

**Exhibit A**  
KOED-DT Technical Exhibit

ENGINEERING STATEMENT  
RE PETITION FOR RECONSIDERATION  
OF THE FINAL DTV TABLE OF ALLOTMENTS IN  
THE SEVENTH REPORT AND ORDER  
MB DOCKET 87-268 FOR  
**KOED-DT, TULSA, OKLAHOMA**  
ON BEHALF OF  
OKLAHOMA EDUCATIONAL TELEVISION AUTHORITY  
OCTOBER 2007

COHEN, DIPPELL AND EVERIST, P.C.  
CONSULTING ENGINEERS  
RADIO AND TELEVISION  
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington )  
 ) ss  
District of Columbia )

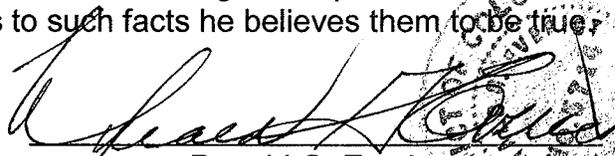
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

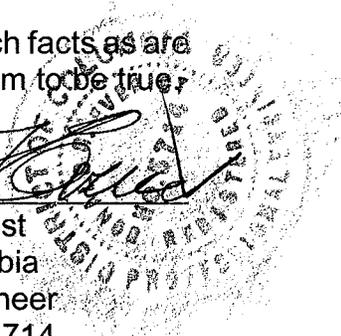
That his qualifications are a matter of record in the Federal Communications Commission;

That the attached engineering report was prepared by him or under his supervision and direction and

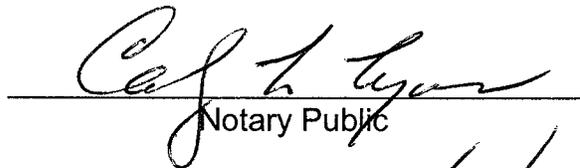
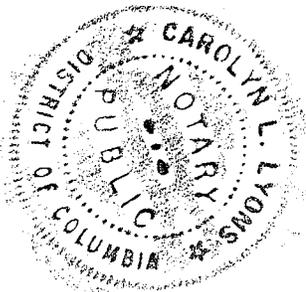
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true;



Donald G. Everist  
District of Columbia  
Professional Engineer  
Registration No. 5714



Subscribed and sworn to before me this 24<sup>th</sup> day of October, 2007.

  
Notary Public

My Commission Expires: 2/28/2008

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington )  
 ) ss  
District of Columbia )

Martin R. Doczkat being duly sworn upon his oath, deposes and states that:

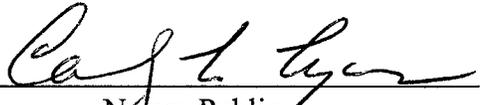
He is a graduate electrical engineer of the Pennsylvania State University, and is a staff engineer at Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That the attached engineering report was prepared by him or under his supervision and direction and

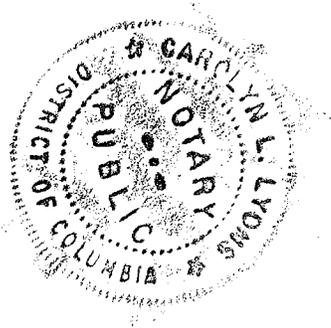
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.

  
Martin R. Doczkat

Subscribed and sworn to before me this 24<sup>th</sup> day of October, 2007.

  
Notary Public

My Commission Expires: 2/28/2008



This engineering statement supports the petition for reconsideration filed on behalf of Oklahoma Educational Television Authority (“OETA”), in its Petition for Reconsideration to modify its facilities in the Final DTV Table of Allotments in the Seventh Report and Order (MB Docket No. 87-268) for its licensed DTV station KOED-DT, Tulsa, Oklahoma.

KOED-DT, Tulsa, Oklahoma

The proposed final DTV Table of Allotments released as Appendix B with the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making<sup>1</sup> (“7<sup>th</sup> R&O”) listed KOED-DT on Channel 11 with 22.2 kW directional ERP and 396 meters HAAT. OETA requested in its reply comments to the Seventh Further Notice of Proposed Rule Making<sup>2</sup> (7<sup>th</sup> FNPRM) to modify its post-transition DTV facility on Channel 11 with 22.2 kW directional ERP and 521 meters HAAT. In its comments in the 7<sup>th</sup> R&O, the FCC denied OETA’s 7<sup>th</sup> FNPRM request because the FCC predicted more than 0.1% interference to be caused to KTUL-DT, Channel 10, Tulsa, Oklahoma. The requested facility in this Petition for Reconsideration for KOED-DT on Channel 11 is with 20 kW non-directional ERP and 521 meters HAAT from the same site. A “post-transition” Longley-Rice analysis, the methodology of which is discussed in a separate section of this statement, predicts that

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<sup>1</sup>“Seventh Report and Order and Eighth Further Notice of Proposed Rule Making In the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service”, MB Docket No. 87-268, Adopted August 1, 2007, Released August 6, 2007, Appendix B FCC 07-138.

<sup>2</sup>“Seventh Further Notice of Proposed Rule Making In the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service”, MB Docket No. 87-268, Adopted October 10, 2006, Released October 20, 2006.

this requested KOED-DT facility causes less than 0.1% interference to the KTUL-DT facility in the final DTV Table of Allotments.

KOED-DT is located on a non-owned tower. The tower owners and OETA's technical representatives gave every indication that KOED-DT is going to be able to return its DTV operation to the location of its NTSC antenna, which is 125 meters above that now licensed for the DTV (FCC File No. BLEDT-20060601BLN). This will permit KOED-DT to more closely approximate its current NTSC service.

#### Longley-Rice Interference Methodology

As stated in the Second Periodic Review,<sup>3</sup> the Channel Election Process allows 0.1% interference to be caused in addition to "existing" interference. The "existing" interference in this analysis considers two separate possible interpretations which the FCC may assume "existing" interference to signify in this stage of the DTV transition. Therefore, these studies included two separate databases, the 7<sup>th</sup> R&O database and the database containing the Protected Stations from the First Round of Channel Elections ("Round One"). This second Round One database has been included in this analysis as a more comprehensive study to include earlier "channel election standards" as would have been used to determine the Tentative Channel Designation for all DTV facilities in the FCC Public Notice dated June 23, 2005 (DA 05-1743). Based on informal guidance from the FCC Staff, the Round One database analysis will be a better indication of whether the FCC

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<sup>3</sup>Report and Order In the Matter of Second Periodic Review of the Commissions Rules and Policies Affecting the Conversion To Digital Television", MB Docket No. 03-15, RM 9832, Adopted August 4, 2004, Released September 7, 2004.

will approve the petition for reconsideration, as all 1,554 DTV stations participating in the First Round of DTV Channel Elections were treated in a similar manner at that time. The first 7<sup>th</sup> R&O database serves as a prediction to the interference scenario after the DTV transition, therefore no analog television facilities were considered and all digital television facilities were assumed to be operating in accordance with the final DTV Table of Allotments released as Appendix B with the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making.

An analysis of predicted interference caused by KOED-DT used the FCC's FORTRAN-77 code which was modified only to the extent necessary (primarily input/output handling) for the program to run on a Windows XP/Intel platform. Comparison of service/interference areas and populations indicates that this model closely matches the FCC's evaluation program. Best efforts have been made to use data and calculations identical to the FCC's program. Any slight differences are attributable to compiler, operating system and/or processor characteristics. The effect of any variance in calculated population values versus the FCC's program is minimized when differencing a given model's results, such as calculating new interference as total interference less baseline interference. Any variance effect is further reduced when using ratios of calculated population values such as measuring the incremental population affected as a percent of the total population served. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 4 km<sup>2</sup> using 3-second terrain data sampled approximately every 1.0 km at one degree azimuth intervals with 2000 Census centroids.

Stations were selected according to the FCC Public Notice dated August 10, 1998 and entitled, "Additional Application Processing Guidelines for Digital Television", which outlines the station selection criteria "culling distances" for considering potential interference scenarios.

Population Data

Final DTV Table of Allotments Data

| <u>DTV<br/>CH.</u> | <u>ERP<br/>kW</u> | <u>HAAT<br/>meters</u>                               | <u>Antenna<br/>ID</u>                        | <u>Coordinates<br/>NAD 27</u> | <u>Area<br/>Sq. km</u> |
|--------------------|-------------------|--|--|-------------------------------|------------------------|
| 11                 | 22.2              | 396  | 74534  | 36° 01' 15"N<br>95° 40' 32"W  | 33,193                 |
|                    |                   | <u>Population<br/>Net<br/>Coverage<br/>thousands</u> | <u>Percent<br/>Interference<br/>Received</u> |                               |                        |
|                    |                   | 1,211  | 0.3  |                               |                        |

The requested DTV parameters and associated data for post-transition based on the non-directional channel 11 KOED-DT facilities are as follows:

Requested Facility

| <u>DTV<br/>CH.</u> | <u>ERP<br/>kW</u> | <u>HAAT<br/>meters</u> | <u>Antenna<br/>ID</u> | <u>Coordinates<br/>NAD 27</u> | <u>Area<br/>Sq. km</u> |
|--------------------|-------------------|------------------------|-----------------------|-------------------------------|------------------------|
| 11                 | 20                | 521                    | N/A                   | 36° 01' 15"N<br>95° 40' 32"W  | 38,810                 |

| <u>Total Coverage</u> | <u>Population</u>            |                                  | <u>Percent Interference Received</u> |
|-----------------------|------------------------------|----------------------------------|--------------------------------------|
|                       | <u>Interference Received</u> | <u>Net Coverage</u><br>thousands |                                      |
| 1,282,342             | 4,895                        | 1,277,447                        | 0.4                                  |

Interference to KTUL-DT is predicted to be below 0.1%.

NTSC  
 From Table II Dec. 21., 2004  
 Report and Order, Sept. 7, 2004

| <u>NTSC CH.</u> | <u>ERP</u><br>kW | <u>HAAT</u><br>meters | <u>Antenna ID</u> | <u>Coordinates NAD 27</u>    | <u>Area</u><br>Sq. km |
|-----------------|------------------|-----------------------|-------------------|------------------------------|-----------------------|
| 11              | 316              | 521                   | 30622             | 36° 01' 15"N<br>95° 40' 32"W | 34,937                |

Population  
 Net  
Coverage  
 thousands  
 1,218

Conclusion

Based on Longley-Rice analyses, the proposed KOED-DT facility requested in this Petition for Reconsideration is predicted to cause less than 0.1% interference to the 7<sup>th</sup> R&O facility of KTUL-DT while providing a post-transition DTV facility that approaches the current analog Grade B predicted service.

**Exhibit B**  
KETA-DT Technical Exhibit

ENGINEERING STATEMENT  
RE PETITION FOR RECONSIDERATION  
OF THE FINAL DTV TABLE OF ALLOTMENTS  
IN THE SEVENTH REPORT & ORDER  
MB DOCKET NO. 87-268  
ON BEHALF OF  
OKLAHOMA EDUCATIONAL BROADCAST AUTHORITY  
**KETA-DT, OKLAHOMA CITY, OKLAHOMA**

OCTOBER 2007

COHEN, DIPPELL AND EVERIST, P.C.  
CONSULTING ENGINEERS  
RADIO AND TELEVISION  
WASHINGTON, D.C.



This engineering statement supports the Petition for Reconsideration filed on behalf of Oklahoma Educational Television Authority, licensee of KETA-TV to modify its facilities in the Final DTV Table of Allotments for its licensed DTV station KETA-DT, Oklahoma City, Oklahoma.

Currently KETA-TV operates on Channel 13 from a common antenna with KWTV(TV), Channel 9. KETA-DT operates on Channel 32 with 1000 kW at an HAAT of 465.2 meters at a different site. KETA-DT proposes to return to this common antenna site shared with KWTV.

The proposed final DTV Table of Allotments released as Appendix B with the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making<sup>1</sup> listed KETA-DT on Channel 13 with 26.4 kW with a slightly directional antenna pattern and 465 meters HAAT. The requested facility in this Petition for Reconsideration for KETA-DT on Channel 13 is with 26.4 kW non-directional ERP and 465 meters HAAT from the KETA-TV NTSC site.

The parameters for the KETA-TV operation are as follows:

Channel: 13  
ERP: 26.4 kW  
HAAT: 465 meters  
Antenna ID: none (non-directional)  
North Latitude: 35° 32' 58"  
West Longitude: 97° 29' 50"

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<sup>1</sup>“Seventh Report and Order and Eighth Further Notice of Proposed Rule Making In the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service”, MB Docket No. 87-268, Adopted August 1, 2007, Released August 6, 2007, Appendix B FCC 07-138.

A “post-transition” Longley-Rice analysis, the methodology of which is discussed in a separate section of this statement, predicts that this requested KETA-DT facility causes the interference listed in Table I to other facilities proposed in the final DTV Table of Allotments and the interference listed in Table II to other protected facilities in the First Round of Channel Elections. As can be seen in the second “results” column of both Table I and Table II, no potentially affected station in the final DTV Table of Allotments or in the First Round of Channel Elections experiences more than 0.1% interference above that predicted to be caused by the KETA-DT facility in the final DTV Table of Allotments due to the requested facility in this Petition for Reconsideration.

#### Longley-Rice Interference Methodology

As stated in the Second Periodic Review,<sup>2</sup> the Channel Election Process allows 0.1% interference to be caused in addition to “existing” interference. The “existing” interference in this analysis considers two separate possible interpretations which the FCC may assume “existing” interference to signify in this stage of the DTV transition. Therefore, these studies included two separate databases, the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making (“7<sup>th</sup> R&O”) database and the database containing the Protected Stations from the First Round of Channel Elections (“Round One”). This second Round One database has been included in this analysis as a more comprehensive study to include earlier “channel election standards” as would have been used to determine the Tentative Channel Designation for all DTV facilities in the

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<sup>2</sup>“Report and Order In the Matter of Second Periodic Review of the Commissions Rules and Policies Affecting the Conversion To Digital Television”, MB Docket No. 03-15, RM 9832, Adopted August 4, 2004, Released September 7, 2004.

FCC Public Notice dated June 23, 2005 (DA 05-1743). Based on informal guidance from the FCC Staff, the Round One database analysis will be a better indication of whether the FCC will approve the petition for reconsideration, as all 1,554 DTV stations participating in the First Round of DTV Channel Elections were treated in a similar manner at that time. The first 7<sup>th</sup> R&O database serves as a prediction to the interference scenario after the DTV transition, therefore no analog television facilities were considered and all digital television facilities were assumed to be operating in accordance with the final DTV Table of Allotments released as Appendix B with the Seventh Report and Order and Eighth Further Notice of Proposed Rule Making.

For each of the tables included in this engineering statement, the same procedure was used to develop the two separate Results columns. The first column in each table does not consider any potentially “preexisting” interference predicted to be caused by the DTV facility of interest, while the second column in each table considers this “preexisting” predicted interference from the DTV facility of interest. In other words, the interference predicted to be caused to other potentially affected stations due to the facility in the Final DTV Table of Allotments has been subtracted from the interference predicted to be caused by the Petition for Reconsideration facility in the second column, while the interference predicted to be caused by the Petition for Reconsideration facility remains unchanged in the first column.

An analysis of predicted interference caused by the proposed KETA-DT facility used the FCC’s FORTRAN-77 code which was modified only to the extent necessary (primarily input/output handling) for the program to run on a Windows XP/Intel platform. Comparison of service/interference areas and populations indicates that this model closely matches the FCC’s

evaluation program. Best efforts have been made to use data and calculations identical to the FCC's program. Any slight differences are attributable to compiler, operating system and/or processor characteristics. The effect of any variance in calculated population values versus the FCC's program is minimized when differencing a given model's results, such as calculating new interference as total interference less baseline interference. Any variance effect is further reduced when using ratios of calculated population values such as measuring the incremental population affected as a percent of the total population served. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 4 km<sup>2</sup> using 3-second terrain data sampled approximately every 1.0 km at one degree azimuth intervals with 2000 Census centroids.

Stations were selected according to the FCC Public Notice dated August 10, 1998 and entitled, "Additional Application Processing Guidelines for Digital Television", which outlines the station selection criteria "culling distances" for considering potential interference scenarios.

The results are provided in Table I and Table II.

#### Conclusion

Based on Longley-Rice analyses, the proposed KETA-DT facilities requested in this Petition for Reconsideration demonstrates that KETA-DT can change site and minimally impact other potentially affected facilities in both 7<sup>th</sup> R&O and Round One databases.

COHEN, DIPPELL AND EVERIST, P.C.

TABLE I  
PREDICTED LONGLEY-RICE INTERFERENCE ANALYSIS  
VERSUS OTHER FACILITIES IN THE PROTECTED ROUND ONE CHANNEL ELECTION DATABASE  
FOR THE DESIRED PETITION FOR RECONSIDERATION OPERATION OF  
KETA-DT, OKLAHOMA CITY, OKLAHOMA  
CHANNEL 13 26.4 KW ND ERP 465 METERS HAAT  
FROM EXISTING KETA-TV SITE  
OCTOBER 2007

| <u>Channel</u> | <u>Call</u> | <u>City/State</u> | <u>Dist(km)</u> | <u>Status</u> | <u>FCC File No.</u> | <u>Results</u><br><u>No Baseline</u> | <u>Results</u><br><u>Above KETA-DT 7th R&amp;O</u> |
|----------------|-------------|-------------------|-----------------|---------------|---------------------|--------------------------------------|--|
| 12             | KWET        | CHEYENNE OK       | 196.8           | TVDB          | BLET-19780717IP     | No Interference                      | <b>No Interference</b>                             |
| 12             | KXII        | SHERMAN TX        | 185             | PRTCT         | BDTV-340158         | 0.00%                                | <b>0.00%</b>                                       |
| 12             | KXII        | SHERMAN TX        | 185             | TVDB          | BLCT-19840229KF     | No Interference                      | <b>No Interference</b>                             |
| 13             | KAFT        | FAYETTEVILLE AR   | 313.3           | TVDB          | BPET-20030509AAE    | 1.38%                                | <b>-0.13%</b>                                      |
| 13             | KUPK-TV     | GARDEN CITY KS    | 363.9           | TVDB          | BLCT-19840406KG     | 0.00%                                | <b>0.00%</b>                                       |
| 13             | KUPK-TV     | GARDEN CITY KS    | 363.9           | PRTCT         | BPCDT-19991025ADQ   | 0.00%                                | <b>0.00%</b>                                       |
| 13             | KOAM-TV     | PITTSBURG KS      | 307.4           | PRTCT         | BMPCDT-20011206AAF  | 0.02%                                | <b>0.00%</b>                                       |
| 13             | WIBW-TV     | TOPEKA KS         | 399.6           | PRTCT         | BDTV-390019         | No Interference                      | <b>No Interference</b>                             |
| 13             | WIBW-TV     | TOPEKA KS         | 399.6           | TVDB          | BLCT-2399           | No Interference                      | <b>No Interference</b>                             |
| 13             | KERA-TV     | DALLAS TX         | 339.2           | PRTCT         | BLEDT-20031103ACR   | 0.00%                                | <b>0.00%</b>                                       |
| 13             | KERA-TV     | DALLAS TX         | 339.2           | TVDB          | BLET-19990419KE     | 0.00%                                | <b>0.00%</b>                                       |

COHEN, DIPPELL AND EVERIST, P.C.

TABLE II  
PREDICTED LONGLEY-RICE INTERFERENCE ANALYSIS  
VERSUS OTHER FACILITIES IN THE FINAL DTV TABLE OF ALLOTMENTS  
FOR THE DESIRED PETITION FOR RECONSIDERATION OPERATION OF  
KETA-DT, OKLAHOMA CITY, OKLAHOMA  
CHANNEL 13 26.4 KW ND ERP 465 METERS HAAT  
FROM EXISTING KETA-TV SITE  
OCTOBER 2007

| <u>Channel</u> | <u>Call</u> | <u>City/State</u> | <u>Dist(km)</u> | <u>Status</u> | <u>Results</u><br><u>No Baseline</u> | <u>Results</u><br><u>Above KETA-DT 7th R&amp;O</u> |
|----------------|-------------|-------------------|-----------------|---------------|--------------------------------------|--|
| 12             | KXII-DT     | SHERMAN TX        | 180.2           | 7th R&O       | 0.01%                                | 0.00%  |
| 13             | KUPK-DT     | GARDEN CITY KS    | 366.8           | 7th R&O       | 0.04%                                | -0.53%   |
| 13             | KFJX-DT     | PITTSBURG KS      | 311.2           | 7th R&O       | 0.41%                                | 0.00%  |
| 13             | WIBW-DT     | TOPEKA KS         | 404.9           | 7th R&O       | no interference                      | no interference                                    |