Station KAET-DT • Phoenix, Arizona
Engineering Analysis of Early Transition to DTV Channel 8

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Arizona Board of Regents, licensee of noncommercial TV Station KAET, Phoenix, Arizona, FCC Facility ID No. 2728, to study potential interference and contour conditions related to a proposed early transition to DTV facilities presently authorized for post-transition operation.

Background

TV Station KAET is presently licensed to operate on analog Channel 8 (FCC File No. BLET-19840718KF) and pre-transition DTV Channel 29 (FCC File No. BLEDT-20020405ABD). KAET holds an FCC construction permit for post-transition DTV operation on Channel 8 (FCC File No. BPEDT-20080612AAK), operation of which would replace the present analog facility on that channel. The post-transition facility is to employ the present nondirectional transmitting antenna used for the current analog operation. The digital ERP would be 25.1 kilowatts with a radiation center at 912 meters above mean sea level and 549 meters above average terrain.

Proposed Conditions

Prior to June 12, 2009, it is proposed to cease KAET analog operation and commence operation with the full authorized Channel 8 post-transition DTV facilities. An OET-69 interference study has been conducted using pre-transition allocation conditions, yielding results demonstrating that no interference in excess of the permissible 0.5% would be caused to any other authorized operation. The two facilities of primary interest in the study were Station KAZT-TV, analog Channel 7, Prescott, Arizona, FCC Facility ID No. 35811, located 150.3 kilometers to the north, and TV Station KGUN, analog Channel 9, Tucson, Arizona, FCC Facility ID No. 36918, located 162.1 kilometers east-southeast of the KAET transmitter site.

The accompanying map figure compares the F(50, 50) 56 dBu (Grade B) Channel 8 analog contour, the F(50,90) 40.2 dBu noise-limited Channel 29 pre-transition digital contour, and the F(50,90) 36 dBu noise-limited Channel 8 post-transition digital contour. As shown, both digital contours fully encompass the analog contour, so there is 100% digital coverage of both analog service area and population. The post-transition digital contour covers 99.21% of pre-transition digital contour area and 99.95% of pre-transition digital contour population, and so effectively maintains current digital service.

Conclusion

Based on the OET-69 interference and contour analysis study results, I conclude that KAET-DT may commence operation with its full DTV Channel 8 post-transition facilities without causing impermissible interference to any other authorized pre-transition facility, and also that the facility would effectively maintain current analog and digital service area and population.

Figure

In carrying out these engineering studies, the following attached figure was prepared under my direct supervision:

1. Comparison of pre-transition analog/digital and post-transition digital contours.

Stanley Salek, P.E.

March 11, 2009

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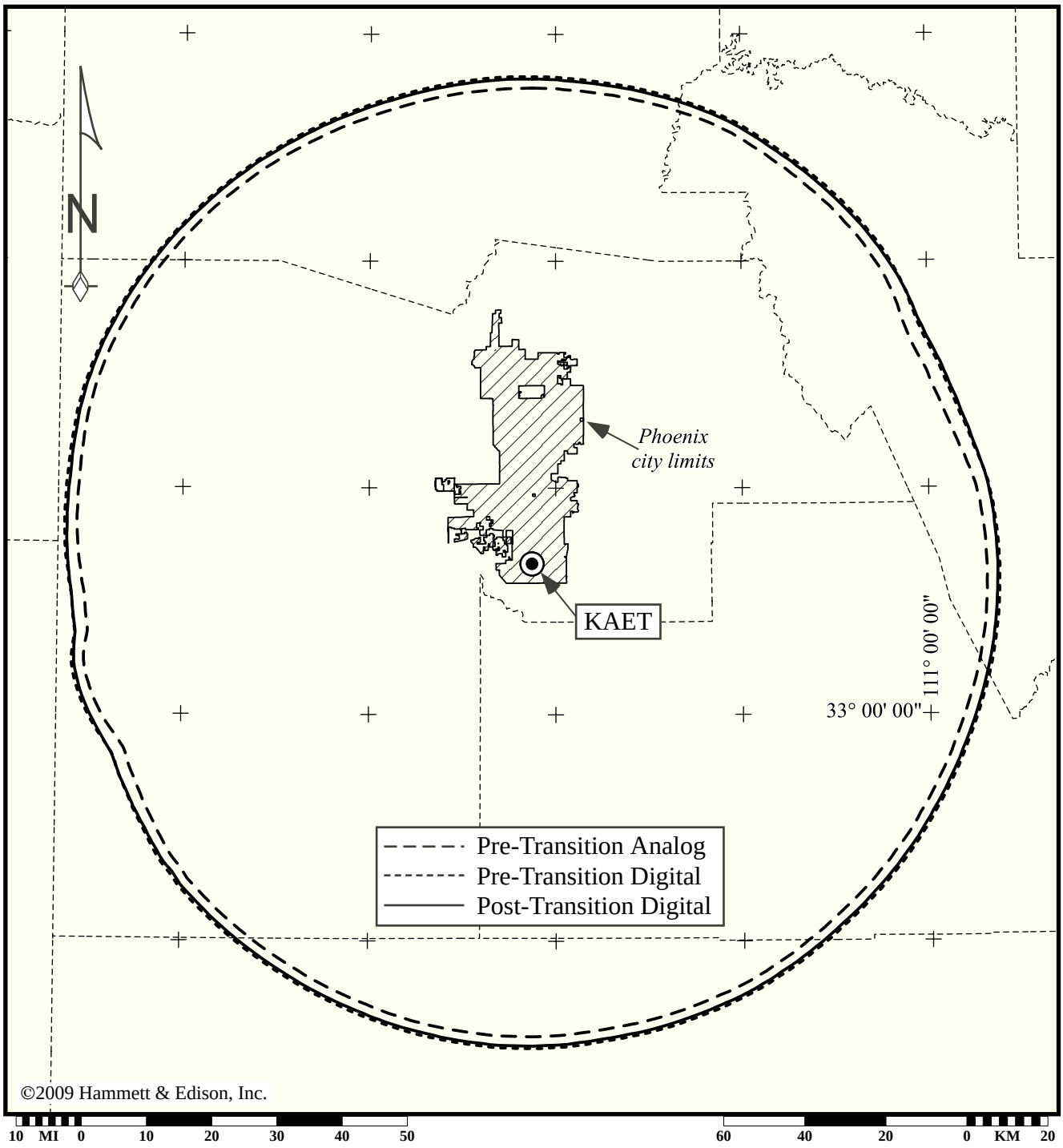
Comparison of Pre-Transition Analog/Digital and Post-Transition Digital Contours

Pre-Transition Analog Channel 8: F(50,50) 56 dBu, BLET-19840718KF
Pre-Transition Digital Channel 29: F(50,90) 40.2 dBu, BLEDT-20020405ABD
Post-Transition Digital Channel 8: F(50,90) 36 dBu, BPEDT-20080612AAK



Albers equal area map projection. Geographic coordinate marks shown at 30-minute increments. City limits and county lines shown taken from U.S. Census Bureau TIGER/Line 2000 data.