Exhibit ___ (RC-T)
Docket No. UT-960369
Witness: Richard Cabe, Ph.D.

BEFORE THE WASHINGTON

UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Price Proceeding For Interconnection, Unbundled Elements, Transport and Termination, and Resale	)	DOCKET NO. UT-960369
In the Matter of the Pricing Proceeding For Interconnection, Unbundled Elements, Transport and Termination, and Resale for U S WEST COMMUNICATIONS, INC.	)	DOCKET NO. UT-960370
In the Matter of the Price Proceeding For Interconnection, Unbundled Elements, Transport and Termination, and Resale for GTE NORTHWEST INCORPORATED	)	DOCKET NO. UT-960371

REBUTTAL TESTIMONY OF RICHARD CABE, Ph.D

On behalf of

MCI WORLDCOM, INC.

Exhibit ___ (DNP-T)
Docket No. UT-991991
Witness: David N.Porter

February 7, 2000

I. Introduction

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Richard Cabe and my business address is 221 I St., Salida, Colorado.

Q. ARE YOU THE SAME RICHARD CABE WHO FILED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. MCI WorldCom asked me to examine the proposals now before the Commission for geographic deaveraging of Unbundled Network Element (UNE) rates and to make a recommendation to the Commission as to which proposal best serves the public interest at this time. I've examined the proposals, as modified in reply testimony, and I recommend that the Commission adopt the three zone deaveraging proposal set out in the testimony of Douglas Denney on behalf of AT&T.

The remainder of my testimony discusses the reasoning behind this recommendation.

II. Wire Centers, Exchanges, and Communities of Interest

Q. PLEASE DISCUSS WHETHER ZONES FOR DEAVERAGING RATES SHOULD BE BASED ON WIRE CENTERS OR SOME OTHER BASIC LEVEL OF AGGREGATION.

A. The level of detail at which loop cost information is generally available in proxy cost models is the wire center. AT&T's proposal assigns wire centers directly to zones based strictly on the wire center's cost characteristic. Staff's proposal aggregates wire centers into exchanges before making direct assignments to zones. U S West aggregates much further, to the level of 'community of interest'[1] before making cost-based assignments to zones.

Application of any criterion other than cost will diminish the precision with which resulting zones reflect variations in cost. Membership in exchanges or communities of interest are criteria other than cost, so, insofar as these criteria suggest zone assignments which differ from the assignments suggested by cost considerations, resulting zones will less accurately reflect cost variations among wire centers.

Exchanges consist of either a single wire center or a group of wire centers, so the question is really whether the different wire centers of a single exchange should be kept together in their assignment to a zone. I believe that they should not, and that zones should therefore be developed as aggregates of wire centers

[1] Responsive Direct Testimony of Jerrold L. Thompson, page 9.

without first aggregating wire centers into exchanges. In situations where costs vary significantly between wire centers in a single exchange a zone pricing plan will more closely reflect cost if the wire centers are assigned to different zones.

Q. WHAT IS THE EFFECT OF AGGREGATING WIRE CENTERS BY REFERENCE TO CHARACTERISTICS OTHER THAN COST?

A. U S West's community of interest notion[2] is such a high level of aggregation, before cost considerations are even introduced, that this approach would severely compromise the purpose of cost-based deaveraging. To see the effect of aggregation of wire centers on criteria other than cost, imagine assigning wire centers to rate zones completely at random, then calculating the weighted average cost per line in each zone. Such a procedure would be expected to produce rate zones with approximately the same price; differences in price among the zones would undoubtedly be introduced by accident of random assignment. The three zones could then be ordered from low price to high price and offered as a plan for geographic deaveraging. However, such a plan would in no way reflect geographic variations in cost as required by geographic deaveraging intended to serve the purposes now before this Commission. U S West's procedure doesn't go as far as aggregating all the way to rate zones without regard to cost, but aggregating to the level of community of interest before considering cost

[2] Responsive Direct Testimony of Jerrold L. Thompson, pages 8 & 9.

characteristics has much of the same effect.

Q. IS THERE A REASON TO USE NON-COST-BASED AGGREGATION TO THE LEVEL OF 'COMMUNITY OF INTEREST' RATHER THAN RELYING ON COST-BASED CRITERIA FOR AGGREGATION?

A. No. As indicated above, any aggregation of wire centers on criteria other than cost diminishes the extent to which rates accurately reflect cost. U S West argues that wholesale rates should reflect community of interest because otherwise retail rates wouldn't reflect community of interest, and that would be bad. However, both steps in this logic should be examined. First, retail rates will only follow wholesale rates when competition using UNE loops develops. Yet, all of the zone based rates U S West proposes in this proceeding will lead to increases in UNE loop rates over existing rates - not a change likely to greatly accelerate the rate of development of UNE based competition[3]. Thus, it is not at all clear that retail prices will follow wholesale prices quickly or closely. Further, if UNE based competition ever develops to the point that ILECs seek to lower retail prices in some areas, they will do so in a different environment than we see today. If competition develops to the point that ILECs seek rate decreases, consumers will be aware of these competitive forces and will be much less likely to seek a regulatory explanation of why prices are going down in some areas and not in

[3] See Rebuttal Testimony of Douglas Denney, page 15, lines 1 - 6, and the modification of staff's proposal in the Responsive Testimony of Thomas L. Spinks.

others. Consumers recognize that neighbors across a street sometimes fall into different taxing jurisdictions and pay different rates. There are places where neighbors across a street are served by different telephone companies, and consequently pay different rates. Such discontinuities are inevitable in any plan, and do not pose a problem that justifies departure from a cost based delineation of zones for deaveraging.

III. Aggregation of Wire Centers into Rate Zones

Q. ONCE THE WIRE CENTER IS CHOSEN AS THE BASIC UNIT THAT WILL BE AGGREGATED INTO ZONES, IS THERE A 'SCIENTIFIC' METHOD FOR DELINEATING ZONES?

A. No. Whether the basic unit chosen is the wire center, exchange, or community of interest, aggregation of these smaller units into zones is inherently a matter of judgement. While statistical tools can be used as aids, it should be clear that the statistical tools rely on criteria chosen by the analyst. For example, the zones determined by Mr. Spinks application of t-tests depend, first, on the initial groupings of data to which the t-tests are applied and, second, on the level of

confidence which the analyst must choose in applying the tests. The analyst's judgement is inherent in absolutely any method of delineating zones. The correctness of the zones delineated in any proposal is determined by the extent to which the resulting deaveraging of rates accomplishes the intended objective.

Q. WHAT OBJECTIVES SHOULD INFORM THE ANALYST'S JUDGEMENT IN DELINEATING ZONES?

A. The purpose of the whole deaveraging exercise is to facilitate the development of efficient competition; this is the goal that should inform the development of zones. The FCC was concerned that "where averaging covers high and low cost areas, it could distort competitors' decisions whether to lease unbundled elements or build their own facilities". [4] This concern about distorting the development of competition is most urgent in high density areas where competition is likely to develop soonest, and particularly where CLECs are most likely to consider the alternative of building their own facilities. For this reason zones should be delineated in such a way as to accurately reflect cost variation, especially at the lower cost, higher density end of the spectrum.

Q. HOW WELL DO THE PROPOSALS ACCOMPLISH THIS OBJECTIVE?

A. It appears that the proposals of U S West and GTE are calculated to avoid accomplishment of this objective. I've already discussed the consequence of U S

[4] First Report and Order, CC Docket 96-98, released August 8, 1996, ¶758

West's aggregation to the community of interest level before even considering cost characteristics - it results in very little significant deaveraging. GTE's most recent proposal[5] accomplishes the strategy of "minimalist deaveraging"[6] by extending the low cost zone so far as to include 76% of lines in that zone, dividing the remaining 24% of lines into two other zones. This approach paints the high density area with a very broad brush, and saves its detail for the low density area.

Recall, however, that the whole point of this exercise in deaveraging is to facilitate the development of efficient competition. In particular, the Commission should be concerned to give CLECs price signals that will prevent them from making the wrong decisions between building new facilities and purchasing UNEs. The areas in which that decision is most likely to be distorted by highly averaged UNE loop prices are the high density areas - precisely the areas that GTE proposes to lump together into a very large aggregate for rate averaging purposes. Mr. Tucek's protestations about breaks in points on a graph are entirely irrelevant. As discussed above, there are innumerable plausible methods for delineating zones, and none of these methods can claim the imprimatur of correctness. A 'correct' delineation of zones is one which serves the public interest by facilitating

[5] Tucek Responsive Direct Testimony, page 25, line 17. GTE's earlier methodology, with the lowest rate in the middle zone obviously doesn't reflect variations in cost.

[6] "If however, the Commission decides it must deaverage UNEs now, without correspondingly deaveraging and rebalancing retail rates to remove the implicit Universal Service support, then *GTE proposes a minimal level of deaveraged wholesale rates* to avoid further distortions in the market." Dye Direct, page 17, line 3, emphasis supplied.

the efficient development of competition. Both ILEC proposals would accomplish very little deaveraging where it matters most.

IV. Distance Sensitivity of Loop Rates

Q. PLEASE DISCUSS STAFF'S PROPOSAL REGARDING DISTANCE SENSITIVITY.

A. Staff presents exhibits which "are intended as an example of how rates could vary with distance." (Spinks direct page 7, line 7) It is undeniable that cost varies with loop length. While I believe that distance sensitivity may be appropriate at some time, there is no urgent reason to undertake that radical change in pricing at this time, and there is good reason to wait. While staff's example represents a valiant first attempt at a complex task, it requires further study and refinement before implementation.

Q. WHAT ISSUES REMAIN FOR STUDY AND REFINEMENT BEFORE DISTANCE SENSITIVE UNE LOOP RATES CAN BE IMPLEMENTED?

A. U S West and GTE raise implementation issues related to incorporating distance sensitivity into their Operations Support Systems (OSS). These changes would also have significant impacts on CLECs, which probably can't be evaluated in the absence of a proposal that gives greater detail than is contained in staff's example. Staff's initial statistical analysis of the relationship between cost and loop length

was sufficient to develop an example that opens discussion of distance sensitive loop rates. That analysis did the best job possible with the data and methods at hand. With additional time for study that estimate could be refined by seeking additional data or adopting more complicated statistical procedures. At this time, given the uncertainty regarding the difficulties of implementing Staff's proposal, and without a compelling reason to create more than three geographically deaveraged rate zones, I recommend that the Commission defer consideration of distance-sensitive loop rates until competition has developed further.

Q. IN THE TESTIMONY OF PAGE MONTGOMERY, AN ALTERNATIVE TO INCORPORATING DISTANCE SENSITIVITY IN ILEC OSS IS PROPOSED. DO YOU BELIEVE THAT MR. MONTGOMERY'S MODIFICATION OF STAFF'S EXAMPLE ELIMINATES THE NEED FOR FURTHER STUDY AND REFINEMENT?

A. No, I don't. Mr. Montgomery proposes to allow CLECs to calculate an offset from the ILEC invoice to introduce distance sensitivity into UNE loop rates. The ILEC could then audit the CLEC calculation of the offset. While I believe that the Commission should be very attentive to any proposal that would reduce the CLECs' dependence on ILEC OSS, this proposal makes a fundamental change in the industry's billing practice, and I don't believe that it should be adopted without further evaluation. CLECs will incur additional administrative costs to

implement Mr. Montgomery's proposal, just as they would if they were pressed into auditing a more complex ILEC bill for UNE loops.

Q. DO YOU HAVE OTHER CONCERNS WITH REGARD TO MR. MONTGOMERY'S PROPOSAL?

A. Yes, I do. Mr. Montgomery's proposal weakens the connection between rates and costs relative to the staff example on which it was based. This is because Mr. Montgomery's proposal rests on a mismatch between two measures of loop length: the length of the loop along the route it follows from the wire center to the customer, and the distance as the crow flies between a wire center and customer location. Because Mr. Montgomery used Staff's proposal as his starting point, he relies on staff's estimate of the relationship between loop length and cost, which is based on loop length in route feet. Yet he proposes a rate structure based on distance from the wire center 'as the crow flies'. This results in a mismatch that distorts the relationship between loop length and cost.

Q. WHAT PROBLEMS ARE CREATED BY THE MISMATCH BETWEEN THE LOOP LENGTH MEASURE IN MR. MONTGOMERY'S PROPOSAL AND THE UNDERLYING ANALYSIS ON WHICH THE PROPOSAL IS BASED?

A. The mismatch weakens the connection between rates and costs in two separate ways because staff's analysis was based on route length in two ways. Staff relied

on a route length measure, first, in developing the relationship between loop length and cost, and second, in assigning numbers of loops to distance bands. Since Mr. Montgomery's proposal relies exclusively on distance as the crow flies, it conflicts with both of these uses of route length in staff's analysis. The first mismatch between distance measures is probably less important than the second, but there is no urgency which would argue for proceeding without fixing the problem.[7]

The second mismatch arises from the need to ensure that the weighted average of distance band prices in a zone is equal to the zone price. This averaging process requires accurate numbers of loops in each distance band to use as weights. Thus, using an 'as the crow flies' distance to delineate distance bands requires knowledge of the number of loops in each such distance band. Lack of this knowledge will make it impossible to develop distance sensitive rates which average up to the Commission's previously determined average loop cost.

Q. DOES MR. MONTGOMERY'S PROPOSAL RAISE OTHER CONCERNS?

A. Yes, it raises two additional concerns. First, Mr. Montgomery's proposal violates the FCC's directive to establish a minimum of three zones. For those CLECs who

[7] Introducing some distance sensitivity into rates which formerly were averaged over loop length is probably a step in the direction of more accurately reflecting costs, even if the relationship between cost and loop length is a rough one. This judgement rests, in part, on the fact that any distance band prices based on that relationship must be adjusted so that they average up to the Commission's previously determined average loop cost.

do not elect distance sensitive rates, his plan establishes only two rate zones. Second, Mr. Montgomery requires CLECs to make a permanent, irrevocable election to pay distance sensitive rates or rates deaveraged into two zones. It is not clear what purpose such a permanent election would serve, but I don't believe such a measure is reasonable at the present stage of development of competition in this market[8]. The nature of competition in this market is very likely to change over the next several years, and it would surely not serve the public interest to constrain competitive interactions by tying CLECs to an election which must be made in the infancy of competition in the market.

In particular, this election will have very different effects on CLECs who intend to offer service to the broad range of customers as distinguished from CLECs who intend to target offerings to customers on short loops. CLECs with an 'untargeted' offering may prefer the lower administrative costs of distance averaged rates. CLECs offering service targeted to customers on short loops could prefer distance sensitive rates. The most dramatic case is a data CLEC that only offers service on loops 3000 route feet or less. Such a CLEC will always get the lowest rate

[8] Mr. Montgomery mentions simplification of deaveraging and adverse selection. I don't believe that operating two different deaveraging plans simultaneously can be regarded as a simplification. Adverse selection occurs when two parties to a contract have different information and the party with the poorer information is induced to enter into a contractual arrangement that would not have been acceptable if information had been symmetric before contracting. In the present instance the Commission is going to determine the terms of the contract at the conclusion of this proceeding. While ILECs may have poorer information about a new CLEC's business strategy and the extent to which offerings will be targeted to shorter or longer loops, the terms of the contract are not subject to negotiation - the Commission will have already determined the prices - therefore no adverse selection problem arises.

because it only serves the shortest loops. Such a CLEC further benefits under Mr. Montgomery's grouping of staff's distance bands and 'as the crow flies' implementation. Such a CLEC doesn't incur the administrative costs of a complex rate structure because any customer whose loop is no more than 3000 route feet long will certainly be within 3000 feet of the wire center as the crow flies, so such a CLEC would only face a single price in each zone.

I'm not suggesting that self-selecting rate structures are always inappropriate[9], or that the development of competition should not benefit from CLECs using very different strategies. However, the irrevocable election proposed in Mr. Montgomery's testimony unnecessarily creates a 'barrier to mobility'[10] that cannot be regarded as serving the public interest.

Q. DO YOU BELIEVE THAT A NEED FOR RETAIL DEAVERAGING SHOULD STAND IN THE WAY OF WHOLESALE DEAVERAGING?

A. No. Wholesale deaveraging does not create an immediate need for retail deaveraging. It is only if wholesale deaveraging facilitates the development of competition that ILECs may be forced to seek reductions in prices in low cost areas. If competition doesn't develop there is no need for retail deaveraging. As discussed above, the rate changes now under consideration cannot be calculated to

[9] Commercial and industrial customers of electric service commonly choose among alternative rate structures.

[10] See R. Caves and M. Porter, "From Entry Barriers to Mobility Barriers", Quarterly Journal of Economics, May 1977 and subsequent literature.

greatly accelerate the development of competition. ILECs are free to propose price reductions whenever they experience competitive pressure, whether from CLECs using their own facilities or from CLECs using UNEs.[11] Any price reductions that ILECs may find desirable should be proposed at the ILEC's initiative. The Commission should certainly not feel obliged to solve a problem that hasn't yet materialized.

V. Conclusion

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. I recommend that the Commission adopt the deaveraging proposal contained in the testimony of AT&T witness Douglas Denney. It is the best proposal to further the objective of fostering the development of efficient competition because it reaches a reasonable delineation of zones based strictly on cost differences among areas served. If the Commission is interested in distance sensitive loop rates, I believe that further study should be undertaken before attempting to implement the concept. If, contrary to my recommendation, the Commission considers

[11] I would urge the Commission to ensure that price reductions are extended to all customers similarly situated in terms of cost of service rather than in a manner that discriminates to the benefit of only those customers with competitive alternatives. Further, price increases are a different matter, and shouldn't be allowed merely to make a competitive price decrease 'revenue neutral', or in the name of 'rate rebalancing'. A company seeking rate increases should be required to show that such increases are just and reasonable.

adopting the proposal for optional distance sensitive loop rates contained in the testimony of William Page Montgomery, I urge the Commission not to require the permanent, irrevocable election contained in that proposal.