Q. **PLEASE STATE YOUR NAME, EMPLOYER, AND BUSINESS ADDRESS**.

A. My name is Thomas L. Spinks. I am employed by the Washington Utilities and Transportation Commission. My business address is P.O. Box 47250, Olympia, Washington, 98504.

Q. **IN WHAT CAPACITY ARE YOU EMPLOYED?**

A. I am employed as a Telecommunications Industry Expert.

Q. **HAVE YOU PREPARED A STATEMENT OF YOUR QUALIFICATIONS?**

A. Yes. A summary of my education and experience is provided as Exhibit ___ (TLS-1).

Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. The purpose of my testimony is to present Staff's proposals for deaveraging the rates of U S WEST and GTE as directed by the Commission at paragraph 481 of the Seventeenth Supplemental Order in this docket. Staff is proposing deaveraged rates for unbundled loops and switching.

Q. **WHAT ARE STAFF'S PROPOSALS FOR DEAVERAGING LOOPS?**

A. Staff proposes to deaverage loops for U S WEST and GTE by establishing density zones based on the HAI cost model density zones. Staff also proposes that unbundled loops be offered on a distance-sensitive basis within density zones. The proposed density zones

and distance-sensitive rates for U S WEST and GTE are shown in Exhibits ____ (TLS-2) and ____ (TLS-3).

Q. **WHAT CRITERIA DID STAFF CONSIDER IN DEVELOPING ITS DEAVERAGING PROPOSALS?**

A. Proposals for deaveraging must meet the FCC requirement that states establish at least three deaveraged zones and that rates for elements be "structured consistently with the manner in which the costs of providing the element are incurred." (47 CFR § 51.507(a)). Also, deaveraging proposals should not confer any unfair competitive advantage or harm upon any carrier. Finally, the FCC noted in its August, 1996 interconnection order that commentors on geographic deaveraging generally agreed that rates should be geographically deaveraged where there are significant cost variations. (Order at ¶ 760). Based on these guidelines, Staff developed its proposals on the premise that costs should be deaveraged where significant cost differences exist between geographic areas and, to that end, that statistical tests should be used to identify the deaveraged zones.

Q. **HOW DOES STAFF PROPOSE TO DEAVERAGE LOOP COSTS?**

A. Loop costs are deaveraged using the following steps:

1. Identify the geographic areas having significant cost differences.
2. Assign exchanges to their density zones.
3. Assign cost estimates to each exchange and calculate loop costs for each density zone.

4. Calculate the statewide average loop cost and adjust it to equal the statewide average loop rate set by the Commission.

Q. **HOW WERE DENSITY ZONES ESTABLISHED FOR U S WEST AND GTE?**

A. Staff first examined the relationship between density and costs without reference to existing density zones used in either the HAI and BCPM cost models using the following procedure:

1. The exchanges are ranked by access line density and split into density groups of 0-50 lines per square mile, 50-100 lines per square mile, etc., subject to the group size also having sufficient observations to conduct a meaningful test.
2. A statistical test of differences between means is conducted with the null hypothesis being that there is no difference between the groups. If the hypothesis could not be rejected, the groups are combined. If the hypothesis is rejected and a significant difference in cost is identified, then a density zone is identified for the group.

The purpose of the testing is to see if unique geographic zones could be identified. After completing these tests, Staff determined that there was no one unique set of density zones that could be identified exclusive of any other set. For instance, the initial tests identified density zones of 0-100 and 100-200 lines per square mile, but subsequent tests with the same data also showed that significant differences existed if the zones were identified as 0-75 and 75-200 lines per square mile. Another potential issue was the question of which cost value to use in the "t" test: average total cost or average loop cost. The distinction is

more than an academic exercise because some density groupings are significantly different under one cost value but not the other. Since Staff could not determine a unique set of geographic areas where costs differed significantly, and even the choice of the cost value was subjective, Staff chose to use the pre-existing HAI model density zones as a starting point. In cases where there was no significant difference between HAI density zones, the zones were combined.

Q. **WHAT GEOGRAPHIC UNIT WAS USED FOR LOOP COST ESTIMATES?**

A. Costs can be calculated for purposes of geographic deaveraging at several levels including the census block group, wire center, and exchange levels. Staff chose the exchange level of cost for two reasons. First, offering unbundled network elements ("UNEs") at the exchange level is simpler to administer than offering UNEs at more disaggregated levels. Second, the state universal service fund ("USF") calculations are made at the exchange level. The USF plan developed by the Commission in Docket No. UT-980311 envisions portable funds that are calculated and made available at the exchange level.

Q. **HOW ARE DEAVERAGED LOOP COSTS ESTIMATED FOR EACH OF THE DENSITY ZONES?**

A. The Commission determined statewide average loop rates for GTE and U S WEST in Phases I and II of this proceeding. In order to calculate deaveraged loop rates on a density zone basis, disaggregated cost estimates must be used to calculate the density zone costs

and the estimates must then be reconciled with the statewide average loop rate. The proxy cost models produce disaggregated cost estimates by wire center or density zone. The Commission earlier indicated that cost models already a matter of record should be used to produce these cost estimates. Therefore, Staff chose the HAI model and output that Staff submitted in Docket No. UT-980311(a) because of our familiarity with, and availability of, the data. The choice of a model, however, does not appear to be crucial to the outcome of the deaveraging process. While the HAI and BCPM models produce different absolute cost estimates, in Staff's experience the relative cost estimates between wire centers in the models are fairly consistent between models. Since the disaggregated loop costs have to be reconciled back to the statewide average cost, relative cost differences between the cost models cannot change the ultimate rates in the density zones.

Using the HAI loop cost estimates, Staff first calculates a weighted loop cost for each exchange area. The exchange area costs are then assigned to their appropriate density zones. The exchange level costs in each density zone are weighted together to produce an average loop cost for each density zone. The density zone costs are then weighted together to create the statewide average loop cost based on the cost model output. The statewide average loop cost produced by this process must then be reconciled with the statewide average loop cost from the Seventeenth Supplemental Order in this proceeding. For example, the GTE HAI model statewide average loop cost is $18.27 per loop, per month. The statewide UNE loop price set by the Commission in the Seventeenth Supplemental Order in this docket for GTE is $23.94. Staff calculated a ratio of the two

cost estimates (1.31) and applied the ratio to the HAI loop costs in each density zone to produce the UNE loop rate for each density zone.

Q. **PLEASE EXPLAIN STAFF'S RECOMMENDATION FOR DISTANCE-SENSITIVE LOOP RATES?**

A. Distance-sensitive loop rates are economically rational because there is a higher cost to provide longer loops than shorter loops, and distance-sensitive prices capture this relationship. Sending rational price signals to buyers promotes competition and efficient choice of technology. Competition is enhanced when potential competitors may consider market entry in less dense areas of the state because loops in the core area of these rural areas are priced below the average cost for the area. For instance, an unbundled loop in locations like Northport, Springdale, or Pateros costs on average $42 per month. With distance-sensitive rates loops within a half-mile of the wire center would cost a competitor $10-20 per month. With distance-sensitive rates potential competitors will make efficient technology choices in determining whether to serve customers using leased UNEs, or by alternative technologies because leased loops at a particular location will reflect the cost of providing the loop to that location.

Q. **HOW DID STAFF CALCULATE THE DISTANCE-SENSITIVE RATES FOR U S WEST AND GTE?**

A. Staff calculated the distance-sensitive rates using the results from a regression equation where the average loop cost for wire centers is modeled as a function of wire center loop

density and loop length. The resulting equation is used to calculate rates in each density zone by setting the density variable at the average level for the zone and then varying the distance of the loop. The distance-sensitive rates are then weighted by the number of loops at each thousand-foot increment to calculate a density zone average rate. The density zone average rate is then reconciled back to the statewide average rate set by the Commission earlier in this proceeding. The distance-sensitive rates shown in Exhibits ____ (TLS-2) and ____ (TLS-3) are intended as an example of how rates could vary with distance using 1000 foot distance increments for the first 12 kilofeet. Other more distance aggregated rate structures may also be appropriate, such as setting distance-sensitive increments in six kilofoot bands or using geo-political boundaries such as city limits. The more aggregated rate structures may be more appropriate if Staff's proposed rate structure creates undue administrative burdens and cost. The regression results, diagnostics, loop distributions, and cost estimates are all included in Staff's workpapers.

Q. **IS IT FEASIBLE FOR U S WEST AND GTE TO PROVIDE UNBUNDLED LOOPS ON A DISTANCE-SENSITIVE BASIS?**

A. Yes. To identify individual loop distance, a company needs to know how far the customer is from the wire center. One way of estimating that distance is to be able to associate each customer with a census block and know how far each census block is from the customer's wire center. Data bases already exist which can locate a census block for a given address. In addition, the HAI and BCPM models use data that provide the distance from wire centers to the center of census blocks or census block groups. Hence,

reasonably accurate loop distances may be identifiable with minimal additional cost by using existing information already available to the companies.

Q. **HOW DOES STAFF PROPOSE TO DEAVERAGE SWITCHING COSTS?**

A. Staff proposes to deaverage switching costs in a manner similar to the methods used to deaverage loop costs. Deaveraged switching costs are estimated using the following steps:

1. Wire center switching costs are first sorted into the same density groups used for unbundled loops.
2. A test is made to determine whether the cost differences are statistically significant.
3. Where the cost differences are significant, a separate switching rate is established for the density zone. If cost differences are not significant, the density zones are combined.
4. The current tariffed local switching rates are deaveraged into the density zones using the same HAI model reconciliation process developed for unbundled loops.

Staff's data and calculations are included in the workpapers.

Q. **DOES THIS COMPLETE YOUR TESTIMONY?**

A. Yes.