EXHIBIT RVF-11T

BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of	**)**	
	)	**DOCKET NO. UT-033044**
QWEST CORPORATION	**)**	
	)	
To Initiate a Mass-Market Switching	**)**	
And Dedicated Transport Case	**)**	
Pursuant to the Triennial Review	**)**	
Order	**)**	

DIRECT TESTIMONY

OF

ROBERT V. FALCONE

ON BEHALF OF

AT&T COMMUNICATIONS OF THE PACIFIC NORTHWEST, INC., AT&T LOCAL SERVICES ON BEHALF OF TCG SEATTLE, AND TCG OREGON
(COLLECTIVELY "AT&T")

HOT CUT PROCESS

December 22, 2003

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME FOR THE RECORD.

A. My name is Robert V. Falcone.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am a self-employed telecommunications and management consultant retained by AT&T to assist with its efforts on the TRO hearings in the states.

Q. HAVE YOU OFFERED OTHER TESTIMONY IN THIS PROCEEDING?

A. Yes, I have testified on behalf of AT&T and TCG on network architecture issues. My work and educational experience are described in that testimony.

Q. WHAT ISSUES DOES THIS TESTIMONY ADDRESS?

A. This testimony describes the current hot cut process and other operational impairments that Competitive Local Exchange Carriers ("CLECs") would face if there were no unbundled switching available in Washington.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. First, I address the operational and economic barriers presented by the current hot cut process. This section of my testimony introduces the findings of the Federal Communications Commission ("FCC") in the Triennial Review Order ("TRO"). It summarizes the FCC's conclusion that CLECs are impaired without access to unbundled local switching as a result of economic and operational impairment, among other things, related to the hot cut process and it describes certain aspects of the FCC's directions to the Commission regarding the FCC's finding of impairment.

Second, I describe the specifics of the ILEC hot cut process and AT&T's experience with hot cuts as a CLEC. My testimony summarizes why AT&T has chosen the unbundled network element platform ("UNE-P") as its market entry strategy and describes specific concerns related to hot cuts.

Third, my testimony discusses the number of hot cuts to be expected and other new operational constraints that would arise if unbundled local switching were no longer available to CLECs, meaning that all customer conversions would require a hot cut loop migration. Further, my testimony illustrates why no manually-based process is capable of ensuring a seamless, low cost migration of loops that is equivalent to the ease with which customers are migrated using UNE-P today.

II. BACKGROUND: THE OPERATIONAL AND ECONOMIC BARRIERS PRESENTED BY THE CURRENT HOT CUT PROCESS

Q. WHAT IS A HOT CUT?

A. Whenever a customer seeks to move his or her local service from one switch-based carrier to another, the connection between the customer's loop and the original carrier's switch must be broken and a new connection must be established between that loop and the new carrier's switch. Because the customer's loop is lifted or "cut" while it is still in active service (*i.e.*, the loop is "hot"), the process used to transfer loops has become known as a "hot cut." The hot cut process involves two separate changes to the customer's service that must be coordinated to occur at approximately the same time: (1) the manual transfer of the customer's loop from one carrier's network to another's (the loop cut); and (2) the

porting of the customer's telephone number (including the timing of the associated software changes and disconnection of the original carrier's switch translations), so that inbound calls to the customer can be routed to the new carrier's switch using the customer's existing telephone number.

Q. DOES A HOT CUT CAUSE THE CUSTOMER TO LOSE SERVICE?

A. Yes. This occurs in two ways. The first is a complete loss of dial tone. From the time the customer's loop is disconnected from the Incumbent Local Exchange Carrier's ("ILEC's") switch until it is reconnected to the CLEC's switch, the customer has no dial tone and is completely out of service. Second, from the time the customer's loop is reconnected to the CLEC's switch until the customer's number is successfully ported to the CLEC's switch, the customer cannot receive any incoming calls. That is because, until the appropriate change message is received by the Number Portability Administration Center ("NPAC"), the NPAC database indicates that calls should be routed to the ILEC's switch. If calls are sent to the ILEC's switch after the customer's loop has been physically moved, they are unable to complete.

Q. HOW DID THE FCC ADDRESS THE ISSUE OF HOT CUTS?

A. In the TRO,[1] the FCC reviewed substantial data provided by both ILECs and CLECs and found, on a national basis, that competing carriers providing voice service to mass market customers are impaired without access to unbundled local circuit switching.[2] This finding was based in part on clear evidence regarding the economic and operational barriers caused by the hot cut process.[3] The FCC recognized that "whether a customer was previously being served by the competitive LEC using unbundled local switching (*i.e.*, using UNE-P), or by the incumbent itself, a hot cut must be performed [if unbundled local switching is no longer available]."[4] I will address the details of the FCC's impairment finding with respect to hot cuts later in my testimony.

III. OPERATIONAL AND ECONOMIC IMPACTS WHEN USING UNBUNDLED LOOPS

Q. HOW IS AT&T CURRENTLY SERVING MASS MARKET CUSTOMERS?

[1] *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Deployment of Wireline Services Offering Advanced Telecommunications Capability*, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, CC Docket Nos. 01-338, 96-98, 98-147, FCC 03-36 (Rel. Aug. 21, 2003)(hereinafter **"TRO"**).
[2] TRO ¶ 459.
[3] *Id*.; *see also* TRO at ¶ 473 ("Our national finding of impairment is based on the combined effect of all aspects of the hot cut process on competitors' ability to serve mass market voice customers.").
[4] *Id*. at ¶ 465.

A. AT&T is currently serving virtually all its mass market (residential and small business) customers using UNE-P.

Q. HAS AT&T USED METHODS OTHER THAN UNE-P TO PROVIDE SERVICE TO MASS MARKET CUSTOMERS?

A. Yes. AT&T has served a limited portion of the small business market using an unbundled loop ("UNE-L") from the ILEC with an AT&T-owned switch, which requires a hot cut process. Significant cost and operational issues that occurred even at these low volumes of hot cuts, however, caused AT&T to virtually eliminate UNE-L as a means of acquiring customers.

Q. DID AT&T EXPERIENCE THE HOT CUT IMPAIRMENTS FOUND BY THE FCC?

A. Yes. As confirmed by the FCC, AT&T's experience was that the hot cut process frequently led to provisioning delays and service outages that led to an untenable level of customer dissatisfaction. In particular, ILEC provisioning delays included substandard performance in returning timely firm order confirmations, failure to provide a reliable schedule for performing hot cuts, and failure to notify AT&T consistently and timely that customer loops had been transferred to AT&T, so that AT&T could complete the final steps necessary to ensure the customer could receive incoming calls.[5] Factors that contributed to customer service outages typically involve wiring errors caused by the manual work that is required

[5] Timely firm order confirmations are essential to communicate when the order is to be provisioned so that number porting activities can began and service migration can be confirmed with the customer. Late firm order confirmations also cause the customer's order to be delayed past the times originally requested by the customer.

on the ILECs cross connection frames. When a wiring error goes undetected by the technician who made it the customer experiences an extended outage. In addition, ILEC charges for hot cuts make facilities-based competition for the mass market uneconomic.

Q. GIVEN THESE PROBLEMS, DOES AT&T CONTINUE TO USE HOT CUTS?

A. AT&T has existing customers that it serves using its own switch and unbundled loops dating back to the time when AT&T was using UNE-L as a market entry strategy. When these customers wish to change their service by adding lines or migrating additional lines from the ILEC, AT&T will use UNE-L to satisfy this request. However, AT&T typically does not provide service to any new residential or small business customers using UNE-loops.

Q. HOW DOES THE HOT CUT PROCESS DIFFER FROM PROVIDING SERVICE USING UNE-P?

A. UNE-P is a simple process that is ordered and provisioned electronically. With UNE-P, there is no need to perform any physical work in the ILEC's central office or outside loop plant to migrate an existing ILEC customer to a CLEC that is providing service using UNE-P. The migration from ILEC-retail to CLEC-UNE-P service only requires the ILEC to make software changes. Thus, there is little chance for error and the customer does not have to lose service during the migration, because the service is being provided through the use of the ILEC's switch. This eliminates the need for a physical transfer of the customer's loop, as

well as the need to port the customer's telephone number to another switch. Consequently, CLECs offering service via UNE-P may almost always provide service to the customer very quickly.

A hot cut, in sharp contrast, is a complex, highly manual process. It requires significant coordination between both the ILEC and a CLEC. Both carriers must perform multiple tasks in the hot cut ordering and provisioning processes, and both parties must coordinate these operations in the proper, agreed-upon sequence. If the many steps of the hot cut process are not performed in that exact sequence -- and properly coordinated between both carriers -- and if the ILEC does not complete its downstream processes correctly and timely, the customer will experience a service outage that is much longer than the unavoidable outage associated with this process.

Q. PLEASE DESCRIBE THE ADDITIONAL STEPS OF MIGRATING A CUSTOMER FROM AN ILEC TO AT&T USING A HOT CUT AS OPPOSED TO THE UNE-P PROCESS.

A. When a CLEC uses its own switch to serve mass market local customers with a UNE-L architecture, the processes needed to change local carriers are much more complex, manual and costly than for UNE-P, requiring physical work to transfer the customer's loop from one carrier's switch to another's. For example, the CLEC must assign the customer to facilities in its switch and equipment; both the CLEC and the ILEC must conduct a series of number porting activities; and the ILEC must perform numerous manual provisioning and testing activities in its

central office and sometimes in the field. A summary of all the additional technical steps involved in a hot cut is contained in my **Exhibit RVF-12** attached to my testimony. Not only are there significantly more steps involved in a hot cut, but also those steps must be coordinated if a cut is to be successful in limiting the time the customer is out of service.

Q. DO THESE ADDITIONAL STEPS HAVE AN IMPACT ON CLECS?

A. Absolutely, they have an adverse impact on CLECs. First, these additional steps add time; UNE-P migrations occur much more quickly than UNE-L migrations. The order completion interval for a UNE-P migration typically run from the same day to less than 2 days. In sharp contrast, the order completion interval for UNE-L orders, that do not require fieldwork, is typically 5 days. Compounding this problem is the fact that in many instances a conversion of a customer using UNE-L will require fieldwork before that customer's line can be converted, while UNE-P migrations never require such work.[6]

Second, this multi-step, highly manual process introduces numerous opportunities for human error resulting in poor service quality. The greater the opportunity for error, the more likely the service migration date may be delayed or changed, which causes customer dissatisfaction with the CLEC. Moreover, introduction of errors also significantly increases the likelihood that the customer may either be completely out of service for an extended period or be unable to receive incoming

[6] Customers who are served by a loop on an integrated digital loop carrier (IDLC) system will need to have their lines moved to a non-IDLC facility before they are eligible for conversion to a UNE-loop.

calls; problems that will occur more frequently when trying to serve the mass market with such a highly manual process. Mass market customers will not accept significant delays or errors. As the FCC noted, "[m]ass market customers . . . have come to expect the ability to change local service providers in a seamless and rapid manner."[7] They "generally demand reliable, easy-to-operate service and trouble-free installation."[8] Moreover, when troubles occur, end-user customers blame the CLECs. The FCC further recognized that "[s]ervice disruptions also will influence customer perceptions of competitive LECs' ability to provide quality service, and thus affect competitive LECs' ability to attract customers."[9]

Third, these additional steps add significant cost. The non-recurring charge for a UNE-P order in Washington is only $ 0.27. In sharp contrast, the cost for a hot cut (coordinated installation without cooperative testing) in Washington is $ 59.81. Similarly, AT&T's internal costs for UNE-P are significantly less than UNE-L, because once the orders are submitted they are tracked electronically and generally do not require individual work. For UNE-L orders, however, AT&T bears significant operational and labor costs to prepare, track and implement its orders. These costs include the following work activities: (1) connecting facility assignments ("CFA") inventory management, (2) dial tone and conformance testing, (3) internal pre-cut and day of cut coordination with ILEC, and (4)

[7] TRO at ¶ 471.
[8] *Id*. at ¶ 467.
[9] *Id*. at ¶ 466.

separate systems and activities required to support number portability. In addition, if AT&T's customer wants the conversion completed during "non-business" hours (a reasonable request), AT&T must pay overtime for any involved ILEC personnel. And critically, AT&T will never recover these costs if AT&T loses the customer as a result of problems incurred during the hot cut itself, or in situations where the industry is experiencing rapid customer churn.

Q. CAN THE HOT CUT PROCESS SUSTAIN THE VOLUME OF CUTS NECESSARY TO ALLOW EFFECTIVE COMPETITION?

A. No. The failure and service restoration problems that occur at low volumes can only increase given: (1) the tremendous increase in the level of activity that will be required if unbundled local switching were not available and (2) the number of additional inexperienced people that will be necessary to work the hot cut process and to troubleshoot and repair the increased troubles that are likely to occur. Because the industry as a whole has absolutely no experience providing service to mass market customers using a hot cut process--or anything remotely comparable to it--it is impossible to accurately qualify the impact this process will have on service quality. We do know, however, that service quality is likely to decline, because any time a process requires human intervention and manual steps, there is greater opportunity for failures to occur. Moreover, the opportunity for failures increases disproportionately when rapid increases in volumes occur. For decades, all industries, including the telecommunications industry, have affirmatively sought out and implemented process improvements that reduce or eliminate

manual "touch points" to their processes. Attempting to serve the mass market using the manual hot cut process runs counter to that trend and can only set the industry back.

IV. THE FCC'S FINDINGS REGARDING THE CURRENT HOT CUT PROCESS

Q. WHAT DEFICIENCIES DID THE FCC FIND WITH THE CURRENT HOT CUT PROCESS?

A. The FCC made numerous findings regarding the inadequacy of the current hot cut process. These findings confirm the concerns AT&T has raised about hot cuts in the past and demonstrate why AT&T moved away from UNE-L hot cuts as a method to provide service to its customers.

First, the FCC recognized that deficiencies in the hot cut process are seen and felt by customers. It found that the problems and delays associated with hot cuts "prevent[ ] the competitive LEC from providing service in a way that mass market customers have come to expect."[10] This is a substantial problem because "competition is meant to benefit consumers, and not create obstacles for them."[11]

Second, the FCC recognized that CLECs are likely to lose customers as a result of these problems. "Service disruptions also will influence customer perceptions of competitive LECs' ability to provide quality service, and thus affect competitive LECs' ability to attract customers."[12] Specifically, the FCC found that the

[10] TRO at ¶ 466.
[11] *Id*. at ¶ 467.
[12] *Id*. at ¶ 466.

"record shows that customers experiencing service disruptions generally blame their provider, even if the problem is caused by the incumbent."[13]

Third, the FCC recognized that many of the problems with hot cuts are inherent in the process. The FCC concluded, based on the evidence presented, that "hot cut capacity is limited by several factors, such as the labor intensiveness of the process, including substantial incumbent LEC and competitive resources devoted to coordination of the process, the need for highly trained workers to perform the hot cuts, and the practical limitations on how many hot cuts the incumbent LECs can perform without interference or disruption."[14]

Fourth, the FCC focused specifically on the unavoidable limitations on the volume of hot cuts the ILECs could perform. The FCC found that CLECs were impaired because hot cuts could not be performed in the volumes that would occur in the mass market: "[h]aving reviewed the record evidence," "we find that it is unlikely that incumbent LECs will be able to provision hot cuts in sufficient volumes absent unbundled local circuit switching in all markets."[15] The FCC specifically rejected ILEC arguments that the FCC's findings in section 271 proceedings regarding hot cuts demonstrated lack of operational impairment. The FCC correctly found that the number of hot cuts in the current market environment "is not comparable to the number that incumbent LECs would need to perform if unbundled switching were not available for all customer locations

[13] *Id*. at ¶ 467.
[14] *Id*. at ¶ 465.
[15] *Id.* at ¶ 468.

served with voice-grade loops."[16] Thus, the issue here is that there is "an *inherent limitation* in the number of manual cut overs that can be performed, which poses a barrier to entry that is likely to make entry into a market uneconomic."[17]

Finally, the FCC concluded that ILEC promises, regarding the ability to perform some volume of hot cuts that had never been requested, cannot be relied upon to demonstrate adequate performance. Specifically, the FCC found that "incumbent LECs' promises of future hot cut performance [are] insufficient to support a FCC finding that the hot cut process does not impair" CLECs.[18]

In short, the FCC found "ample testimony in the record" on CLECs' operational and economic difficulties with hot cuts.[19] It recognized that "hot cuts frequently lead to provisioning delays and service outages and are often priced at rates that prohibit facilities-based competition for the mass market."[20]

Q. PLEASE SUMMARIZE THE FCC'S NATIONAL FINDING OF IMPAIRMENT REGARDING THE HOT CUT PROCESS.

A. Consistent with AT&T's experience, and based in large part on its conclusions outlined above, the FCC made a "national finding that competitive carriers providing service to mass market customers are impaired without unbundled access to local circuit switching" and set out a plan to help mitigate the "inherent

[16] *Id*. at ¶ 469.
[17] *Id*.
[18] *Id*. at n. 1437.
[19] *Id*. at ¶ 466.
[20] *Id*.

difficulties" with the ILECs' hot cut processes.[21] The FCC's plan included asking the state commissions to "approve and implement a batch cut migration process – a *seamless, low-cost process for transferring large volumes of mass market customers . . . .*"[22] This batch cut process must "render the hot cut process more efficient and reduce per-line hot cut costs."[23] It must also "address the costs and timeliness of the hot cut process."[24]

Q. WHAT DOES THE FCC MEAN BY "BATCH CUT PROCESS"?

A. The FCC defined a batch cut process as a seamless, low-cost process for transferring large volumes of mass market customers.[25] The FCC found that "the hot cut process could be improved if cut-overs were done on a bulk basis, such that the timing and volume of the cut over is better managed," and the non-recurring costs reduced.[26] Indeed, the FCC found that "such improvements are likely to be *essential* to overcome the operational impairment that competitors face in serving mass market customers. *Without such improvement*, the record shows that *carriers are likely to be unable to economically serve a market characterized by low margins*."[27]

[21] *Id*. at ¶¶ 422-423.
[22] *Id*. at ¶ 423 (emphasis added).
[23] *Id*. at ¶ 460.
[24] *Id*. at ¶ 488.
[25] *Id*. at ¶ 487.
[26] *Id.* at ¶ 474.
[27] *Id*.(emphasis added).

Q. DID THE FCC FIND CURRENT ILEC PROCESSES FOR CONVERTING CUSTOMERS IN BULK TO BE SUFFICIENT?

A. No. The FCC found that project managed cut-overs involve the conversion of a number of lines at one time, pursuant to provisioning requirements and intervals negotiated by the incumbent and the competitive LEC. We find that these approaches are not sufficiently developed or widespread enough to adequately address the impairment created by the loop cut over process. The evidence in the record demonstrates that the carriers that have used project-managed cut-overs have used them only for business customers, and only after acquiring the customer through a means that offered the use of incumbent LEC loops and switches in combination.[28]

The FCC also noted "the record evidence indicates that incumbent LECs are not well-equipped to handle hot cut volumes even with the existence of a procedure to manage bulk migrations on a project-managed basis."[29]

Q. DID THE FCC OFFER ANY DIRECTION FOR STATE COMMISSIONS REGARDING BATCH CUT PROCESSES?

A. The FCC found that a seamless, low-cost batch cut process for moving mass market customers from one carrier to another is necessary, ***at a minimum***, for carriers to compete effectively in the mass market.[30] The FCC's Order directs state commissions to approve, within nine months of the effective date of the

[28] *Id*. at ¶ 474.
[29] *Id*. at ¶ 487, n. 1516.
[30] *Id*. at ¶ 487.

Order, a batch cut migration process to be implemented by the incumbent LECs that will address the costs and timelines of the hot cut process.[31] More specifically, it requires state commissions to do the following:

- Adopt a batch cutover "increment" for migrating customers served by unbundled loops combined with unbundled local circuit switching to unbundled stand-alone loops. In other words, states should decide the appropriate volume of loops that should be included in the "batch."

- In conjunction with incumbent LECs and competitive LECs, approve specific processes to be employed when performing a batch cut. The FCC "expect[s] these processes to result in efficiencies associated with performing tasks once for multiple lines that would otherwise have been performed on a line-by-line basis."

- Determine whether the ILEC is capable of migrating batch cutovers in a timely manner.

- Adopt TELRIC rates for the batch cut process. These rates should reflect the efficiencies associated with batch migration of loops to a competitive LEC's switch, either through a reduced per-line rate or through volume discounts.[32]

Q. WILL THE IMPLEMENTATION OF A BATCH PROCESS ELIMINATE ECONOMIC IMPAIRMENT?

A. No. First, the efficiency gains realized from a manual batch process will likely be too incremental to result in substantial reduction of the overall costs required to

[31] *Id*. at ¶ 488. A state commission may decline to institute a batch cut process, provided that it instead issues *detailed* findings regarding the volume of UNE-L migrations that could be expected if competitive LECs were no longer entitled to unbundled local circuit switching, that the incumbent can be expected to meet that demand in a timely and efficient manner using the existing hot cut process, and that the non-recurring costs associated with the hot cut process are not an entry barrier. *Id*. at ¶ 490. Failure to develop a process, however, does not relieve the state commission of its obligation to analyze whether requesting carriers are impaired without access to unbundled switching.
[32] TRO at ¶ 489.

extend mass market loops to CLEC switches. Critically, a batch provisioning process does not relieve any of the economic impairment that results from the collocation, collocation equipment and backhaul costs that a CLEC must incur to connect the ILEC loop to its switch, as discussed in my network architecture testimony.

Q. WILL THE IMPLEMENTATION OF A BATCH PROCESS ELIMINATE OPERATIONAL IMAPIRMENT?

A. No. The batch hot cut process does not eliminate any of the manual steps necessary to perform a hot cut. It also does not eliminate the need to physically change out the customer's facilities for those customers that are on IDLC systems. Any process that relies on multiple manual steps to achieve a customer migration to another carrier is going to subject to human error and therefore is unsatisfactory for serving the mass market.

V. OTHER NEW OPERATIONAL CONSTRAINTS THAT WILL BE CREATED IF ALL MIGRATIONS REQUIRE UNE-L CONVERSIONS

Q. ARE THERE NEW OPERATIONAL CONSTRAINTS THAT WILL ARISE IF ALL UNE-P CUSTOMERS ARE MIGRATED TO UNE-L?

A. If UNE-P were no longer available to CLECs, there would be operational concerns that could arise. One examples of this relates to tandem trunking and collocation space.

Q. WHAT IS A TANDEM SWITCH?

A. A tandem is a switch that does not directly serve an end user. It serves as an efficient through point to connect local switches that do not have sufficient traffic volumes between them to warrant a direct trunk group or to handle overflow traffic between local switches during peak traffic periods.

Q. WHAT DO YOU MEAN BY "TRUNKING" AND "TRUNK GROUPS"?

A. The transport pathways that carry calls from switch to switch are called trunks (or trunk groups). Within the network, such trunking connects the ILEC's local switches to each other, CLEC switches to ILEC switches (typically the tandem switches), and the ILEC's local switches to tandem switches. Tandems are used when it is not efficient to connect each end office switch directly to every other end office switch or to connect these switches for their full complement of traffic during peak times. In such cases, the ILEC will connect the end offices to a tandem switch. Traffic may flow from any end office switch to the tandem and then from the tandem to any other switch in the network.

Q. HOW WILL THE TRUNKING BE AFFECTED IF ALL MASS MARKET CUSTOMERS MUST BE SERVED USING UNE-L?

A. Many trunk groups, specifically the trunks to and from the tandem switches, could be under engineered resulting in call blocking to the end user while others, specifically the direct trunk groups, could be underutilized. To understand these impacts, the Commission must first recognize that, with UNE-P, all traffic travels on the ILEC's transport network. If the ILEC connects local switch 1 with local

switch 2 using direct trunking, all calls between those switches will generally travel through that trunk group without ever passing through a tandem switch. If, however, all CLECs must provide service using their own switches, those switches will principally be connected to the ILEC's network using the ILEC's tandem switches, because the CLEC does not have the economies of scale to connect directly to each and every ILEC local switch. Accordingly, nearly every call from a CLEC customer, whether to an ILEC customer or to another CLEC's customer will have to pass through trunks connected to the ILEC tandems. When a trunk group is carrying its total capacity for calls, the next call is blocked which means the customer gets a no circuits available message and the call cannot complete. If all UNE-P customers are migrated to UNE-L, significant blocking of trunk groups connected to the tandem could occur. Accordingly, the Commission must investigate the effects that forcing traffic onto UNE-L may have on the ILEC's tandem and associated interconnection facilities, to assure that CLEC customers' quality of service would not be degraded if CLECs no longer have access to UNE-P.

Conversely, in some cases, interconnection trunks between the ILEC local switches will be underutilized. Because calls to and from CLEC customers will travel through the ILEC's tandem switch, there will be less demand for the shared transport between the ILEC's local switches. However, the extra capacity there cannot be redeployed to accommodate this shift in traffic patterns.

Q. WHAT OTHER NEW OPERATIONAL CONSTRAINTS WILL ARISE?

A. If unbundled local switching is no longer available to competitors, all competitors will have to install their own facilities in collocation space. It is unclear whether the ILEC will be able to accommodate the dramatic increase in the space that will be needed as CLECs expand existing collocations or when new CLECs that were formerly UNE-P only providers seek to install equipment. At the very least, the interval to obtain and build out collocation space likely will increase. At the worst, sufficient space may not be available, especially in remote central offices that are generally very small in size.[33]

Q. ARE THERE OTHER ISSUES RELATED TO BATCH CUTS THAT THE FCC DIRECTED THIS COMMISSION TO CONSIDER?

A. Yes. The FCC also directed state commissions to consider whether (or the extent to which) temporary or "rolling access" to UNE-P would address all identified impairment.[34] Rolling access to UNE-P is not adequate to "cure" the many operational and economic issues for the reasons described in this and other AT&T testimony. However, should the Commission make a finding that all economic

[33] The FCC identified available collocation space as an issue. TRO ¶ 513. "We find that the absence of sufficient collocation space in the incumbent central office or offices might in some markets render competitive entry impossible and thus result in impairment. We therefore direct the state commissions to consider evidence concerning the costs and physical constraints associated with collocation in a particular market. We direct state commissions to consider whether competitive entry is inhibited, or is likely to be inhibited going forward, by the exhaustion of available collocation space in the incumbent LEC's central offices. Evidence relevant to this inquiry would include, for example, the amount of space currently available in those central offices; the expected growth or decline, if any, in the amount of space available; and the expected growth or decline, if any, of requesting carriers' collocation space needs, assuming that access to unbundled switching were curtailed. The state commissions shall consider this factor in determining whether to find that requesting carriers are not impaired without access to unbundled local circuit switching.

[34] TRO ¶ 524.

and operational impairment would be eliminated by a batch hot cut process, AT&T believes the use of rolling UNE-P is required. Indeed, AT&T is not aware of any methodology for transferring "batches" of customers that would not require the customers to first be acquired by the CLEC.[35] Therefore any batch migration process developed by this Commission should be based on the assumption that the CLEC has already acquired the customer using UNE-P before moving it to a UNE-L/CLEC switch network configuration. Further, as acknowledged by the FCC, "competitive LECs may face difficulties in accumulating enough customers to justify batch line migration processing *in both new central offices* and existing collocations."[36] Accordingly, if rolling access is established by this Commission, it should include sufficient time for CLECs to accumulate enough customers to justify collocation, and enough time to then establish the collocation in new central offices.

VI. RECOMMENDATIONS ON EVALUATING THE HOT CUT PROCESS

Q. DID THE FCC IDENTIFY A STANDARD AGAINST WHICH AN ILEC'S HOT CUT PROCESS SHOULD BE MEASURED?

A. Yes. In describing a hot cut process that demonstrated "consistently reliable performance," the FCC recognized that for the migration of customers, UNE-P should be the standard of performance. The FCC stated: "This review is

[35] The FCC stated that "we find that the availability of unbundled local switching—even on a temporary basis ---may enable competitors to acquire customers, aggregate them, and migrate them to the carriers own switch in a manner *that would not be feasible if the customers each had to be migrated individually* upon signing up with the competitive LEC. TRO ¶ 522.
[36] *Id.* ¶ 522.

necessary to ensure that customer loops can be transferred from the incumbent LEC main distribution frame to a competitive LEC collocation *as promptly and efficiently as incumbent LECs can transfer customers using unbundled local circuit switching*."[37] Thus, the appropriate comparison must be whether the ILEC can move customers served by UNE-L at the same volumes and performance levels as UNE-P. This is perfectly logical, since CLECs would be forced to abandon UNE-P and substitute UNE-L if they are denied access to unbundled local switching.

Moreover, such a standard is required in order to provide parity to all carriers that seek to provide a bundle of both local and long distance services to mass market customers. ILECs today can (and do) add large numbers of long distance customers through the electronic PIC process, which is very comparable to the electronic provisioning process used to provide UNE-P service. If CLECs cannot have the same ability to add local customers, they are seriously impaired in their ability to provide similar bundled offers. Indeed, the RBOCs themselves have recognized that the ability to offer such bundles is a major competitive advantage in fending off CLECs and/or winning back CLEC local customers. Further, since the FCC's impairment standard requires a review of all costs and revenues a CLEC would incur, including long distance, CLECs must have the same ability to offer local/long distance bundles as the ILEC.

[37] TRO at n. 1574 (emphasis added).

Q. WHAT CHARACTERISTICS SHOULD BE INCLUDED IN ANY BATCH CUT PROCESS CONSIDERED BY THIS COMMISSION?

A. While any batch process will still continue to contain the same manual steps as the current process making it difficult to significantly reduce the economic and operational impairment, the development of a batch cut process by this Commission would be of some benefit to competition, because it would facilitate CLECs' use of non-ILEC facilities in the limited situations where it is otherwise feasible to do so. From AT&T's perspective, the process should, at a minimum, address the elements contained in **Exhibit RVF-13** attached.

Q. IF THIS COMMISSION ORDERS, AND THE ILEC SUCCESSFULLY IMPLEMENTS A BATCH HOT CUT PROCESS, WILL THAT SUFFICIENTLY ADDRESS IMPAIRMENT ISSUES?

A. No. Although a batch process may increase Qwest's hot cut throughput capabilities the opportunity for human error caused by the manual work steps involved with this process resulting in prolonged customer outages will never make it sufficient to support mass market migrations. And even if the ILEC charges for hot cuts were reduced, that would affect only one of many additional costs that only CLECs face in attempting to provide service using non-ILEC switches, as more fully described in my network architecture testimony.

VII. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The process of migrating customers to a CLEC-owned switch using an ILEC loop, the so-called "hot cut process," is extremely dependent on manual work, rendering the process prohibitively expensive, highly error prone with resulting impacts to customer service, and not scalable to handle reasonable commercial volumes. As such, CLECs will remain impaired by any manual hot cut or loop migration process. Even the best manual processes that could be operationalized today, including batch migration processes, cannot satisfy the requirements needed to eliminate the CLECs' operational impairment in attempting to compete for mass-market customers. Accordingly, this Commission should develop and approve a comprehensive review process to insure any process put forth by Qwest will deliver as advertised and could evaluate the extent to which CLECs remain impaired.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.