	37.0	0.026	57.5	0.007	78.0	0.004
-3.0	0.179	5.2	0.152	17.0	0.060	37.5	0.018	58.0	0.005	78.5	0.009
-2.8	0.215	5.4	0.154	17.5	0.063	38.0	0.009	58.5	0.000	79.0	0.013
-2.6	0.239	5.6	0.155	18.0	0.056	38.5	0.003	59.0	0.008	79.5	0.016
-2.4	0.249	5.8	0.155	18.5	0.039	39.0	0.001	59.5	0.016	80.0	0.019
-2.2	0.241	6.0	0.153	19.0	0.018	39.5	0.004	60.0	0.025	80.5	0.021
-2.0	0.216	6.2	0.150	19.5	0.000	40.0	0.010	60.5	0.031	81.0	0.022
-1.8	0.171	6.4	0.145	20.0	0.010	40.5	0.017	61.0	0.036	81.5	0.023
-1.6	0.106	6.6	0.140	20.5	0.010	41.0	0.023	61.5	0.037	82.0	0.023
-1.4	0.025	6.8	0.135	21.0	0.005	41.5	0.025	62.0	0.036	82.5	0.023
-1.2	0.072	7.0	0.130	21.5	0.001	42.0	0.022	62.5	0.031	83.0	0.022
-1.0	0.181	7.2	0.126	22.0	0.001	42.5	0.016	63.0	0.024	83.5	0.021
-0.8	0.298	7.4	0.123	22.5	0.006	43.0	0.008	63.5	0.015	84.0	0.020
-0.6	0.419	7.6	0.120	23.0	0.019	43.5	0.001	64.0	0.005	84.5	0.018
-0.4	0.538	7.8	0.119	23.5	0.033	44.0	0.003	64.5	0.004	85.0	0.016
-0.2	0.651	8.0	0.118	24.0	0.044	44.5	0.004	65.0	0.012	85.5	0.015
0.0	0.753	8.2	0.118	24.5	0.047	45.0	0.001	65.5	0.018	86.0	0.013
0.2	0.842	8.4	0.119	25.0	0.041	45.5	0.008	66.0	0.023	86.5	0.011
0.4	0.912	8.6	0.119	25.5	0.030	46.0	0.017	66.5	0.024	87.0	0.009
0.6	0.963	8.8	0.120	26.0	0.018	46.5	0.026	67.0	0.023	87.5	0.007
0.8	0.992	9.0	0.119	26.5	0.011	47.0	0.031	67.5	0.020	88.0	0.005
1.0	1.000	9.2	0.118	27.0	0.009	47.5	0.033	68.0	0.015	88.5	0.003
1.2	0.987	9.4	0.116	27.5	0.012	48.0	0.030	68.5	0.008	89.0	0.002
1.4	0.956	9.6	0.113	28.0	0.016	48.5	0.025	69.0	0.001	89.5	0.001
1.6	0.907	9.8	0.109	28.5	0.018	49.0	0.018	69.5	0.007	90.0	0.000
1.8	0.846	10.0	0.105	29.0	0.014	49.5	0.012	70.0	0.015		
2.0	0.774	10.2	0.101	29.5	0.004	50.0	0.008	70.5	0.022		
2.2	0.696	10.4	0.097	30.0	0.009	50.5	0.007	71.0	0.029		

Figure 2



## PREDICTED COVERAGE CONTOURS

**NEW DTV STATION**  
**MOBILE, ALABAMA**  
**CH 18 300 KW (MAX-DA) 574 m**

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

Figure 3

## CDBS TV/DTV SEPARATION STUDY

Job Title:  
Channel: 18  
Class:  
Type: DT

Separation Buffer: 50 km  
Coordinates: 30-36-45 87-38-43  
Zone: III

Call Id	City St	File Status Num	Channel Zone	ERP HAAT	DA Id	Latitude Longitude	Bear	Dist. (km)	Req. min	max
WPMI-T 11906	MOBILE AL LIC C	BLCT 19820308KEIII	15(+)	5000.000	D	30-37-35 087-38-50	353.1	1.6	24.1	96.6
				521	18505			22.55	Clear	
WPMI-T 11906	MOBILE AL APP C	BPCT 20040106AAIII	15(+)	5000.000	D	30-36-40 087-36-27	92.4	3.6	24.1	96.6
				563	68280			20.47	Clear	
WEAR-T 71363	PENSACOLA FL STA C	BDSTA 20021021AD	17( )	8.300	D	30-36-45 087-38-43	90.0	0.0	24.0	110.0
				102.8	44863			24.00	Clear	
WEAR-T 71363	PENSACOLA FL CP C	BPCDT 19991028AEIII	17( )	1000.000	N	30-36-45 087-38-43	90.0	0.0	24.0	110.0
				579	39646			24.00	Clear	
DWEART	PENSACOLA FL DTV		17( )	1000.000	D	30-37-38 087-37-31	49.5	2.5	24.0	110.0
			III	372				21.48	Clear	
NEW 158818	MOBILE AL GRA C	BPRM 20000714ABIII	18(Z)	396.000	D	30-36-45 087-38-43	90.0	0.0	223.7	223.7
				552	65214			223.70	Short	
WDHN 43846	DOTHAN AL LIC C	BLCT 2038	18(Z)	1070.000	N	31-14-30 085-18-48	71.9	233.5	244.6	244.6
			III	223				11.06	Short <sup>1</sup>	
WBXN-C 70419	NEW ORLEANS LA LIC C	BLTTA 20040525AG	18(+)	5.000	D	29-55-12 090-01-29	252.0	241.5	0.0	0.0
					20425			3.10	Class A	
WMAH-T 43197	BILOXI MS LIC C	BMLET 20030103AAIII	19(+)	1593.000	D	30-45-18 088-56-44	277.6	125.6	12.0	106.0
				476.3	64495			19.59	Clear	
WMPV-T 60827	MOBILE AL LIC C	BLCT 19860103KFIII	21(+)	4370.000	D	30-35-18 087-33-16	107.2	9.1	24.1	96.6
				436	18235			14.99	Close	
WMPV-T 60827	MOBILE AL CP C	BPCT 20010905AAIII	21(+)	3083.000	D	30-35-18 087-33-16	107.2	9.1	24.1	96.6
				436	42006			14.99	Close	
WXXV-T 53517	GULFPORT MS LIC C	BLCT 19870224KGIII	25(-)	2240.000	D	30-44-48 089-03-30	276.7	136.2	24.1	96.6
				488	19236			39.62	Clear	

**du Treil, Lundin, and Rackley**

**Coordinates: 30-36-45 87-38-43 Frequency Range: 200-300 Range: 16**

**FM Stations Within 16 kilometers**

<i>Rec Type</i>	<i>Fac Id</i>	<i>Call</i>	<i>Status</i>	<i>Chan</i>	<i>Svc Class</i>	<i>Class</i>	<i>City</i>	<i>St</i>	<i>DA</i>	<i>Latitude</i>	<i>Longitude</i>	<i>ERP (kW)</i>	<i>HAAT (m)</i>	<i>RCAMSL (m)</i>	<i>Bear</i>	<i>Dist. (km)</i>
C	2540	WBLX-F	LIC	225	FM	C	MOBILE	AL	N	30-37-35	087-38-50	100.000474.0	508.0	508.0	353.1	1.6
C	53145	WKSJ-F	LIC	235	FM	C	MOBILE	AL	N	30-37-35	087-38-50	100.000474.0	508.0	508.0	353.1	1.6
C	12143	WJLQ	LIC	264	FM	C	PENSACOLA	FL		30-37-35	087-38-50	100.000474.0	508.0	508.0	353.1	1.6
C	8680	WYOK	LIC	281	FM	C	ATMORE	AL		30-37-35	087-38-50	100.000474.0	508.0	508.0	353.1	1.6
C	52230	WPCS	LIC	208	FM	C	PENSACOLA	FL		30-35-18	087-33-16	100.000405.0	429.0	429.0	107.2	9.1
C	73256	WMEZ	LIC	231	FM	C0	PENSACOLA	FL		30-35-18	087-33-16	100.000405.0	437.0	437.0	107.2	9.1
C	61243	WTKX-F	LIC	268	FM	C	PENSACOLA	FL	N	30-35-18	087-33-16	100.000405.0	437.0	437.0	107.2	9.1
C	32946	WXBM-F	LIC	274	FM	C	MILTON	FL		30-35-18	087-33-16	100.000405.0	437.0	437.0	107.2	9.1
C	52230	WPCS	CP	208	FM	C0	PENSACOLA	FL	N	30-35-16	087-33-13	95.000	414.0	439.0	107.4	9.2
C	63931	WYCL	CP	297	FM	C0	PENSACOLA	FL	N	30-35-16	087-33-13	100.000417.0	441.0	441.0	107.4	9.2

**du Treil, Lundin, and Rackley**

Coordinates: 30-36-45 87-38-43 Channel Range: 2-69

Range: 16

**TVs Within 16 kilometers**

Rec Type	Facility Id	Call	Status	Chan	Svc Class	Class	City	St	DA	Latitude	Longitude	ERP (kW)	HAAT (m)	RCAMSL (m)	Bearing	Dist. (km)
C	158818	NEW	GRA	18	DM		MOBILE	AL	D	30-36-45	087-38-43	396.000	552	584	0	0
C	71363	WEAR-T	STA	17	DS		PENSACOLA	FL	D	30-36-45	087-38-43	8.300	102.8	136	0	0
C	71363	WEAR-T	CP	17	DT		PENSACOLA	FL	N	30-36-45	087-38-43	1000.00	579	612	0	0
C	71363	WEAR-T	LIC	3	TV		PENSACOLA	FL	N	30-36-45	087-38-43	100.000	574.9	608	0	0
C	10894	WHBR	STA	34	DS		PENSACOLA	FL	D	30-37-35	087-38-50	108.000	415	449	353.0	1.55
C	10894	WHBR	CP	34	DT		PENSACOLA	FL	D	30-37-35	087-38-50	1000.00	415	449	353.0	1.55
C	11906	WPML-T	LIC	15	TV		MOBILE	AL	D	30-37-35	087-38-50	5000.00	521	554	353.0	1.55
C	10894	WHBR	LIC	33	TV		PENSACOLA	FL	D	30-37-35	087-38-50	3470.00	415	449	353.0	1.55
C	83150	960722	APP	61	TV		MOBILE	AL	N	30-37-38	087-37-31	5000.00	347	378	49.46	2.52
C	17611	WSRE	STA	31	DS		PENSACOLA	FL	D	30-36-40	087-36-27	287.000	549	657	92.43	3.63
C	11906	WPML-T	LIC	47	DT		MOBILE	AL	D	30-36-40	087-36-27	1000.00	558	590	92.43	3.63
C	17611	WSRE	CP	31	DT		PENSACOLA	FL	D	30-36-40.3	087-36-26.9	1000.00	549	590	92.28	3.63
C	11906	WPML-T	APP	15	TV		MOBILE	AL	D	30-36-40	087-36-27	5000.00	563	595	92.43	3.63
C	83943	WBPG	LIC	55	TV		GULF SHORES	AL	D	30-36-40.3	087-36-26.8	3750.00	308	340	92.28	3.63
C	60827	WMPV-T	CP	20	DT		MOBILE	AL	D	30-35-18	087-33-16	500.000	436	468	107.1	9.11
C	60827	WMPV-T	LIC	21	TV		MOBILE	AL	D	30-35-18	087-33-16	4370.00	436	468	107.1	9.11
C	60827	WMPV-T	CP	21	TV		MOBILE	AL	D	30-35-18	087-33-16	3083.00	436	468	107.1	9.11
C	41210	WJTC	LIC	45	DT		PENSACOLA	FL	D	30-35-16	087-33-13	1000.00	457	490	107.3	9.21
C	41210	WJTC	LIC	44	TV		PENSACOLA	FL	D	30-35-16	087-33-13	3310.00	457	490	107.3	9.21

TECHNICAL EXHIBIT  
APPLICATION FOR DTV CONSTRUCTION PERMIT  
NEW DTV STATION  
MOBILE, ALABAMA  
CH 18      300 KW (MAX-DA)      574 M

Technical Specifications

Channel	18
Frequency	494-500 MHz
Proposed Site Coordinates (NAD 27)	30° 36' 45" North Latitude 87° 38' 43" West Longitude
Site Elevation above mean sea level	44.8 m
Average elevation above mean sea level of 8 equally spaced radials, 3-16 kilometers	42.5 m
Overall height of proposed antenna structure	
Above ground	579.7 m
Above mean sea level	624.5 m
Height of antenna radiation center	
Above ground	570.8 m
Above mean sea level	616 m
Above average terrain	574 m
DTV Transmitter	
Rated power output (average)	16.91 kW
Transmission line	Dielectric 562176
Nominal diameter	(6-1/8") 15.6 cm
Length	(1,950 ft) 594.4 m
Efficiency (2.1 dB loss)	61.6%
Antenna	Dielectric TFU-28GTH 6T120
Polarization	Horizontal
Peak Power Gain	28.8
Beam Tilt	1.00°
Main Lobe(s)	110°, 230°, 350° T

Proposed Operation

Transmitter output power (average)	16.91 kW
Transmission line loss	6.49 kW
Antenna input power	10.42 kW
Effective Radiated Power (MAX-DA) (DTV average at main lobe)	300 kW