Exhibit TJT-5T
Docket No. UT-023003

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Review of: Unbundled Loop and Switching Rates; the Deaveraged Zone Rate Structure; and Unbundled Network Elements, Transport, And Termination	Docket No. UT-023003

SUPPLEMENTAL REPLY TESTIMONY OF TIMOTHY J. TARDIFF ON BEHALF OF VERIZON NORTHWEST INC.

June 18, 2004

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

A. My name is Timothy J. Tardiff. I am a Vice President at National Economic Research Associates ("NERA"), 200 Clarendon Street, 35th Floor, Boston, MA 02116.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS PROCEEDING?

A. Yes. I filed Reply Testimony on April 26, 2004, and Rebuttal Testimony on May 12, 2004.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL REPLY TESTIMONY?

A. My Supplemental Reply Testimony updates the testimony I have previously filed on behalf of Verizon Northwest Inc. ("Verizon NW") and addresses the numerous flaws associated with the revised version of HM 5.3 submitted by AT&T Communications of the Pacific Northwest, Inc. ("AT&T") and WorldCom, Inc. (d.b.a. "MCI") (collectively, "AT&T/MCI") during the June 4, 2004 evidentiary hearings in this proceeding. Per the Commission's instructions, I will refer to latest iteration of AT&T/MCI's cost model as "HM 5.3 Revised."[1]

[1] Before the Washington Utilities and Transportation Commission, Docket No. UT-023003, *Hearing Transcript* (June 4, 2004) at p. 1484.

Q. PLEASE DESCRIBE THE CHANGES MADE TO HM 5.3 REVISED.

A. HM 5.3 Revised purports to correct an admitted error in AT&T/MCI's previous cost model filing. While the previous version of HM 5.3 erroneously applied the strand distance adjustment to distribution loop lengths that accounted for drop distances, HM 5.3 Revised does not account for drop lengths when utilizing the strand distance adjustment.[2] The effect of this change is to increase the strand distance target to which initial distribution distances are normalized (e.g., the "backbone" and "branch" cable lengths).[3] While the change removes an inconsistency between the way in which TNS goecoded customer locations and how the Model used that information in estimating distribution plant requirements (i.e., because the geocoded customer locations are not set back from the street, the strand distance multiplier naturally should not account for drop lengths), AT&T/MCI's modification does not remedy any of the fundamental flaws in AT&T/MCI's cost model -- HM 5.3 Revised's representation of outside plant facilities continues to be highly inaccurate and produces cost estimates that are far below the economic costs that Verizon NW incurs when providing UNEs.

[2] Specifically, AT&T/MCI replaced the values in cells AV20 to AV29 of the "LCFactors" worksheet of the distribution module from positive values (purportedly representing geocoding success rates from the TNS data used in the previous version of HM 5.3) to zero.

[3] In previous versions of the HAI Model, TNS purportedly geocoded cluster locations 50 feet back from roads and the model accordingly reduced the strand distance TNS reported so that it would correspond to the distribution plant that is located on roads. Because TNS did not use the 50-foot setback in preparing data for the current version, it would be inconsistent with the Model's logic to remove any distance associated with drop cables.

Q. WHAT FLAWS ARE STILL RESIDENT IN HM 5.3 REVISED?

A. As I discussed in my Reply and Rebuttal Testimonies, and Mr. Dippon discusses in greater detail in his Supplemental Reply Testimony, a fundamental problem with HM 5.3 -- revised or not -- is the manner in which it models outside plant. HM 5.3 attempts to approximate customer locations and the cable necessary to serve them through the use of overly simplistic "backbone" and "branch" cable grills. The Model then expands or shrinks these grills to match some pre-determined measure supplied by TNS, the third-party engaged by AT&T/MCI. While AT&T/MCI's most recent modification may more properly align the Model with the cluster data it uses as an input, this change does not -- and, indeed, cannot -- solve the inherent inaccuracies in the clustering process and the Model's loop design algorithms themselves. In particular, HM 5.3 Revised still presents the untested and unevaluated theory that "bigger is better" when designing the components of a telecommunications network, which in turn is depicted as a highly abstract collection of "backbone" and "branch" cable distribution areas. As a result, while a large number of the specific numbers I reported in my Reply Testimony have changed, my overall conclusion -- that HM 5.3 is fundamentally flawed and should not be used to estimate Verizon NW's forward-looking costs of providing UNEs -- remains the same. For example, HM 5.3 Revised still produces a loop cost that is less than 40 percent of this Commission's current rate, and

total network investments that are less than 30 percent of what it would cost Verizon NW to replace its current network.

Q. WHAT SIGNIFICANCE SHOULD THIS COMMISSION GIVE TO THE FACT THAT HM 5.3 REVISED PRODUCES GREATER OUTSIDE PLANT DISTANCES?

A. Very little, when one considers the numerous flaws described in the Reply Testimonies of Messrs. Dippon, Murphy, Richter, and myself -- flaws that have not been remedied by AT&T/MCI's most recent changes. As I described in my Reply Testimony,[4] the total route distances produced by a model are not dispositive. Rather, the mix of components (e.g., the size and locations of SAIs and copper cables, whether those cables are underground or on poles, etc.) produce important differences in costs. And, in addition to total route distances, the relative distribution of route distances across geographic areas (e.g., does a model place a disproportionate amount of route miles in low-density areas) is important. As such, the fact that a cost model happens to produce more total route miles than another says nothing about that model's overall accuracy or reliability, and in no way indicates that it somehow produces more realistic and accurate UNE cost estimates.

[4] Before the Washington Utilities and Transportation Commission, Docket No. UT-023003, *Reply Testimony of Dr. Timothy J. Tardiff on behalf of Verizon Northwest Inc.* (April 26, 2004) at p. 24. Indeed, Dr. Mercer agreed that the specific equipment represented along outside plant routes was very important in determining costs. Before the Washington Utilities and Transportation Commission, Docket No. UT-023003, *Reply Testimony of Dr. Robert A. Mercer on behalf of AT&T Communications of the Pacific Northwest, Inc. and WorldCom, Inc.* (May 12, 2004) at p. 13.

Q. HOW DOES HM 5.3 REVISED PERFORM WITH RESPECT TO THE LOOP LENGTH BENCHMARK THIS COMMISSION HAS PREVIOUSLY USED?

A. HM 5.3 Revised's loop lengths are less accurate than what I previously reported. For example, while my Reply Testimony reported an average absolute deviation of 57 percent for HM 5.3 (compared to 15 percent for VzLoop),[5] the corresponding deviation for HM 5.3 Revised has increased to 61 percent.[6]

Similarly, as Mr. Dippon and Mr. Murphy describe in their Supplemental Reply Testimonies, HM 5.3 Revised's increase in distribution distances has exacerbated the Model's tendency to produce copper loop lengths in excess of the 18,000-foot design standard to which the Model purportedly adheres.[7] And as Mr. Dippon demonstrates, the problems associated with HM 5.3 Revised's excessively long loops are exacerbated by the Model's representation of customer locations further from an SAI than the maximum loop length produced by the Model allows, thereby making it

[5] Before the Washington Utilities and Transportation Commission, Docket No. UT-023003, *Reply Testimony of Dr. Timothy J. Tardiff on Behalf of Verizon Northwest Inc.* (April 26, 2004) p. 97.

[6] The average (over wire centers) ratio of HM 5.3 loop lengths to actual loop lengths increased from 1.49 to 1.56 (compared to an average of 1.00 for VzLoop). And the precision of that average has not improved; the standard deviation remains at 0.97 (compared to the much more precise standard deviation of 0.25 for VzLoop).

[7] This can be seen by interrupting an HM 5.3 run at the point at which the distribution module has been populated, and then adding the "backbone" and "branch" cable distances. (For clusters served by fiber feeder (where excessive copper lengths can occur) the sum of Columns T and W of the "calculations" worksheet is the maximum copper distance.) One can readily observe that the number of clusters that exceed the design threshold has increased.

impossible to serve many of the customer locations modeled by HM 5.3 Revised.

Q. DOES THE SUBMISSION OF HM 5.3 REVISED ALTER YOUR PRE-FILED REPLY TESTIMONY?

A. Yes. Although my overall conclusions have not changed -- HM 5.3 Revised remains inherently flawed and incapable of producing accurate estimates of Verizon NW's forward-looking costs of providing UNEs -- a number of statements and most of the numbers derived from HM 5.3 have changed due to AT&T/MCI's submission of HM 5.3 Revised. In addition, Map 1 of my Rebuttal Testimony, which Mr. Dippon initially produced in his Reply Testimony, has changed. My updated Reply Testimony and Rebuttal Testimony are attached hereto as Exhibits TJT-6T and TJT-7T.

Q. DOES THE SUBMISSION OF HM 5.3 REVISED CHANGE YOUR RECOMMENDATION TO THIS COMMISSION?

A. No. HM 5.3 continues to produce estimates of UNE costs well below Verizon NW's economic costs and falls short on validation tests, such as this Commission's loop length comparison standard. Accordingly, the Commission should not rely upon HM 5.3, to any extent, to establish Verizon NW's UNE rates.

Q. DOES THIS COMPLETE YOUR SUPPLEMENTAL REPLY TESTIMONY?

A. Yes.