

**ENGINEERING STATEMENT
ARIZONA BOARD OF REGENTS FOR ARIZONA
TELEVISION STATION KAET, PHOENIX, AZ
FILE NUMBER BLEDT-20090612AEF
REQUEST TO SIMULCAST ON ATSC 3.0 (NEXT GEN TV)**

This statement supports an application by Arizona Board of Regents of Arizona, licensee of noncommercial digital television station KAET, to transmit an ATSC 3.0 ("3.0") "Next generation" TV signal on a currently operating 3.0 "Lighthouse" station.

The Commission has adopted rules to allow current ATSC 1.0 stations to transition to the Next Generation television standard of ATSC 3.0.¹ The purpose of this statement is to show that KAET will be in compliance with the coverage requirements stated in the rules.

KAET is not proposing to make any changes that would affect coverage of its current ATSC 1.0 station that transmits on VHF Channel 8. KAET is proposing to simulcast its ATSC 1.0 stream in ATSC 3.0 format on Class A television station KFPH-CD which operates on channel 35 as an ATSC 3.0 Lighthouse station and will serve as the host.

KAET is licensed to serve Phoenix, AZ, and within the Phoenix (Prescott) Designated Market Area ("DMA"). KFPH-CD is licensed to the city of Phoenix, AZ and also inside the Phoenix (Prescott) DMA. The city of Phoenix is also inside the noise-limited contour of KFPH-CD. Attached as Figure 1 to this statement is a map showing the noise limited contour (36 dBu) of KAET's ATSC 1.0 facility and the protected contour (50.8 dBu) of KFPH-CD, which would be the ATSC 3.0 simulcast host station for KAET.

The cyan shaded area of the map shows the Phoenix (Prescott) DMA. The map clearly shows both stations being within the DMA and, therefore, satisfies the ATSC 3.0 coverage requirement for KAET.²

Considering the above, KAET will be in full compliance concerning the coverage requirements as stated in the Rules.

¹ See 47 C.F.R. § 73.3801

² See 47 C.F.R. § 73.3801(d)

Figure 1
Coverage Comparison for KAET ATSC 1.0 and ATSC 3.0 Transmissions
ATSC 1.0: Ch 8, 40 kW, Non-Directional, 549 m HAAT
ATSC 3.0: Ch 35, 15 kW, Directional, 502 m HAAT
Phoenix (Prescott) DMA shown in Cyan

