

TECHNICAL EXHIBIT  
APPLICATION FOR DTV MAXIMIZATION  
STATION KAIT-DT (FACILITY ID 13988)  
JONESBORO, ARKANSAS  
CH 8 28.2 KW 531 M

Technical Narrative

This Technical Exhibit supports an application for digital television (DTV) station KAIT-DT to maximize its post-transition facility. This application requests a construction permit (CP) for a digital television operation on channel 8, using its licensed non-directional antenna.

Proposed Facilities

Station KAIT-DT proposes to operate DTV channel 8 with a non-directional effective radiated power (ERP) of 28.2 kilowatts and antenna height above average terrain (HAAT) of 531 meters. The transmitter site coordinates are:

35° 53' 22" North Latitude  
90° 56' 08" West Longitude

A sketch of antenna and pertinent elevations are included as Figure 1. Figure 2 is a map showing the DTV predicted coverage contours. The predicted 43 dBu contour will encompass all of Jonesboro. The Jonesboro city limits were derived from information contained in the 2000 U.S. Census of Population and Housing.

### Population Served

The herein proposed KAIT-DT “maximized” facility is predicted to serve 819,952 persons, post-transition, based upon the 2000 Census. KAIT-DT’s associated Appendix B facility is predicted to serve 689,000 persons. Therefore, the herein proposed KAIT-DT facility would serve more than 100% of KAIT-DT’s Appendix B population.

### Allocation Considerations

The proposed KAIT-DT operation meets the FCC’s 0.5% post-transition interference standards to pertinent Class A and DTV facilities using the procedures outlined in the FCC’s OET-69 Bulletin and a **non-standard 1 kilometer cell size** and 1 kilometer terrain distance increment.

### Radiofrequency Electromagnetic Field Exposure

The proposed KAIT-DT facilities were evaluated in terms of potential radio frequency (RF) energy exposure at ground level to workers and the general public. The radiation center for the proposed DTV antenna is located 530 meters above ground level with an ERP of 28.2 kW. A conservative relative field value of 0.3 was assumed for the calculation (see Figure 3). The calculated power density at a point 2 meters above ground level will not exceed  $0.0034 \text{ mW/cm}^2$ . This is less than 5% of the FCC's recommended limit of  $0.2 \text{ mW/cm}^2$  for channel 8 for an “uncontrolled” environment.

Access to the transmitting site will be restricted and appropriately marked with warning signs. In the event that workers or other authorized personnel enter restricted areas or climb the tower, appropriate measures 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 monitors or scheduling work when the station is at reduced power or shut down. The proposed KAIT-DT operation appears to be otherwise categorically excluded from environmental processing.

It is noted that this statement only addresses the potential for radiofrequency electromagnetic field exposure. All other aspects of the environmental processing analysis will be or already have been provided to the FCC by the tower owner.

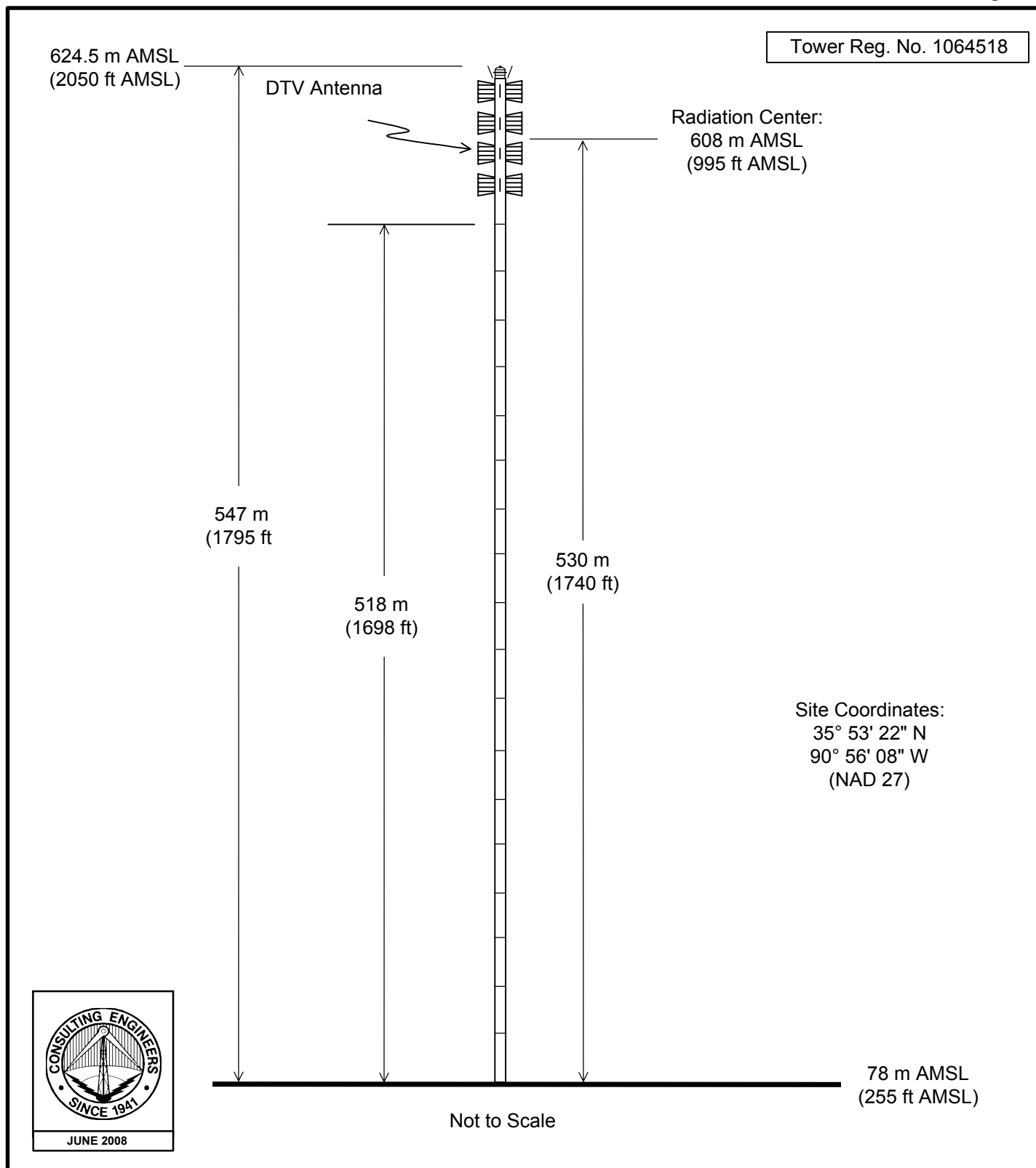


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Figure 1



## PROPOSED ANTENNA AND SUPPORTING STRUCTURE

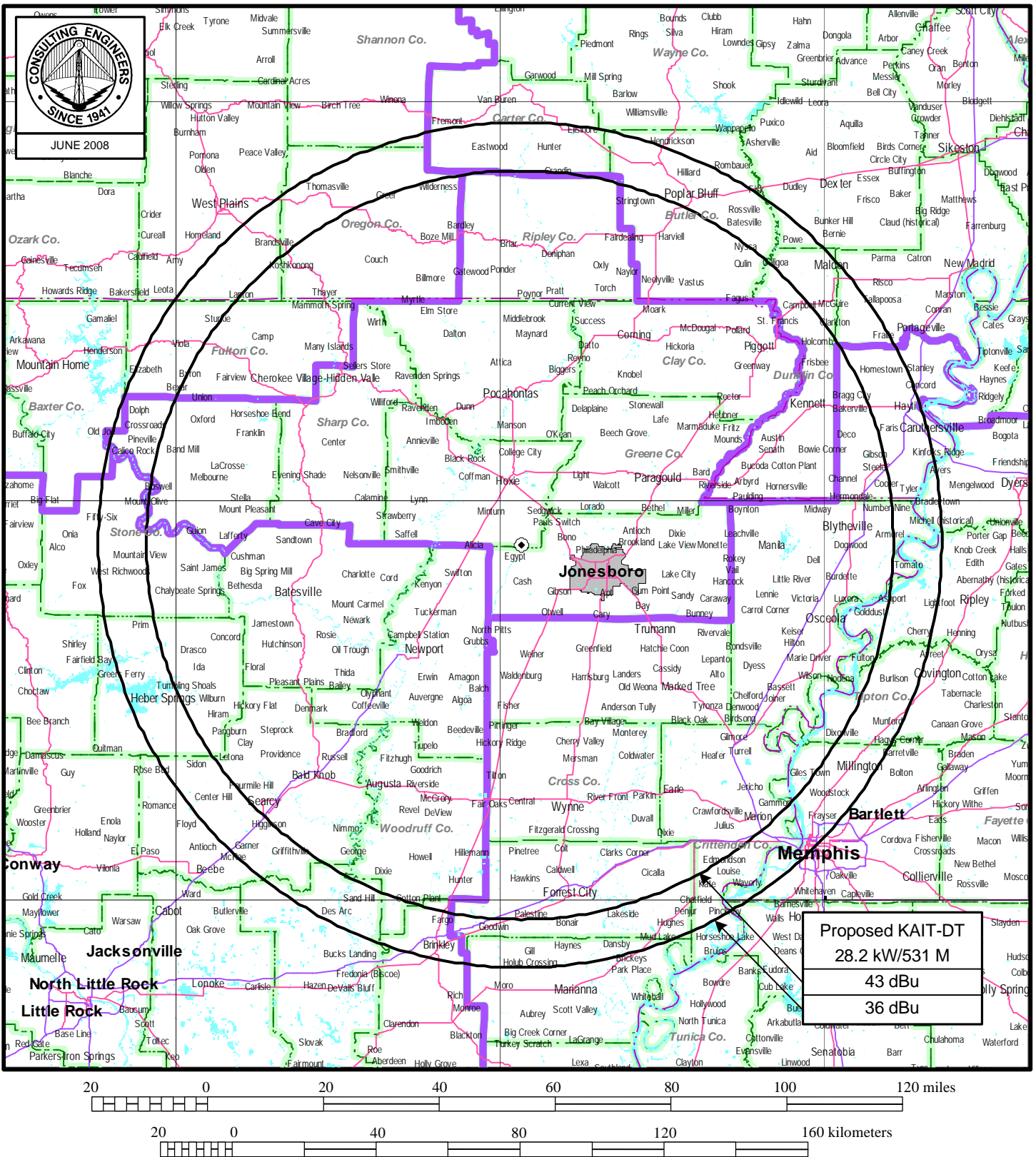
TELEVISION STATION KAIT-DT

JONESBORO, ARKANSAS

CH 8 28.2 KW 531 M

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

Figure 2



## PREDICTED COVERAGE CONTOURS

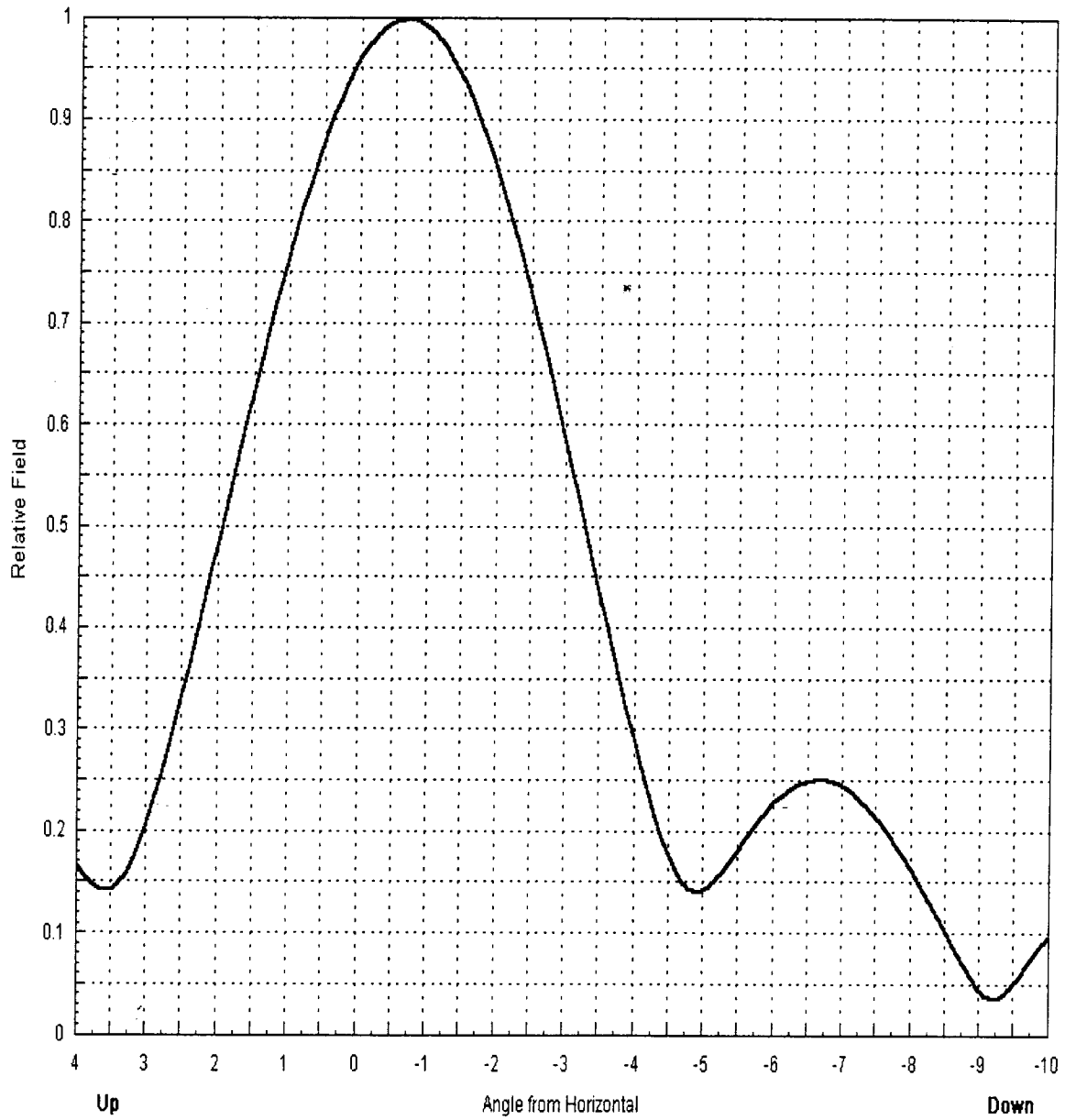
STATION KAIT-DT  
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Figure 3



Calculated Elevation Pattern



Harris Pattern No.: 9264E01K  
Model: TAB-12HM