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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

REPLY COMMENTS OF  
DU TREIL, LUNDIN & RACKLEY, INC.  
IN THE MATTER OF  
1998 BIENNIAL REGULATORY REVIEW -  
STREAMLINING OF RADIO TECHNICAL RULES IN  
PARTS 73 AND 74 OF THE COMMISSION'S RULES  
MM DOCKET NO. 98-93

These Reply Comments are filed on behalf of the consulting electronics engineering firm of du Treil, Lundin & Rackley, Inc. ("DLR") in response to the Notice of Proposed Rule Making ("NPRM") in the above captioned proceeding.

PTP Contour Prediction Model

In light of the Comments filed in the above captioned proceeding, DLR conducted further study of the PTP Contour Prediction Model. DLR projected the service and interfering contours for several stations using the PTP model. We find that the PTP model produces anomalous results in a number of situations, particularly in the prediction of interfering contours.

We conducted studies using actual station facilities so that others could more easily test the results. As an example, the following station facilities were employed:

1. KKBT, Los Angeles-CA, Channel 222B, 43 kW, 887 m HAAT, 1787 m AMSL  
Coordinates: 34-13-36 / 118-03-57
2. KLIT, Avalon-CA, Channel 224A, 6 kW, 45 m HAAT, 172 m AMSL  
Coordinates: 33-20-23 / 118-19-09

**CASE 1**

For KKBT, the PTP model produced the following results along the 355° radial:

54 dBu service contour:	77.7 km
54 dBu interfering contour:	135.6 km
40 dBu interfering contour:	114.6 km

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As indicated above, the predicted 40 dBu contour is 21.0 km LESS than the 54 dBu interfering contour.

**CASE 2**

For KLIT, the PTP model produced the following results along the 0° radial:

40 dBu service contour:       70.9 km  
40 dBu interfering contour:   64.8 km

Now the 40 dBu contour is not normally employed for service predictions in FCC related situations. However, the above results, which show the predicted interfering contour at 6.1 km LESS than the service contour, clearly indicate a flaw in the propagation model.

Based on our studies, we do not believe that these are isolated findings. These findings clearly show that the PTP model is flawed at least for the purposes of projecting interfering contours, but possibly in the prediction of service contours as well.

DLR continues to support Commission efforts to adopt a suitable propagation model, or models, that could be used to supplement the conventional FCC prediction curves. However, the above results clearly demonstrate the perils of employing an untested propagation model.\*



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\* Considerable effort has been expended by the FCC's Office of Engineering Technology in developing the Longley-Rice propagation model for use in the context of analog and digital television prediction. The FCC OET has released OET Bulletin No. 69 outlining the use of the Longley-Rice model for television related purposes. It would seem logical to extend the extensive work in the television broadcasting service using the Longley-Rice model to the FM broadcasting service. Furthermore, the limited results of measurements of both service and interference relating to digital television have generally supported the Longley-Rice service and interference predictions made using the OET implementation of the Longley-Rice model.

**CERTIFICATE OF SERVICE**

I, Sue Cook, do hereby certify that I have caused to be served by mail, First Class postage prepaid, this 4<sup>th</sup> day of December 1998, copies of the foregoing "Comments" on the following persons:

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