B. VERIZON'S CLAIMED INTEROFFICE DEDICATED TRANSPORT COSTS

1. CORRECTION OF PORTS PER NODE CALCULATION

Q. HOW DOES VERIZON PROVIDE FOR INTEROFFICE DEDICATED TRANSPORT IN ITS COST STUDY?

A. In conducting its purported forward-looking economic cost study, Verizon's cost model uses SONET rings to provide interoffice transport. SONET rings are a technology that allows for electrical (DS0, DS1, DS3, and STS1) and optical (OC-3 and OC-12) circuits to be easily added to or removed from a transport ring that provides protected (or redundant) transmission between nodes on the ring. SONET nodes are the point where dedicated transport circuits enter and exit the fiber optic ring. The terminal equipment at these SONET nodes convert electrical signals into optical signals, when needed, and multiplexes these signals up to the appropriate speed. SONET terminal equipment comes in several different bandwidths or "speeds." OC-48 SONET equipment is able to transmit signals at approximately 2448 megabits per second. This is the SONET ring transmission speed Verizon has used in its cost study for interoffice facility cost. The capacity of an OC-48 SONET depends on the type of SONET ring that has been deployed. Verizon's assumption that the capacity of an OC-48 SONET ring of 48 DS3s is reasonable, although the capacity can actually be greater.

Q. WHAT IS THE RELATIONSHIP BETWEEN THE OC-48 SONET RING USED BY VERIZON AND THE NUMBER OF NODES ON THE SONET RING?

A. For every DS3 that is placed on a SONET ring, two ports must be used for the DS3 circuit – one at each of the nodes over which dedicated transport circuit is

moving. In other words, if the capacity of an OC-48 SONET ring were determined to be 48 DS3s, then 96 ports would be needed for the 48 DS3 circuits operating between the nodes on that SONET ring. A key issue is the number of nodes on a SONET ring, but the general principle is that the larger the number of nodes on the ring serving these 96 ports, the lower the utilization of any one of those individual nodes. Each of the OC-48 SONET nodes has the ability to actually terminate 48 DS3 circuits. As such, as more nodes are added to each SONET ring, the potential utilization of the SONET nodes on those rings decreases.

Q. DOES VERIZON'S ASSUMPTION CONCERNING THE NUMBER OF NODES AND PORTS ON A SONET RING RESULT IN REASONABLE COSTS FOR DEDICATED TRANSPORT?

A. No. Verizon has significantly understated the number of ports that must be used at each SONET node to provide 48 DS3 circuits on the SONET ring.[101] As a result, Verizon has significantly overstated its investment per DS3, which results in substantially inflated dedicated interoffice transport costs.

---

[101] Verizon has also significantly understated the number of ports that must be used at each SONET node to provide 48 STS1 circuits and 16 OC-3 circuits.

Q. IN WHAT WAY HAS VERIZON SIGNIFICANTLY UNDERSTATED THE NUMBER OF PORTS USED ON ITS SONET RINGS IN ITS COST STUDY?

A. Verizon indicated in its interoffice dedicated transport cost study that the capacity of an OC-48 Bi-directional Line Switched Ring ("BLSR") is 48 DS3s.[102] In addition, Verizon asserts that it has on average 3.79 nodes per SONET ring.[103] As we explained above, to support 48 DS3s within a SONET ring, 96 ports must be available within the SONET nodes because each DS3 must have a port to enter the SONET ring at one node and a second port to depart the SONET ring at another node.[104] Consequently, given Verizon's assumptions of 48 DS3s per SONET ring and 3.79 nodes per SONET ring, each node must have on average

---

102 Workpaper Part D-2, VA PART D-2 IOF_MODEL Workbook, "Parameters" Spreadsheet, Row 373. The assumption of 48 DS3s per OC-48 BLSR is actually a conservative estimate. In reality, BLSR SONET rings can support more than 48 DS3s depending on the number of nodes on the ring and on the network engineering applied. The engineering rule is that no cross section between two nodes on the SONET ring can exceed 48 DS3s. This engineering rule, though, can permit more than 48 DS3s on the SONET ring as a whole. In short, while the remainder of this testimony will accept Verizon's assumption of 48 DS3s per OC-48 SONET ring (but account for this assumption correctly), the Commission should realize that this is a very conservative assumption from a cost standpoint.

103 Workpaper Part D-2, VA PART D-2 IOF Eng_SUP Workbook, Cell B14. In other proceedings (*e.g.*, New York and Massachusetts), Verizon has explicitly stated the average number of ports per ring in the interoffice dedicated transport cost studies. Verizon then multiplies this value of ports by the average distance between nodes to arrive at an average distance per ring. In Verizon's FCC filing, Verizon failed to state explicitly the average number of ports per ring or the average distance between nodes but instead embedded these two pieces of information in Cell B14. The 3.79 value, however, compares reasonably with the values found in New York (3.76 nodes per ring) and Massachusetts (3.83 nodes per ring).

104 The discussion of the number of nodes per ring is to the "logical" number of nodes that are on a particular SONET ring. Often there will be many more "physical" nodes on fiber rings where the fiber passes through the node, but SONET electronics are not placed on that node. The important factor for developing the number of ports per node is the number of "logical" nodes per ring that have electronics at those nodes.

approximately 26 ports.[105] Verizon's interoffice dedicated transport cost study, however, assumes only 16 ports per node, understating the number of required ports in its cost study by 38.5%.[106]

Q. HOW DID VERIZON MAKE ITS FLAWED CALCULATION OF INTEROFFICE DEDICATED TRANSPORT COSTS?

A. It appears that Verizon took the 48 DS3s per SONET ring and divided by three nodes (the more conservative of the whole number of nodes comprising the average of 3.79 nodes) and calculated 16 ports. Verizon's flawed methodological approach, however, failed to account for separate entry and exit ports on different nodes on the ring. Thus, if a DS3 uses 16 ports to enter the ring on one node it also needs 16 ports on a separate node to exit the ring for a total of 32 required ports.[107]

---

105 Mathematically, the 26-port figure is derived as follows: The 3.79 nodes per ring average indicates that Verizon's SONET rings generally have either 3 or 4 nodes per ring. For the 3-node rings, assuming 96 ports are available on the ring, there are on average 32 ports per node (96 ports / 3 nodes). For the 4-node rings, again assuming 96 ports on the ring, there are on average 24 ports per node (96 ports / 4 nodes). Given the average of 3.79 nodes per ring, the 3-node scenario would occur 21 percent of the time and the 4-node scenario 79 percent of the time. Using this distribution to determine the number of ports per node yields a total of 25.68 ports per node (32 * 0.21 + 24 * 0.79). We have rounded this value to 26 ports for our analysis.

106 Verizon uses a 75 percent fill factor in developing the cost for interoffice dedicated transport. This factor has not been altered in the restated cost study. However, Verizon's understatement of the capacity of the OC-48 is only compounded by this fill factor.

107 In another proceeding, Verizon has claimed that the forward-looking number of nodes per ring should be six, thereby supporting the 16 ports for node that Verizon was using. (*See* State of New York Public Service Commission, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case 98-C-1357, Workpaper Part C-1 – Section 1.0 to the Panel Testimony of Bell Atlantic – New York on Revised Costs and Rates for Unbundled Network Elements
(footnote continued)

Q. HOW DOES THIS FAILURE TO INCLUDE THE APPROPRIATE NUMBER OF PORTS PER NODE IMPACT VERIZON VA'S COST ANALYSIS?

A. The bulk of the cost associated with SONET rings is fixed based on physically establishing the SONET node. As a result, the vast majority of the investment is incurred whether one DS3 or 48 DS3s are in service at the particular SONET node. In its cost analysis, Verizon averages the total cost of the SONET ring across the number of ports that are available at the SONET node. Under Verizon's cost analysis, the lower the number of ports, the greater the cost; the greater the number of ports, the lower the cost. Thus, the average number of ports per node must be accurately determined so as to not misstate the average investment per port. By understating the number of ports per node by 38.5% for DS3s, Verizon has significantly overstated the investment per DS3 in its cost calculation. As a result, Verizon's claimed interoffice dedicated transport costs are similarly inflated.

---

and Related Wholesale Services, February 24, 2000, p. 6 (line 372). [Exhibit 323 in the New York UNE cost proceeding] This document shows that Verizon did not report that it was using six nodes per ring, but rather 3.79 nodes per ring.) Verizon's claim is simply not plausible. Given the growth in data traffic and related growth in transport necessary to support such traffic, the forward-looking impact on SONET network engineering is to realize *smaller* numbers of nodes per ring – not *larger* number of nodes per ring. It simply is not reasonable for Verizon to argue that the forward-looking number of nodes per ring is higher than approximately 3.79.

Some networks are migrating away from OC-48 transport to OC-192, effectively quadrupling the capacity of the transport network. In doing this, ILECs can increase the number of nodes per ring, but the unit cost per DS3 is significantly reduced as a result of the increased number of ports available in moving from OC-48 to an OC-192 network.

Q. IN YOUR RECALCULATION OF VERIZON'S INTEROFFICE DEDICATED TRANSPORT COSTS, DID YOU USE THE 3-NODE ASSUMPTION USED BY VERIZON?

A. No. This assumption is not consistent with 3.79 nodes per SONET ring average used by Verizon in its cost study. The 3.79 nodes per ring is an appropriate figure that should be used consistently in the Verizon cost study.

Q. DO THE INFLATED DS3 COST CLAIMS AFFECT VERIZON'S CLAIMED COSTS FOR OTHER SPEEDS OF DEDICATED TRANSPORT?

A. Yes, Verizon used the DS3 Dedicated Transport cost study as the basis for the DS1 and DS0 Dedicated Transport cost studies, and this flawed analysis likewise resulted in inflated cost claims for DS1 and DS0 dedicated transport. Consequently, the required correction to Verizon's DS3 Dedicated Transport cost study must also be made in these downstream cost studies. Verizon also made the same type of error in its STS-1 and OC3 Dedicated Transport cost studies. The correct number of ports per node for these speeds of dedicated transport using the approach detailed above for DS3s is 26 and nine, respectively for the STS-1 and OC3 Dedicated Transport cost studies.[108] Instead, Verizon incorrectly used 16 and six, respectively, which substantially inflated its claimed costs.

---

[108] An OC-48 SONET ring has a capacity of 48 STS-1 circuits and thus requires 96 STS-1 ports on the nodes of the SONET ring. An OC-48 SONET ring has a capacity of 16 OC-3 circuits and requires 32 OC-3 ports on the nodes of the SONET rings. An OC-48 SONET ring has a capacity of four OC-12 circuits and requires eight OC-12 ports on the nodes of the SONET rings. The remaining calculations to determine the number of ports per node for the SONET rings are identical to those outlined for the DS3 ports.

Q. COULD YOU PLEASE SUMMARIZE THE IMPACT OF THIS CORRECTION IN VERIZON'S COST STUDY FOR THE VARIOUS FORMS OF DEDICATED TRANSPORT?

A. Yes. The following table sets forth the average investment per port using Verizon's incorrect analysis and the restatement that we have done using appropriate assumptions of the numbers of required nodes and ports for each of the various forms of dedicated transport.[109] The average investment uses the same split between Fujitsu and Lucent equipment as set forth in Verizon's original cost study.

Port Type	Corrected Investment Level for Verizon's Cost Study	Verizon's Claimed Investment Level
OC-48 – OC-3 Ports	$8,828.59	$13,078.47
OC-48 – STS-1 Ports	$2,751.91	$4,351.86
OC-48 – DS3 Ports	$2,730.58	$4,317.20

2. CORRECTION TO PERMIT THE CLEC ELECTION OF DCS

Q. WHAT IS DCS?

A. DCS is an acronym for "Digital Cross-connection System." DCS allows for telecommunications providers to electronically cross connect different speeds of dedicated transport. For example, this piece of equipment allows the telecommunications carrier to take multiple DS1 dedicated transport circuits, entrance facilities, or loops and place them onto a DS3 circuit that can then be

[109] Unlike Verizon, which divided three nodes by the 48 DS3s, we used the more accurate 3.79 node average provided by Verizon.

carried to another location. This is also referred to as "grooming." Other technology (*e.g.*, ATM switching) is able to perform many of the same functions as DCS with a much lower level of investment. As such, DCS is normally and economically used when the electronic capability available with DCS can best be put to use (*e.g.*, when many changes are expected in the circuits connecting two locations or when the ability to re-provision circuits across different high speed transport is important). ILECs choose when and where to use DCS in dedicated transport circuits based on cost and performance trade-offs. CLECs should have the same opportunity to make this choice through unbundling.

Q. HOW HAS VERIZON COSTED AND PRICED DCS?

A. Verizon has averaged the cost of DCS into its prices for interoffice transport.

Q. IS THIS APPROPRIATE?

A. No. ILECs choose when and where to use DCS in dedicated transport circuits based on cost and performance trade-offs. With unbundling, CLECs should have the same opportunity to decide when and where to use DCS in dedicated transport circuits.

Q. DID THE FCC FIRST REPORT AND ORDER PROVIDE THAT ILECS SHOULD OFFER DEDICATED TRANSPORT AND DCS SEPARATELY?

A. Yes. The FCC in its *First Report and Order* specifically refers to the unbundling of DCS from dedicated transport:

> Accordingly, we conclude that the section 251(d)(2)(B) requires incumbent LECs to provide access to shared interoffice facilities and dedicated interoffice facilities between the above-identified points in incumbent LECs' networks, including facilities between incumbent LECs'

> end offices, new entrant's switching offices and LEC switching offices, and DCSs. We believe that access to these interoffice facilities will improve competitors' ability to design efficient network architecture, and in particular, to combine their own switching functionality with the incumbent LEC's unbundled loops.[110]

The FCC required that the new entrant be permitted to have access to DCS. Simply giving the CLEC access to the DCS equipment does not allow the ILEC to make its use mandatory and include it as an element in its cost study. The CLEC is free to elect not to purchase this element, as other technology affords other alternatives for accomplishing the same functionality as DCS, in a much less costly manner (*e.g.*, ATM switching).

Q. DOES VERIZON PROVIDE ACCESS TO DCS ON A SEPARATE BASIS ALREADY?

A. Yes. Verizon has a Special Access Tariff (Tariff No. 1) that provides access to DCS functionality known as IntelliMux (see § 7.2.12). This service permits "allows point-to-point rerouting of customer...facilities."[111] Moreover, this tariff states that the price for this DCS functionality is based on the type of port that is acquired – Voice Grade, DS1, or DS3.[112] As such, if the customer wants to connect DS3 Special Access Service to the DCS, the customer must purchase a DS3 network access port at the DCS. In short, this is the appropriate approach to

---

110 *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, FCC *First Report and Order*, FCC Docket No. 96-325, Released August 8, 1996, ¶ 447.

111 Verizon Special Access Tariff FCC No. 1, § 7.2.12(E).

112 Verizon Special Access Tariff FCC No. 1, § 7.2.12(F).

establish costs for interoffice dedicated transport for unbundling. Moreover, the FCC explicitly requires that the incumbents make DCS available in the same manner for unbundling that it makes it available for special access.[113]

Q. DO THE INTERCONNECTION AGREEMENTS BETWEEN AT&T AND VERIZON, AND WORLDCOM AND VERIZON GIVE THE CLECS THE OPTION OF PURCHASING DCS WITH DEDICATED TRANSPORT?

A. Yes. Attachment 2 § 10.3 of the agreement between AT&T and Verizon provides that dedicated transport includes DCS as an *option* where available. Similarly, Attachment 3, § 10.2.4 of the agreement between WorldCom subsidiary MCImetro Access Transmission Services, Inc. and Verizon requires Verizon to "offer DCS and multiplexing, both with and separately from Dedicated Transport."

Q. DOES THE NETWORK CONFIGURATION THAT VERIZON IS USING PERMIT IT TO SEPARATE DCS FROM THE DEDICATED TRANSPORT?

A. Yes. Based on the diagrams provided by Verizon with its cost study, Verizon always places DSX cross-connect points on each side of the DCS. As such, the dedicated transport, which appears at the DSX, can be readily separated from the DCS, which also appears at the DSX, so that the CLEC can either purchase dedicated transport with DCS (if DCS is available) or without DCS.

---

[113] FCC *First Report and Order*, FCC Docket No. 96-325, ¶ 444.

Q. HOW HAVE YOU RECALCULATED VERIZON'S COST STUDY TO CORRECT THIS ERROR?

A. We have stated the cost of DCS as a separate element. Effectively, we have taken Verizon's investments for DCS already included in its dedicated transport cost studies and separately developed the cost for this element based on the various port types available on DCS. We have made no underlying changes to Verizon's cost for DCS.

3. DEVELOPMENT OF MULTIPLEXING RATES

Q. DID VERIZON PROPOSE A RATE FOR MULTIPLEXING IN THIS PROCEEDING?

A. No.

Q. DID VERIZON PROVIDE UNDERLYING COSTS AND INVESTMENT DATA FROM WHICH RATES COULD BE GENERATED?

A. Yes. Verizon included the underlying equipment investment cost in its filing for Virginia. However, Verizon has not converted these equipment investment costs into proposed rates for Multiplexing.

Q. IS IT UNUSUAL THAT VERIZON DID NOT PROVIDE A COST FOR MULTIPLEXING?

A. Yes. In recent UNE cost proceedings in New York and in Massachusetts, Verizon provided costs for these elements in its cost studies and proposed rates for Multiplexing to those respective commissions.

Q. WHY ARE MULTIPLEXING RATES IMPORTANT?

A. Multiplexing enables the CLEC to take entrance facilities at lower transport speeds (*e.g.*,as DS1) and combine these together through unbundled access to

multiplexing to take advantage of higher speed interoffice dedicated transport. Without Multiplexing, CLECs will be severely limited in the manner in which they can utilize interoffice dedicated transport.

Q. HOW HAVE YOU APPROACHED VERIZON'S FAILURE TO PROVIDE MULTIPLEXING RATES?

A. Our restatement of Verizon's cost in this proceeding includes Multiplexing costs in two forms: DS1 to DS0 Multiplexing and DS3 to DS1 Multiplexing, as Verizon did in similar proceedings. We rely on the underlying equipment investment costs Verizon has proposed in this proceeding before the FCC in making this cost calculation. The details for how the calculations were made can be found in our supporting work papers.

4. CORRECTION TO TRANSPORT EQUIPMENT IN-PLACE FACTOR

Q. FIRST, WHAT IS AN IN-PLACE FACTOR?

A. In most instances, Verizon has determined the material investment for each of the elements in its cost study. However, it has not separately identified the installation and miscellaneous costs necessary to put the material investment operation – or "in-place." The in-place factor is intended to gross up the material investment to represent the total installed cost of telecommunications equipment.

Q. WHAT IS THE IN-PLACE FACTOR FOR TRANSPORT EQUIPMENT PROPOSED BY VERIZON?

A. Verizon has proposed an in-place factor for transmission equipment of 53.2% in Virginia.

Q. WHAT IS YOUR CONCERN WITH THE IN-PLACE FACTOR USED BY VERIZON?

A. First, Verizon has used an in-place factor that is not representative of TELRIC cost for this element. In our experience, the in-place cost for transmission equipment should be in the 30% range. Verizon has proposed an in-place factor for transmission equipment of 53.2% in Virginia, which is significantly higher than any cost-based in-place factor we have seen. Second, Verizon has not separately identified the installation and miscellaneous costs that go into its in-place factor. It is therefore impossible to verify Verizon's claimed costs.

Q. WHAT IN-PLACE FACTOR WOULD YOU RECOMMEND FOR VIRGINIA?

A. In the New York UNE cost proceeding, Verizon presented a transmission equipment in-place factor of 36.4%.[114] There is no reason to believe that installation costs in Virginia should be 46% greater than the 36.4% factor used in New York. Verizon uses the same equipment vendors for transport equipment in New York as in Virginia, so it is unlikely that such a large difference is supportable. In short, in light of the large difference between Verizon's in-place factor in Virginia as compared to New York, we would recommend that the Commission use the value which Verizon presented in the New York proceeding.

---

[114] State of New York Public Service Commission, *Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements*, Case 98-C-1357, Workpaper Part C-1 – Section 1.0 to the Panel Testimony of Bell Atlantic – New York on Revised Costs and Rates for Unbundled Network Elements and Related Wholesale Services, February 24, 2000, p. 3. Please note that this exhibit can also be found as Exhibit 323 in the New York UNE cost proceeding.

C. SUMMARY OF CORRECTIONS TO VERIZON'S INTEROFFICE DEDICATED TRANSPORT COST STUDY

Q. COULD YOU PLEASE SUMMARIZE THE INTEROFFICE DEDICATED TRANSPORT RATES THAT RESULT FROM YOUR CHANGES TO VERIZON'S COST STUDY?

A. Yes. The following table summarizes the proposed rates for interoffice dedicated transport that are derived from our restatement of Verizon's cost study based on the criticisms and corrections identified above. These modifications also incorporate the annual cost factors and overhead factors addressed earlier in this testimony.

Rate Element	AT&T Monthly Rate	Verizon Monthly Rate
DS0 Dedicated Transport (Fixed)	$20.23	NA
DS0 Dedicated Transport (Per Mile)	$0.29	NA
DS1 Dedicated Transport (Fixed)	$43.66	$54.76
DS1 Dedicated Transport (Per Mile)	$2.46	$3.91
DS3 Dedicated Transport (Fixed)[115]	$198.88	$499.44
DS3 Dedicated Transport (Per Mile)	$33.53	$59.11
STS-1 Dedicated Transport (Fixed)[116]	$200.24	$502.99
STS-1 Dedicated Transport (Per Mile)	$33.61	$59.11
OC-3 Dedicated Transport (Fixed)[117]	$584.64	$1,441.40
OC-3 Dedicated Transport (Per Mile)	$102.95	$178.07

[115] It is difficult to precisely compare the AT&T/WorldCom and Verizon proposed rates for dedicated transport in that Verizon has averaged DCS investment into its rates rather than allowing CLECs to elect this UNE if it wants to as does Verizon. Nonetheless, for DS3 dedicated transport, allowing CLECs to elect DCS accounts for 12.3% of the investment difference between AT&T/WorldCom and Verizon.

[116] For STS-1 dedicated transport, allowing CLECs to elect DCS accounts for 12.2% of the investment difference between AT&T/WorldCom and Verizon.

[117] For OC-3 dedicated transport, allowing CLECs to elect DCS accounts for 14.4% of the investment difference between AT&T/WorldCom and Verizon.

OC-12 Dedicated Transport (Fixed)	$2,578.58	$4,113.45
OC-12 Dedicated Transport (Per Mile)	$255.04	$390.84
Multiplexing DS1 to DS0 – Common	$167.56	N/A
Multiplexing DS1 to DS0 – Plug-In	$6.98	N/A
Multiplexing STS-1/DS3 to DS1	$259.36	N/A
Multiplexing STS-1/DS3 to DS1 – Plug-In	$9.26	N/A
DCS DS1 Port	$5.77	NA
DCS DS3 Port	$109.40	NA
DCS STS-1 Port	$109.40	NA
DCS OC-3 Port	$328.19	NA

D. VERIZON'S CLAIMED COMMON (SHARED) TRANSPORT COSTS

Q. WHAT IS THE RELATIONSHIP BETWEEN THE COST FOR COMMON TRANSPORT AND INTEROFFICE DEDICATED TRANSPORT?

A. Common transport is closely linked to the costs for interoffice dedicated transport. The trunks that are used to carry common transport are provisioned on dedicated transport circuits. As such, the underlying cost for dedicated transport directly relates to the costs that would be incorporated into the calculations for common transport. Of course, other issues also come into play with common transport in that the cost recovery for this element is not based on circuits, but on minutes. As such, the assumptions related to the number of minutes that will pass across a trunk provisioned over dedicated transport are critical factors in developing the cost for this element.

Q. WHAT CONCERN DO YOU HAVE WITH VERIZON'S COMMON TRANSPORT COST STUDY?

A. Verizon used as the underlying cost element for common transport the costs from the dedicated transport cost study for DS1 Dedicated Transport and STS-1 Dedicated Transport. Using these elements as the underlying cost for the

transport in common transport is appropriate, but Verizon's cost study for common transport costs must be corrected to account for the same errors as in the dedicated transport cost study.

Q. COULD YOU PLEASE SUMMARIZE THE RESULTING RATES FOR COMMON TRANSPORT BASED ON YOUR MODIFICATIONS TO VERIZON'S COST STUDY?

A. Yes. The resulting rate for common transport is $0.000060 per minute of use – fixed and $0.000001 per minute of use per mile. This rate also reflects adjustments to the annual cost factors and overhead factors that are addressed in other sections of this rebuttal testimony.

E. CONCLUSION

Q. PLEASE SUMMARIZE THIS PART OF YOUR TESTIMONY.

A. Verizon has significantly overstated its forward-looking economic costs for dedicated interoffice transport and common transport. For dedicated interoffice transport, Verizon's understated the capacity of the SONET rings, thereby significantly overstating the costs for the circuits riding those SONET rings; improperly included DCS on most dedicated transport circuits regardless of whether the CLEC elects this element or not; used an inflated installation factor for transport equipment that is significantly higher than even Verizon has previously suggested is reasonable; and failed to develop multiplexing cost for DS1 to DS0 and DS3 to DS1 multiplexing. Finally, Verizon's cost for common transport, which is based on its underlying dedicated transport cost study, must be revised to correct the errors in that underlying study.

VI. ACCESS TO OSS COSTS

A. INTRODUCTION AND SUMMARY OF THIS PORTION OF THE TESTIMONY

Q. WHAT IS THE PURPOSE OF THIS PORTION OF YOUR REBUTTAL TESTIMONY?

A. In this section, we will rebut Verizon's Panel Testimony on Unbundled Network Element and Interconnection Costs. For certain of the adjustments proposed herein, we rely on concurrently filed reply testimony of AT&T/WorldCom witnesses Mr. Lee and Mr. Hirschleifer.

B. VERIZON'S "ACCESS TO OSS" CHARGE IS NEITHER COMPETITIVELY NEUTRAL NOR BASED ON FORWARD-LOOKING COSTS.

Q. PLEASE SUMMARIZE THE MAJOR CONCLUSIONS THAT YOU HAVE REACHED BASED ON YOUR REVIEW OF VERIZON'S ACCESS TO OSS TESTIMONY AND THE ASSOCIATED COST STUDIES.

A. With respect to Verizon's access to OSS cost studies and pricing recommendations, we have reached the following major conclusions:

- The one-time development costs in Verizon's "access to OSS" study are caused by the transition to a competitive environment, not by new entrants' orders for UNEs. Therefore, it is inappropriate to recover these costs solely from new entrants.
- Because new entrants incur costs for their own portion of the electronic gateway between their operation and Verizon's OSS, the simplest competitively neutral mechanism for cost recovery is to require each company to bear its own costs for access to OSS.