B. Questions for Other Participants

1. Describe the hot cut process currently used to transfer lines from the ILEC switch to the CLEC facilities.

Response: This question's reference to the "current" hot cut process in fact implicates two related, yet procedurally distinct processes. The first involves the process required to cut over a loop for an individual customer. The second involves the so-called "project" hot cut, in which loops for multiple customers in a wire center are moved from the ILEC's switch to the CLEC's switch. Both processes will be described below.

It is also important to note that the question implies that the only hot cuts at issue here are those involving the process that is used by the ILEC to disconnect a working (hot) line from its switch and reconnect it to a CLEC's collocation for transport to its switch. This is an inappropriately constrained view of the scope of this issue. In fact, hot cuts are used not only to move lines from the ILEC to a CLEC, but also to move lines from a CLEC to the ILEC and from one CLEC to another CLEC. Accordingly, any procedures that are developed by the Commission to develop an economic and efficient batch hot cut process that complies with the requirements of the Triennial Review Order must account for all of these scenarios.[1]

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[1] This discussion focuses on a hot cut for voice services. It does not take into account the additional work involved in cutting over a loop on which a DLEC may be providing DSL services in a line split arrangement. As noted in response to

Individual Hot Cut

As predicate requirement for any hot cut, the CLEC must have installed its switch in its own central office or in a leased facility that has been modified to provide the environment needed to support telecommunications equipment. The CLEC must build an interconnection network in order to exchange traffic and establish connectivity to SS7, E911, Operator Services (OPS) and Directory Listings and Directory Assistance (DA) platforms. Certification for SS7, E911 and OPS/DA is required prior to exchanging traffic. The CLEC is then required to establish collocation arrangements in each of the Verizon central offices in which it wants to gain access to unbundled loops (UNE-L). Once Verizon has made the collocation space available, the CLEC is then required to install the necessary digital loop carrier (DLC) and related equipment in that space that will enable it to gain access to unbundled loops and prepare them for efficient transport to its switch. This collocated equipment is used to extend the unbundled loop from the Verizon central office where the loop terminates to the CLEC's switch that is remotely located from Verizon's central offices. Assuming all of these prerequisite activities have occurred, the actual service conversion of migrating the loop off of the Verizon switch onto the CLEC's collocated equipment is accomplished by using a process commonly known as a hot cut.

Question 3, however, the development of a batch hot cut process must account for those arrangements.

An individual hot cut is initiated by the carrier that wishes to have a customer's loop migrated over to its switch via its collocated equipment by issuing a Local Service Request (LSR) to Verizon. This LSR will provide all of the details that Verizon needs to migrate the customer's line from its existing service arrangement over to the issuing carrier's collocated equipment via the individual hot cut process.

The CLEC's LSR is processed through Verizon's wholesale provisioning organizations, and the order ultimately is forwarded to the Verizon technicians at the central office where the customer's loop terminates. When Verizon's central office technicians receive an order for a hot cut, they first determine the frame locations of the customer's loop and the CLEC's collocated equipment. If done properly, prior to the cutover date Verizon's technicians pre-wire the cross-connection from the connector block where the customer's loop terminates on the line side of the Main Distribution Frame (MDF) to the connector block on the MDF where the Carrier Facility Assignment (CFA) of the CLEC's collocated equipment terminates.

During the pre-wiring stage, new cross connection jumper wires will be terminated to the appropriate CFA terminals on the connector block for the CLEC's equipment.[2] These CFA terminals are assigned by the CLEC when the CLEC submits its LSR for the unbundled loop. The wires are then run to the line

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[2] The termination may be by a solder, wire wrap or punch down connection.

side of the MDF to the terminal block where the cable and pair for the customer's loop appears on the frame.

At this point, because this is a working service, the wires cannot be terminated to the customer's loop until the CLEC is ready to provide dial tone to the customer. Otherwise, the customer will lose all service. Thus, the wires instead must be physically tied down at the terminal block and tagged for termination on the actual service cutover date.

Two days prior to the service cutover date, Verizon's technicians should verify that they are getting dial tone from the CLEC's switch on the CFA specified by the CLEC on its order. If dial tone is present, the order proceeds as scheduled. However, if the Verizon technician finds that there is no dial tone coming from the CLEC's switch Verizon should notify the CLEC to give the CLEC an opportunity to identify the source and fix the problem.[3]

On the date that the cutover is scheduled, Verizon will remove the existing wiring that connects the customer's loop to the Verizon switch and will connect the tagged pre-wired connection to the CLEC's collocated equipment. Prior to performing this action, the Verizon technician should verify that the customer's line is idle so that a call in progress is not dropped when the wires are lifted. Additionally, if the CLEC requested a coordinated cutover, which CLECs often do as an additional measure of service quality, the Verizon technician is required to

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[3] The problem, of course, could also Verizon's end.

contact the CLEC prior to performing the cutover activity. After completing the conversion, the Verizon technician may then disconnect the old cross-connection wires from the switch port and remove the "dead" cross-connection jumpers from the MDF and close out the work order. The CLEC contacts NPAC to finalize the number port.

The method described above is only the simplest of the scenarios for individual hot cuts, involving only one cross-connection per customer line. The process becomes more complex depending on the frame architecture of the central office, which may require more than one cross-connection jumper to connect a customer's loop to the switch port or to the CLEC's collocated equipment. This is the case in offices that utilize an Intermediate Distribution Frame (IDF) and in offices that have a newer type of MDF known as a Cosmic frame. Central offices with IDFs typically require four cross-connects, two new cross-connections to connect the loop to the collocated equipment and two disconnects to remove the Verizon switch port from the loop to accomplish a transfer of a customer's line using the hot cut process. Central offices with Cosmic frames require three cross connections, two new connections and one disconnect, to accomplish the transfer.[4]

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[4] It is not known at this stage of the proceeding whether, and if so, to what extent, Verizon uses either IDFs or Cosmic MDFs in its Pennsylvania wire centers. Obviously, the more touch points that are involved in any manual process, the more opportunity there is for human error. Thus, the additional cross connections that may be required in offices with an intermediate distribution frame (IDF) or Cosmic MDF (or for lines that use IDLC: see discussion below), present a greater opportunity for something to go wrong that can affect the

Verizon's use of Integrated Digital Loop Carrier ("IDLC") also changes the hot cut process. Although MDF-based architecture is the most common in use today, Verizon also uses IDLC for serving residential and commercial customers. The architecture of the loop/switch combination with IDLC is substantially different from the copper wire architecture involved with the MDF. Instead of aggregating copper loops in cables and carrying them all the way to the MDF at the central office, the ILEC brings the loop first to an IDLC remote terminal, which is located in an underground vault or locked cabinet in a neighborhood. The remote terminal converts the analog loops to a digital signal and multiplexes all the digital signals onto a digital carrier system for transmission to the central office. At the central office, the digital loops bypass the MDF altogether and access the switch directly through a digital cross-connection frame. No analog signal or physical reappearance on an MDF is ever re-established to identify an individual subscriber's loop.

Therefore, when a customer is served by an IDLC loop, there are no wires at the MDF that are uniquely associated with his/her individual loop that can be disconnected for reconnection to a CLEC's collocated equipment. If a CLEC wishes to use its own switch to serve a customer that is currently on an IDLC system, Verizon must first physically move the customer's line either to a pre-

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customer's service. Moreover, additional connections are likely to increase the time it takes Verizon's frame technicians to do the work necessary for a hot cut, thereby reducing the number of hot cuts that technicians can perform in a particular office on any given day.

existing copper facility or to a Universal Digital Loop Carrier (UDLC) system.[5] Loops that arrive in the central office on a UDLC system have an appearance on the MDF and therefore can be cross-connected to a CLEC's collocated equipment.

The above description of the individual hot cut process is focused solely on the physical work that must be performed within the central office to accomplish the hot cut. In addition to this activity, a number of additional administrative functions, such as order administration and billing updates, must occur. Typically, a hot cut also involves the software changes necessary to port the customer's telephone number from the existing switch over to the competitor's switch. It is critical that the timing of this number porting is coordinated with the physical cutover so that the customer's inbound service is not interrupted.

Project Hot Cuts.

Unlike an individual hot cut, which is used to fulfill a CLEC order that contains the line or lines that are to be cutover for a single end user customer, a "project" or "bulk" hot cut process is used in those instances in which a CLEC identifies multiple loops to be cut over, such as for multiple customers within the

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[5] When a customer's loop is on an IDLC system, Verizon also must physically remove that loop from the IDLC remote terminal. This activity requires a field dispatch to the remote terminal, where a Verizon technician must perform the physical work to move the customer's line off of the IDLC system onto a copper or UDLC facility. It also requires cross connection work in the central office to connect the customer's new loop facility to the Verizon switch port (if the work is being done prior to the hot cut date), or to the CLEC's collocated equipment when the work is coordinated with the hot cut activity.

same central office. When the bulk process is used, all of the lines are scheduled to be cut over on a specific date and time that the CLEC has pre-negotiated with Verizon. Up to now, this process has mostly been used to convert existing CLEC resale and UNE-P customers to unbundled loops.

A "project" or "bulk" hot cut process does not eliminate *any* of the physical steps associated with an individual hot cut. In order to transfer a loop from one carrier's switch to another, all of the physical activity described above in connection with an individual hot cut must occur regardless of the hot cut process being used. Nevertheless, the bulk hot cut process can be viewed as having five major work flows: (i) CLEC project initiation and order submission, (ii) Verizon service order creation, (iii) Verizon work center & central office work assignment, (iv) Verizon pre-testing and pre-wiring and (v) Verizon and CLEC cutover activities on project due date.

The CLEC initiates a bulk hot cut by notifying Verizon's National Marketing Center (NMC) of its desire to schedule a bulk hot cut project. In this notification, typically a phone call, the CLEC identifies the central office in which the lines reside, the number of lines involved with the project and the date on which the CLEC would like the conversions to occur. The requested conversion date is typically 15 business days from the notification date.

Once Verizon's NMC receives the request, it confers with its central office frame personnel to determine whether Verizon will have sufficient resources at the given location, as well as the necessary time to handle the proposed volume,

based on central office staffing and other frame work that must be performed. Based on discussions with the frame personnel, the NMC informs the CLEC of Verizon's ability (or inability) to support the requested project due date**.** Once a date is agreed upon, the CLEC issues LSRs, typically by using Verizon's EDI interface, for each customer line that will be associated with the project. Before doing so, however, some CLECs conduct an electronic pre-order query of Verizon's "loop make-up" database to determine whether the loop is on a non-copper facility, such as an IDLC system, in an effort to improve the quality of the cut. Any customer whose loop is on an IDLC facility must be excluded from the project, because Verizon's current bulk hot cut process does not support migration of these types of loops as part of a project hot cut.

The CLEC orders that flow –through Verizon's OSS generate internal Verizon service orders that provide Verizon's work centers with the information required to perform the hot cuts on the due date. Once the internal Verizon service orders are created, physical work, largely the same as that described above in connection with individual hot cuts, is required on the frame. Central office frame technicians begin cutover work at a time the CLEC negotiates with Verizon. At that time, the Verizon frame technician identifies on the Verizon frame the locations of the lines to be migrated and of the CFA that is pre-wired to the CLEC's collocated equipment. The frame technician then verifies that these locations agree with the information on the service order and pre-wires the new cross-connections from the existing Verizon frame appearance of a customer's

line to the frame appearance of the CLEC's CFA assigned to that line. At least two days prior to the cutover, the technician checks for CLEC dial tone on each of the CFA assignments.

On the morning of the cutover, Verizon's Regional CLEC Coordination Center (RCCC) technician/coordinator contacts the CLEC to obtain authorization to proceed with the project. Once this authorization is received, the RCCC documents the approval in Verizon's Wholesale Provisioning Tracking System (WPTS) and calls the central office frame crew to inform them that they can proceed with the physical cutover activity on the frame. At the time designated for the cutover, the frame technician removes the old cross connection that connected the customer's line to Verizon's switch port and terminates the pre-wired connection to the CLEC's CFA, thereby connecting the customer to the CLEC's switch.

Not all of the lines involved with the project hot cut are cut over at the same time. Rather, the project is usually worked in groups of 20 lines at a time. Once the first 20 lines are cut over to the CLEC's collocated equipment, the frame crew will call the RCCC to identify the 20 lines on which the physical frame work has been completed. The RCCC then calls the CLEC, which will check the lines for problems. A CLEC representative will then activate the local number portability (LNP) software that informs the network that the telephone numbers associated with these lines have been moved from the Verizon switch to the CLEC's switch. Otherwise, the customer will lose all inbound calls for the duration of the project.

Meanwhile, the RCCC will update WPTS to indicate that the cut is complete for these 20 lines. After the frame crew contacts the RCCC, it selects the next 20 lines on the spreadsheet and cuts them over to the CLEC. The process will continue in this manner, working in groups of 20 lines until all the lines associated with the project have been migrated over to the CLEC.[6]

Once all of the physical frame work is complete, the RCCC notifies the CLEC by telephone that the project is complete. The RCCC also enters the completion notification information into WPTS and sends the confirmed complete project spreadsheet to Verizon's Recent Change Memory Administration Center (RCMAC). The RCMAC verifies that the telephone numbers associated with the project have been ported and releases the customer translations from the Verizon switch**.** In the final step of the process the central office frame crew removes the disconnected wires from the Verizon frame 24 hours after the project due date.

Apart from the physical work conducted at the frame, the majority of the actions necessary to process a project hot cut order are performed by automated electronic systems. Verizon, however, utilizes a manual, labor intensive process to (a) double-check that it is, in fact, working the orders that the CLEC sent over and (b) keep track of the status of each order in the project. These manual processes include, but are not limited to: (1) RCCC analysis of the order request

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[6] For the sake of brevity, AT&T has omitted the steps required when a trouble is discovered on one or more of the hot cut loops.

activity to ensure all orders are included in the project and existing Verizon facilities are being reused, (2) the recently added step of performing a mechanized loop test (MLT) by the RCCC, (3) the verification of lines that may be on non copper facilities due to discrepancies in Verizon's loop make-up database, (4) the manual updates necessary to WPTS and (5) the verbal communications that occur between Verizon's work centers and between Verizon and the CLECs.

2. List each task that is part of the current process. Provide the average time it takes to complete the task, the typical occurrence of the task during the process, the labor rate for the task, and the common overhead loading associated with the labor rate. Indicate the source of the data; i.e. time/motion studies, SME analysis, etc.

Response:

The myriad tasks involved in both the individual hot cut and project hot cut processes are described in the response to Question 1. How much time Verizon takes to complete any particular evolution in those processes is a matter that Verizon is in the best position to answer. AT&T observes, however, that Verizon's processes for both individual and project hot cuts are riddled with unnecessary, redundant and inefficient steps. Thus, the current process can hardly be described as "forward-looking," either for current purposes or in anticipation of the FCC's expectation of an efficient and economical "batch" hot cut process.

In that regard, AT&T submitted a non-recurring cost study in the pending UNE pricing case, Docket No. R-00016683, that is based entirely on forward-looking network assumptions and that reflects, to the maximum practical extent, mechanized rather than manual processes that minimize costly and inefficient human intervention. That study, which the Commission's Tentative Order states

will be used to determine new non-recurring rates for Verizon,[7] included a work-flow and proposed rate for an individual loop hot cut.[8]

AT&T has not yet calculated a project hot cut rate that should be applicable to Verizon's Pennsylvania operations. It is clear, however, that Verizon's current procedures for project hot cuts would have to be substantially modified before they could be used to develop an efficient, forward-looking process (and rates) for project hot cuts. Indeed, Verizon's current procedures include various manual tasks and work-center handoffs that are inefficient and that Verizon should either eliminate or mechanize. These would include, for example, (1) any requirement that the RCCC must manually perform an MLT test on each loop, and (2) requirements for numerous verbal (via phone call) or manual handoff communications that occur throughout the process, both between Verizon's internal work groups and between Verizon and the CLEC.

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7 *Generic Investigation re Verizon Pennsylvania, Inc.'s Unbundled Network Element Rates,* PaPUC Docket No. R-00016683, Tentative Order, Nov. 4, 2002, at 180.

8 *See* Docket No. R-00016683, Direct Testimony of Richard Walsh, AT&T/WCOM Stmt. 7.0, Exh. RJW-1 (NRC #7 – POTS/ISDN BRI Install (UNE-Loop)). A copy of the pertinent excerpt from that study is attached.

3. Describe a batch hot cut process that you would implement to meet the FCC's requirement to establish a batch hot cut process. Include an estimate of the maximum number of lines per batch.

Response:

Before describing, in general terms, the requirements of a batch hot cut process that meets the FCC's requirements, AT&T must first emphasize its concerns that no *manual* batch hot cut process, no matter how carefully crafted, can eliminate CLECs' economic and operational impairment. As is evident from the time and effort that would be involved in developing an improved version of Verizon's current hot cut procedures, it is doubtful that an operationally and economically efficient manual bulk hot cut process can be devised to accommodate the scale and scope conditions that would exist in a fully competitive market based solely on the use of UNE-L, and without access to UNE-P.

Much more is required than simply to tweak Verizon's existing "project" hot cut process. Even with substantial modification, Verizon's current "project" hot cut methodology would not satisfy the TRO requirements for a batch hot cut process. Simply eliminating the myriad redundancies and unnecessary manual steps in the current process would only result in the implementation of the most efficient bulk hot cut process that can be established assuming the use of the embedded technology and systems that Verizon currently uses, which are *not* the most efficient technology and systems available. The inherent limitations of Verizon's systems and management practices, such as limitations on the number

and size of bulk hot cuts that can be performed in a given day, prevent the achievement of greater efficiency – a fact that will remain true so long as the process remains primarily manual.

Moreover, Verizon's current *project* hot cut process was not designed to handle the volumes in an environment where CLECs have "rolling" access to UNE-P as a means of "holding" cutovers until conditions are appropriate for a bulk hot cut, as the FCC envisions in the TRO. Nor was Verizon's "project" process designed for the volumes of hot cuts that could be expected in a world where there is no UNE-P, in which virtually *every* carrier change must be accomplished through a manual hot cut process. Such a process necessarily would have to accommodate, among other things, the conversion of IDLC loops, as well as support for UNE-L based line splitting, CLEC-to-CLEC migrations and CLEC-to-Verizon migrations, as well as resale to UNE-L conversions Weighed against this background, there are a number of criteria that the Commission must apply in considering whether any manually-based hot cut process is workable in a mass- market environment in which UNE-P is no longer available to CLECs. These include, but are not limited to:[9]

- As an initial matter, because it is based primarily on manual work, a batch process should be recognized as an interim solution with limited opportunities for improvement over the current individual hot cut process.

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[9] The considerations identified here should be viewed as preliminary, and not exclusive. As this collaborative proceeds, the issues surrounding the development of a batch hot cut process will be refined, and new issued may be identified.

Therefore, to more effectively reduce CLEC impairment, the Commission should develop a plan to move to an electronic solution that requires fundamental changes to the ILEC's network architecture that currently creates operational and economic barriers to competitive entry to serve mass market customers.

- The batch process must support efficient migration of a sufficient quantity (the equivalent of long distance PIC changes/UNE-P volumes/churn of ILEC win-backs) of unbundled loops to support a fully competitive mass market at quality levels no less than the UNE-P alternative that would be removed.

- Batch cut and other associated loop performance standards should be equivalent to performance for migrating a customer from retail to UNE-P. "This review is 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."[10]

- The batch process design must result in significant cost reduction for all involved parties to help reduce economic impairment.

- The batch process must operate in conjunction with an existing electronic customer acquisition process (i.e. UNE-P).

- There must be exceptions to any established limitations on a customer's ability to remain in "acquisition mode" pending placement into a batch, for situations such as:

    - Time to build a network, i.e. time needed to add new CLEC equipment (e.g. DLC in collocation) or to augment CLEC facilities (e.g. transport) when that the expansion or augmentation is not complete for reasons beyond its reasonable planning or control
    - Time needed to augment collocations i.e. space, power, terminations
    - ILEC collocation space exhaust
    - The ILEC's inability to migrate customers to UNE-L within prescribed time frames

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[10] TRO, ¶512 n.1574.

  - The ILEC's failure to meet performance standards
  - The presence of IDLC
  - The lack of copper and UDLC facilities

- The batch process must include all mass market customers, all types of loops used to serve such customers, and all types of transfers between all LECs. Thus, the process should be insensitive to the identity of the previous carrier and the technology used by that carrier to provide service. In addition, the process should not require CLECs to perform any pre-order activity to "qualify" that an unbundled loop can be migrated. For example, the process must account for the following:

  - IDLC-served loops
  - Line splitting
  - CLEC to CLEC migrations
  - EEL configurations

- To mitigate customer confusion and frustration at the double migration that occurs when purchasing UNE-P on a temporary basis, all of the switch features offered by the incumbent LEC should be made available to the CLEC at TELRIC rates. By doing so, customers would not be forced to change their programmable features such as speed dialing and voice mail multiple times during this rolling acquisition process.

- The CLEC should have the ability to schedule hot cuts and batch hot cuts at any point in a twenty-four hour day with the costs insensitive to the scheduled time of the hot cut (as in an electronic system such as UNE-P).

- The size of the batch.

- The batch process must be developed to provide equivalent OSS functionality to UNE-P transactions, including:

  - Equivalent electronic pre-ordering and ordering capability
  - Equivalent levels of flow-through for ordering and provisioning systems to increase accuracy and lower costs.
  - One LSR per migrating UNE-P customer / account
  - Directory Listings must remain AS-IS when converting from UNE-P to UNE-Loop

- Real-time electronic updates from Verizon systems must be available for order status, testing status, and notification of individual loop cut completion. Updates must be pushed from Verizon systems to CLEC systems.

- There must be a self-executing process to immediately switch customers back to UNE-P if a cut fails, with follow-up electronic communication from the ILEC to the CLEC indicating the cause of the failure, how the ILEC will remedy the failure and when the customer can be migrated to an unbundled loop. The rolling interval for this customer would restart.

- The Commission should include in its analysis the feasibility of interim automation of hot cut process provisioning as part of the batch process.

- ILECs need to have the proven, systemic capability to handle provisioning hot cuts at volumes anticipated across all its markets in the absence of unbundled local switching. Therefore, once designed, the batch cut process must be subject to both pre-implementation and post implementation testing. Pre-implementation testing should include third party "time and motion" study of the hot cut process, and third party-monitored ILEC testing using its own collocation and migration of significant numbers of its own customers through hot cuts from direct connection to its switch to its collocation equipment. Post-implementation trialing would include on-going commission review to determine if the batch hot cut process meets the needs of commercial mass markets in a manner that permits effective and efficient competition.

- The Commission must direct the ILEC to investigate, report, and eliminate any negative impacts of large scale migration from UNE-P to UNE-L from the following:

    - E-911 "unlocks"
    - Number porting
    - Availability of repair testing capabilities
    - Repair databases
    - Billing Systems
    - Provisioning systems such as TIRKS
    - Operator Services, Directory listings and assistance

- The Commission must direct the ILEC to investigate, report and eliminate any negative impact of large scale migration from UNE-P to UNE-L on local network trunking and tandem performance.

- The process must include a method to insure CFA inventories between and among ILECs and CLECs are initially accurate and remain reconciled.

- The intervals to build and augment collocation arrangements (i.e. power/terminations) must be improved.

- Key performance measurement factors:
    - Continue to measure at the most granular level feasible for each activity (FOC, rejection, missed appointment, cuts on time, service outage, etc.)
    - Create new measures for key activities unique to batch process, e.g. % batches started on time, completed on time, etc.
    - Eliminate current exclusions in performance measures for projects/batches.
    - Create, if not currently in place, measures for % service outages during conversion, and average recovery time of outages
    - Revise/establish benchmarks to drive performance that protects end-users.

- Substantial and sufficient self-executing financial consequences must be in place for ILEC failures to meet required performance standards

4. List each task that is part of the batch hot cut process described in the answer to the preceding question. Provide the average time it takes to complete the task, the typical occurrence of the task during the process, the labor rate for the task, and the common overhead loading associated with the labor rate.

Response: See response to Questions 1, 2 and 3.

5. If UNE-P is no longer available, what monthly volumes of hot cuts would be required: (a) to migrate existing UNE-P customers to another form of service and (b) to connect new customers in the ordinary course of business. Provide supporting documentation for these volume estimates.

Response:

AT&T has not yet been able to perform a study of the scalability requirements of a TRO-compliant batch hot cut process in Pennsylvania. Indeed, it is difficult to provide any definitive estimate concerning the applicable volumes because no one knows for certain how the local exchange market will react to a post-TRO environment. Testimony AT&T has submitted in the current New York proceeding regarding bulk hot cuts indicates that "converting from using UNE-L for specialty market situations" –that is, from the manner in which UNE-L is used today – "into UNE-L for the mass market requires scaling by a factor of 33 to 1."[11] Stated another way, in order to process the same number of UNE-P orders that Verizon currently provisions on a monthly basis in New York as UNE-L migrations, Verizon would have to increase its current volume of hot cuts by approximately 33 times.

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[11] *Proceeding on Motion of the Commission to Examine the Process, and Related Costs of Performing loop Migrations on a More Streamlined (e.g., Bulk) Basis,* NYPSC Case 02-C-1425, Testimony of Robert V. Falcone on Behalf of AT&T Communications of New York, Inc., October 24, 2003, at 11. *See also id.* at 36-39. A copy of the public version of that testimony is attached.

BEFORE THE

STATE OF NEW YORK PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Examine the Process, and Related Costs of Performing Loop Migrations on a More Streamlined (e.g., Bulk) Basis.	)	**CASE 02-C-1425**

TESTIMONY OF

ROBERT V. FALCONE

ON BEHALF OF

AT&T COMMUNICATIONS OF NEW YORK, INC.

October 24, 2003

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INTRODUCTION

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

A. My name is Robert V. Falcone. My business address is 9 Ashwood Trail, Long Valley, New Jersey 07853. I am a self-employed consultant working under contract for AT&T on this case.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE IN THE TELECOMMUNICATIONS INDUSTRY.

A. I hold a B.S. in Business Administration from Adelphi University, Garden City, New York. Additionally, I attended a number of technical and business related courses offered by the AT&T School of Business when I was employed by AT&T on a full time basis. My career with AT&T began in 1970, working in a large central office in New York City. My first assignment with AT&T, which lasted for about eight-months was as a frameman. In this assignment my responsibility was to install and remove cross connections on various central office frames. For the next seven years I worked as a switchman in a central office performing switch provisioning and maintenance activities. In 1978, I was promoted to a first level manager

responsible for the software administration of the New York City 4ESS switching complexes. As a first level manager I subsequently held various assignments in AT&T's operations and engineering departments. In 1986, I was promoted to a second level manager responsible for AT&T's access engineering in the Northeast. I also held assignments as a product implementation manager in Bell Laboratories, project manager for the implementation of a new circuit switched network in Canada in a joint venture with Unitel of Canada and implementation manager for AT&T's conversion of its access network to SS7 out-of-band signaling. In 1994, I was promoted to a District Manager responsible for headquarters support of AT&T's local market network implementation. In 1997, I was promoted to a Division Manager responsible for supporting the AT&T regions with local market entry initiatives. I retired from AT&T in June of 1998.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of this testimony is to recommend to the New York Public Service Commission (the Commission) the guidelines and criteria by which it should assess the scalability of the bulk hot cut process developed in this proceeding for application in a mass-market

environment. Additionally, I will address the technical and service quality problems inherent with the hot cut process and discuss how the manual effort involved with the hot cut process will preclude Verizon from performing hot cuts in mass market quantities and with service quality sufficient to allow for the development of a truly efficient and equitable competitive local service market.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. The testimony starts with a general overview of the concerns the testimony will address. Next there is an informational discussion of the frame architecture, how hot cuts are performed and the bulk hot cut process. These sections are intended to provide the reader with the background information that will be needed to understand the issues. The testimony goes on to present a projection of mass market hot cut volumes, discuss the service quality concerns associated with these volumes and describe the factors that limit the scalability of the hot cut process. The testimony concludes with a recommendation to the Commission of what Verizon should be required to demonstrate before it is allowed to deny CLECs access

to unbundled UNE-P and an example of a recent experience AT&T had with Verizon's hot cut process.

II. OVERVIEW

Q. BASED ON YOUR ANALYSIS OF THE FACTORS AFFECTING SCALABILITY THAT YOU DESCRIBE IN THIS TESTIMONY, WHAT CRITERIA SHOULD THE COMMISSION USE TO DETERMINE WHETHER VERIZON'S HOT CUT PROCESS IS WORKABLE IN A MASS MARKET ENVIRONMENT WITHOUT THE AVAILABILITY OF UNE-P?

A. As this Commission knows, competition based on UNE-P is vibrant, ubiquitous and efficient. Millions of customers have elected to change their local exchange carrier from Verizon to a CLEC, from the CLEC to another CLEC, or from a CLEC back to Verizon. The existing systems and processes allow these customer choices to be executed quickly, cheaply and reliably and the result is that New York now has a mature, effectively competitive local mass market. The first criterion, therefore, should be that the elimination of UNE-P should not materially restrict competitive choices that consumers have today; and should not impose additional burdens and service disruptions on customers seeking to make competitive choices that

they do not experience today. Any hot cut process that diminishes customer choice and increases customer dissatisfaction in a mass market environment without UNE-P is a hot cut process that is not sufficiently scalable to meet the demands of the mass market. Second, the hot cut process that CLECs must rely on to compete with Verizon must allow them to turn up service to new customers with the same speed and service quality as Verizon can offer. This means that the process must be able to provide a loop to a CLEC in a manner that will allow that CLEC to offer service to the customer within the same intervals as Verizon would promise to that same retail customer. For example, if Verizon can offer service to a new customer within 24 hours, as would be case if a new tenant moved into an apartment with "leave-in dial tone," the hot cut process must allow the CLEC to make the same offer to the same customer. In the absence of such parity, a CLEC will simply be unable to compete, or to survive. Parity requirements will also need to apply to situations where a customer is served by CLEC A on UNE-L, and CLEC B and Verizon are competing for that customer. It should not be any easier or quicker to migrate the loop and customer to Verizon than to

CLEC B. UNE-P, of course, both allows for and requires such retail competitive parity for reasons this Commission has already found compelling. Conversion of the mass market to a UNE-L architecture must maintain the performance parity principle or competition will not survive. Finally, the Commission must consider Verizon's ability to effectively accomplish the tremendous increase in hot cut volumes that it will be faced with in this environment without impact to the CLEC's ability to compete or impact to the quality of end user service.

Q. WHAT SHOULD THE COMMISSION DO IN ORDER TO ENSURE THAT THE HOT CUT PROCESS IT EVENTUALLY APPROVES MEETS THE TWO CRITERIA YOU DESCRIBE ABOVE?

A. The Commission should require Verizon to demonstrate that its proposed process meets those two criteria. As the FCC said in its Triennial Review Order, promises of future hot cut performance are not sufficient to demonstrate that 'the hot cut process does not impair the ability of a requesting carrier [CLEC] to provide the service it seeks to offer

without at least some sort of unbundled circuit switching.".[1]

Q. HOW SHOULD VERIZON DEMONSTRATE THE SCALABILITY OF ITS HOT CUT PROCESSES?

A. As described in section VIII of my testimony there are a number of scalability concerns that Verizon must be able to demonstrate that it has addressed before it should be permitted to claim non-impairment. These items include; i) proof that a valid time and motion study has been conducted to determine the time it takes to perform all of the steps necessary on the frame to perform a hot cut, ii) determination of Verizon's maximum daily hot cut throughput based on the output of the time and motion study and its current staffing levels, iii) Verizon's plans for converting the imbedded base of UNE-P customers while continuing to perform its normal day-to-day frame work, iv) disclosure of an inventory of its access lines on IDLC facilities and the amount of spare copper/UDLC facilities that these lines can be migrated to, v) disclosure of an inventory of the collocation space readily available in each central office in New York and its plan for how it will

[1] TRO, at footnote 1437.

support the additional requests it is going to receive for new collocation arrangements and augments to existing arrangements along with the impacts that this plan will have on existing collocation intervals, vi) Verizon's estimate of the daily hot cut volumes it will face in a non-UNE-P environment and the supporting details on how it arrived at this estimate, vii) Verizon's plans for how it will expand its tandem switching and associated transport network to accommodate all of the additional traffic it will be receiving from the CLEC switches, viii) Verizon's plans for deploying new technologies to eliminate the manual efforts associated with a hot cut, ix) Verizon's human resources strategy specifically outlining the number of additional people it will need and how it plans on recruiting, hiring and training these addition people and x) the metrics that Verizon proposes the Commission use to monitor its performance.

Q. WHY IS IT NECESSARY FOR VERIZON TO TAKE SUCH STEPS TO DEMONSTRATE SCALABILITY?

A. The Commission should not do away with UNE-P if it believes that the result would be a material decrease in the amount of competition that it can see in the

New York market today. Therefore, as I explain more fully in section V of my testimony, Verizon today performs an average of just over 3,000 hot cuts per month. In contrast, Verizon's OSS systems today handle approximately 100,000 customer line conversions using UNE-P. If UNE-P is terminated in a manner designed not to impair the ability of CLECs to compete, Verizon's hot cut process will need to handle at least 100,000 hot cuts per month when CLECs are required to serve the mass market with UNE-loops. . In short, converting from using UNE-L for specialty market situations into UNE-L for the mass market requires scaling by a factor of 33 to 1.

Scaling a manual process is subject to many limitations. We cannot simply assume that a process that Verizon puts forward on paper will actually work at volumes that will exceed current experience by at least 33 times. Some of the factors that will prevent Verizon's ability to scale up to this level of activity include; i) the manual work that is required to perform a hot cut, ii) the limited work space in which this work must be performed, iii) the large imbedded base of UNE-P lines that will have to be migrated, iv) staffing of qualified technicians and

the resource management challenges associated with this additional work force, v) the large number of unstaffed central offices Verizon has in New York, vi) various collocation issues that Verizon and the CLECs will encounter, vii) the prevalence of IDLC lines in Verizon's New York network and viii) the lack of a process to perform CLEC-to-CLEC migrations. All of these issues are discussed in more detail in section VII of my testimony.

Q. WHAT IS THE CONSEQUENCE OF A HOT CUT PROCESS THAT CANNOT EFFECTIVELY HANDLE THE EXPECTED VOLUMES?

A. The consequence will be less customer choice and increase customer service outages. Eventually, persistent performance disparities between what Verizon can offer retail customers and what a CLEC can offer will simply destroy competition

III. BACKGROUND NETWORK INFORMATION

Q. PLEASE DESCRIBE HOW CUSTOMER LINES (LOOPS) ARE TYPICALLY CONNECTED TO THE PUBLIC SWITCHED NETWORK.

A. There are two basic architectures for connecting loops to switching. The first, and most common, involves use of a Main Distribution Frame (MDF) at which each copper wire loop is individually cross-connected with

another pair of wires that are connected to a switch port connector block or to a CLEC's collocated equipment. The second involves use of Integrated Digital Loop Carrier (IDLC), in which a digital circuit carrying numerous multiplexed loops bypasses the MDF and is attached directly to the switch. Because these architectures have different implications for accessing unbundled loops, I will discuss each in turn.

Q. HOW DOES AN END-TO-END COPPER LOOP (A.K.A. A HOME RUN LOOP) THAT TERMINATES ON THE MDF GET CONNECTED TO THE LOCAL SWITCH?

A. Attachment 1 to my affidavit ("Figure 1") depicts a typical configuration for manually attaching copper loops to switch ports in a Verizon central office. As noted, this is done at the MDF, which consists of a series of connector blocks, each of which is connected to ironwork uprights anchored to the floor and ceiling. The MDF is depicted in Figure 1 as having two sides: a line-side and a switch-side. Bolted to each side of the MDF is a series of connector blocks (see photographs at Attachment 2& 3), each of which typically contains 200 terminals at which individual wires can be connected. To aid frame technicians in

distinguishing the two sides of the MDF, the connector blocks on the line side are arrayed vertically, and the connector blocks on the switch side are arrayed horizontally. See photographs at Attachments 2 and 3. Copper loops are typically attached to switch ports in the following manner. As shown in Figure 1, cables carrying multiple loops enter the central office and run to the MDF. At the frame, each loop (typically a pair of copper wires) is segregated from these cables and connected (by being installed at the appropriate position on the block and then either wire wrapped, push-pin or soldered) to the specific terminal on a connector block to which it is assigned. This is a "hard-wired" connection that is installed at the time the cables are brought into the central office. Barring cable replacement, Verizon technicians never touch these connections. A second wire, known as a "cross-connect" (or alternatively, "cross wire" or "jumper"), is then attached to those same line side terminals. The cross-connect runs to the other (switch) side of the MDF, where it is attached to a specific terminal on another connector block. From those terminals, a pair of wires runs to the switch port (also known as the "line card" or "line

termination unit"). This final connection from the terminal to the line card is also a "hard-wired" connection that the switch vendor establishes when the switch is installed. Again, barring equipment failure or replacement, it is never moved or altered. Verizon maintains a software data base inventory of the numbers assigned to each piece of equipment making up the loop-switch combination. They typically keep track of each copper loop by its cable number and pair number, and record its place on the connector block ("block assignment") by assigning a number to each terminal on each block. Similarly, the line units (or line ports) on the switch are assigned identifying numbers.

Q. ARE ALL COPPER LOOPS ATTACHED TO A SWITCH PORT IN THIS MANNER?

A. No, although most copper loops are attached to the switch in this manner, some are not. For various reasons, it is sometimes preferable to introduce a second frame, called the Intermediate Distribution Frame (IDF), when connecting to the switch port.[2] In this configuration, Verizon first runs a cross-connect

[2] An IDF is used primarily to minimize the length of jumper wires traveling across an MDF, or to insert additional technologies between the loop and port (such as test points or special services equipment).

from the location on the MDF where the loop terminates to a connector block on the MDF that contains the appearance of a house tie-cable that extends to the IDF. These tie cables are permanent connections within the central office that allow Verizon to extend lines from the MDF over to the IDF and then back again if necessary. On the IDF at the block where this tie-cable terminates, the Verizon technician then runs a second cross-connection to another block on the IDF where the switch port assigned to this line is terminated.

Q. HOW DOES A LOOP THAT IS ON AN IDLC SYSTEM GET CONNECTED TO A SWITCH PORT IN THE CENTRAL OFFICE?

A. Although the MDF-based architecture is the most common in use today, ILECs also use IDLC for serving residential and commercial customers. The architecture of the loop/switch combination with IDLC is substantially different from the copper wire architecture described above. As shown in Figure 3 (Attachment 4), instead of aggregating copper loops in cables and carrying them all the way to the MDF at the central office, the ILEC brings the loop first to the IDLC remote terminal, which is located in an underground vault or locked cabinet in a neighborhood.

The remote terminal converts the analog loops to a digital signal and multiplexes all the digital signals onto a digital carrier system for transmission to the central office. At the central office, the digital loops bypass the MDF altogether and access the switch directly through a digital cross-connection frame. No analog signal or physical reappearance on an MDF is ever re-established to identify an individual subscriber's loop. Therefore, when a customer is served by an IDLC loop, there are no wires at the MDF that are associated with his/her individual loop which can be disconnected for reconnection to a CLEC's collocated equipment. If a CLEC wishes to serve a customer utilizing its own switch and that customer is currently on an IDLC system, Verizon must first physically move the customer's line to a pre-existing copper facility or to a Universal Digital Loop Carrier (UDLC) system. Loops that arrive in the central office on a UDLC system have an appearance on the MDF and therefore can be cross-connected to a CLEC's collocated equipment. Verizon has indicated that **[Begin Verizon Proprietary] [End Verizon Proprietary]**

percent of its loops in New York currently use IDLC technology.[3]

Q. HOW DOES A LOOP THAT IS ON AN UDLC SYSTEM HAVE AN APPEARANCE ON THE MDF?

A. The difference between an IDLC loop and an UDLC loop is that on an UDLC system when the multiplexed digital facility arrives at the central office it is routed through central office terminal (COT) equipment. This COT converts the digital signal back to analog and de-multiplexes the facility back to each individual line, which is then terminated on the MDF just as the home run copper loops are.

Q. PLEASE EXPLAIN HOW AN EXISTING CUSTOMER'S LOOP GETS MIGRATED OVER TO A CLEC'S SWITCH.

A. First, the CLEC must have installed its switch in its own central office or in a leased facility that has been modified to provide the environment needed to support telecommunications equipment. The CLEC is then required to collocate equipment in each of the Verizon central offices in which it wants to gain access to unbundled loops (UNE-L). This collocated equipment is used to extend the unbundled loop from

[3] Response to Discovery request ATT-VZ-16PS.

the Verizon central office where the loop terminates to the CLEC's switch that is remotely located from Verizon's central offices. Assuming all of these prerequisite activities have occurred, the actual service conversion of migrating the loop off of the Verizon switch onto the CLEC's collocated equipment is accomplished by using a process commonly known as a hot cut.

Q. WHAT IS A HOT CUT?

A. A hot cut is the process that is used by the ILECs to disconnect a working (hot) line from one carrier's switch and reconnect it to another carrier's switch. Hot cuts are used to move lines from the ILEC to a CLEC, from a CLEC to the ILEC and from one CLEC to another CLEC.

Q. PLEASE DESCRIBE THE PHYSICAL STEPS NECESSARY FOR VERIZON TO PERFORM A HOT CUT WITHIN ITS CENTRAL OFFICE.

A. When Verizon's central office technicians receive an order for a hot cut, they first determine the frame locations of the customers loop and the CLEC's collocated equipment. If done properly, prior to the cutover date Verizon's technicians pre-wire the cross-

connection from the connector block where the customer's loop terminates on the line side of the MDF to the connector block on the MDF where the Carrier Facility Assignment (CFA) of the CLEC's collocated equipment terminates. During the pre-wiring stage new cross connection jumper wires will be terminated by a solder, wire wrap or punch down connection to the appropriate (CFA) terminals on the connector block for the CLEC's equipment. These CFA terminals are assigned by the CLEC when the CLEC submits its Local Service Request (LSR) for the unbundled loop. The wires are then run to the line side of the MDF to the terminal block where the cable and pair for the customer's loop appears on the frame. At this point, because this is a working service, the wires cannot be terminated to the customer's loop until the CLEC is ready to provide dial tone to the customer. Otherwise, the customer will lose service. They must be physically tied down at the terminal block and tagged for termination on the actual service cutover date. Two days prior to the service cutover date, Verizon's technicians should verify that they are getting dial tone from the CLEC's switch on the CFA specified by the CLEC on its order. If dial tone is

present, the order proceeds as scheduled. However, should the Verizon technician find that there is no dial tone coming from the CLEC's switch Verizon should notify the CLEC to give the CLEC an opportunity to fix the problem. On the date that the cutover is scheduled Verizon will remove the existing wiring that connects the customer's loop to the Verizon switch and will connect the tagged pre-wired connection to the CLEC's collocated equipment. Prior to performing this action the Verizon technician should verify that the customer's line is idle so that a call in progress is not dropped when the wires are lifted. Additionally, if the CLEC requested a coordinated cutover, which CLECs often do as an additional measure of service quality, the Verizon technician is required to contact the CLEC prior to performing the cutover activity. After completing the conversion the Verizon technician should then disconnect the old cross-connection wires from the switch port and remove the dead cross-connection jumpers from the MDF and closeout the work order.

Q. IS THE SINGLE CROSS-CONNECTION METHOD YOU DESCRIBER ABOVE THE ONLY METHOD REQURED TO PERFORM A HOT CUT?

A. No. The method I described above is the simplest of the scenarios that exists involving only one cross-connection per customer line. As I described earlier in my testimony, depending on the frame architecture of the central office often more than one cross-connection jumper is necessary to connect a customer's loop to the switch port or to the CLEC's collocated equipment. This is the case in offices that utilize IDFs and in offices that have a newer type of MDF known as a Cosmic frame. Central offices with IDFs typically require four cross-connects, two new cross-connections to connect the loop to the collocated equipment and two disconnects to remove the Verizon switch port from the loop to accomplish a transfer of a customer's line using the hot cut process. Central offices with Cosmic frames require three cross connections, two new connections and one disconnect, to accomplish the transfer.[4]

Q. HOW MANY OF VERIZON'S NEW YORK OFFICES HAVE THESE TYPES OF FRAME ARCHITECTURE?

A. Verizon has **[Begin Verizon Proprietary] [End Verizon Proprietary]** central offices that have a Cosmic frame, a MDF with an IDF or a combination of

[4] Response to Discovery Request ATT-VZ-6

these frame architectures.[5] **[Begin Verizon Proprietary]**

[End Verizon Proprietary]

Q. WHAT IS THE IMPACT OF THE ADDITIONAL CROSS CONNECTIONS NEEDED ON THESE FRAMES?

A. As I will describe later in my testimony, the more touch points that are involved in any manual process the more opportunity there is for human error to occur. The additional cross connections required in these offices to achieve a hot cut will present a greater opportunity for something to go wrong which could impact the customer's service. Additionally, the additional connections that need to be made may increase the time it takes Verizon's frame technicians to do the work necessary for a hot cut thereby reducing the number of hot cuts that these technicians can perform in these offices on any given day/night.

Q. ARE THE STEPS YOU DESCRIBE ABOVE ALL THAT A HOT CUT ENTAILS?

A. No. My description is focused solely on the physical work that must be performed within the central office to accomplish the hot cut. In addition to this

[5] Response to Discovery Request ATT-VZ-7PS

activity there are administrative functions such as order administration and billing updates that must occur. Typically a hot cut also involves the software changes necessary to port the customer's telephone number from the existing switch over to the switch that the loop is being moved to. It is critical that the timing of this number porting is coordinated with the physical cutover so that the customer's service is not interrupted.

Q. IS THERE ANY OTHER PHYSICAL ACTIVITY REQUIRED TO PERFORM A HOT CUT?

A. When a customer's loop is on an IDLC system Verizon must physically remove that loop from the IDLC remote terminal. This activity requires a field dispatch to the remote terminal where a Verizon technician must perform the physical work to move the customer's line off of the IDLC system onto a copper or UDLC facility. It also requires cross connection work in the central office to connect the customer's new loop facility to the Verizon switch port, if the work is being done prior to the hot cut date or to the CLEC's collocated equipment when the work is coordinated with the hot cut activity.

IV. Bulk Hot Cuts

Q. DOES THE "BULK" HOT CUT PROCESS ELIMINATE ANY OF THE PHYSICAL STEPS THAT ARE ASSOCIATED WITH A HOT CUT?

A. No. To transfer a loop from one carrier's switch to another all of the physical activity that I have described above must occur regardless of the hot cut process being used.

Q. WHAT IS THE DIFFERENCE BETWEEN A BULK HOT CUT AND AN INDIVIDUAL HOT CUT?

A. An individual hot cut is utilized to fulfill a CLEC order that contains the line or lines that are to be cutover for a single end user customer. These orders can be for a single loop or for 2 or more loops for a multi-line customer. Verizon will work these orders using a similar hot cut process to the one described above on an order by order basis. A bulk hot cut process is used in those instances when a CLEC identifies multiple loops to be cut over for multiple customers within the same central office. When the bulk process is used all of the lines are scheduled to be cutover on a specific date that the CLEC has pre-negotiated with Verizon. This process has mostly been used to date to convert existing CLEC resale and UNE-P customers to unbundled loops.

Q. WHAT EFFICIENCIES DOES VERIZON GAIN FROM THE BULK HOT CUT PROCESS?

A. None of the manual work at the frame that is required for a hot cut is avoided in a bulk hot cut process. The only efficiency that Verizon and the CLECs realize is that the administrative coordination part of the cutover work is performed once per central office for all of the cutovers that are scheduled for that day within that central office as opposed to repetitively for each customer order. The increased efficiency associated with the coordination, however, comes at a cost to CLECs' ability to obtain a quick transfer to UNE-L. Under the bulk hot cut process, Verizon is given more time to perform its pre-wiring from the date the order is received to the date the cutover is scheduled than it gets when dealing with an individual order. The interval for a bulk hot cut is typically 15 days whereas for individual hot cuts it is 6 days for orders of 5 lines or less.

Q. IS IT PRACTICAL TO UTILIZE THE BULK HOT CUT PROCESS FOR ALL UNE-LOOP HOT CUT CONVERSIONS?

A. No. The bulk hot cut process is currently better than an individual hot cut process for migrating existing CLEC customers from UNE-P or total service resale to

UNE-loops within the same central office. Once the embedded base of UNE-P/Resale customers is migrated over to UNE-L, the bulk hot cut process has significant problems in a mass-market application, even if UNE-P were permitted on a "rolling basis".

Q. PLEASE EXPLAIN THE LIMITATIONS OF THE BULK HOT CUT PROCESS THAT WILL PREVENT IT FROM BEING ABLE TO ACCOMPLISH MASS MARKET MIGRATIONS?

A. Based on AT&T's experience, Verizon currently requires a minimum range of anywhere between 30 and 100 lines in a central office to use its bulk hot cut process.[6] This minimum makes the bulk process useful for cutting over a large group of customers where this minimum line count has been met. This process, therefore, is useful for cutting over the embedded base where the CLEC is already serving customers on UNE-P. It presents significant problems, however, as a basis for providing service to newly acquired customers on a UNE-L basis in a marketplace where UNE-P is no longer available. Indeed, without using "rolling UNE-P on a permanent basis, it will not work at all. Given the 15 day interval required from order date to due date

[6] In AT&T's experience, Verizon has not been consistent. We often find out what the minimum is after a project order has been submitted, at which time we are informed that the minimum has not been met.

for a bulk hot cut job and the 30 line per central office bogie the CLEC will never be able to use this process to win small business and residential customers. To do so, the CLEC would be required to inform prospective customers that they will be added to a queue and when the quantity of other prospective customers in the queue for their serving office reaches the required minimum number then their service will be migrated over to the CLEC in 15 days. Considering there is no way of predicting when the CLEC will get to the 30 line bogie in the customer's central office the CLEC could not even give its prospective customer an estimate of how long it will be before the customer can be migrated over. Obviously the CLECs will not win many customers under such a scenario.

Q. WHY ISN'T UNE-P ON A ROLLING BASIS A SOLUTION TO THIS PROBLEM?

A. Properly (and flexibly) applied, rolling UNE-P mitigates some problems. But even at its best, it does not solve many others. To be at all useful, the rolling UNE-P interval provides sufficient time to permit Verizon to identify and rectify UNE-P customer lines that are on IDLC systems that don't have

parallel copper or UDLC facilities. The interval must also be sufficient to allow the CLEC time to augment its collocated facilities. The UNE-P interval will also need to be extended to accommodate the limitations that Verizon places on the bulk hot cut process.[7] Additionally, often multi-location business customers require a carrier to serve all of its lines throughout the state. Some of these lines may be in locations where the CLEC currently has no facilities. Without an extended rolling UNE-P interval that will allow the CLEC time to establish its facilities in these locations CLECs will be precluded from competing for these customer accounts. Finally, and most importantly, rolling UNE-P does not relieve Verizon of its obligation to support hot cut volumes that it will face as it tries to keep up with the rolling UNE-P migrations.

Q. WHAT ARE THE OTHER LIMITATIONS THAT VERIZON PLACES ON THE BULK HOT CUT PROCESS?

7 As I discuss in more detail below, Verizon currently limits bulk hot cut projects on any give night to one central office per "manager's area" and two central offices per "geographic area." It also places a limit of 150 cutovers per night in any central office. In a world without UNE-P, when virtually all migrations require a hot cut, such limitations could delay UNE-P to UNE-L migrations as projects stack up in a queue. The rolling UNE-P interval must be long enough to accommodate delays caused by such backlogs.

A. In addition to the central office minimums required by Verizon to qualify for a bulk hot cut project, Verizon currently limits the bulk hot cut activity to one central office per manager's area and two central offices per geographic area on any given night. Additionally, Verizon limits the number of cutovers per central office to 150 per night.[8]

Q. WHAT IS A MANAGER'S AREA?

A. Verizon defines its manager's area differently throughout the state. In high density areas such as the NY Metro LATA a manager's area is often defined as a single central office and can range to as many as five central offices. In other locations a manager's area can consist of all the central offices in a single LATA.[9]

Q. WHAT IS A GEOGRAPHIC AREA?

A. Verizon has defined eight geographic areas. They are; Manhattan, Brooklyn & Staten Island, Queens, Bronx, Nassau, Suffolk, Westchester, and Upstate.[10]

Q. WHAT IS THE IMPACT OF VERIZON'S LIMITATIONS?

A. These limits are a Verizon overall limit and not a per CLEC limit. This means that if a particular CLEC has

[8] Response to Discovery Requests ATT-VZ-11S and ATT-VZ-12
[9] Ibid
[10] Ibid

a bulk hot cut job in a Verizon manager area or has two scheduled for a particular geographic area all other CLECs are shutout of that area until that job is complete. If this is a large CLEC the 150 conversions per night limit may lock up that manager's area for a considerable amount of time before the job can be completed. And, of course, even the particular CLEC being served is shut out of additional bulk hot cut jobs if they would overload the Verizon limiting requirements.

Q. ARE THERE ANY OTHER COMPLICATING ISSUES ASSOCIATED WITH THE BULK HOT CUT PROCESS?

A. Yes. The bulk hot cut process is not designed to handle IDLC loops. In fact, Verizon's bulk hot cut process excludes IDLC loops. Under Verizon's process, CLECs are given access to Verizon's loop make-up database to determine whether the loop is on IDLC or not. If it is, the CLEC may not include it in the batch process and must use the individual hot cut process to convert this loop. Nevertheless, CLECs occasionally include IDLC loops in batch hot cuts because Verizon's database, upon which CLECs rely for IDLC information, has errors in it. In those instances, the lines are removed from the bulk hot cut

project. Additionally, if the line happens to be part of a multi-line account all of the lines associated with that account must be removed from the project to maintain the quality of the customer's service.

Q HOW SHOULD THE COMMISSION EVALUATE THE CAPABILITY OF A BULK HOT CUT PROCESS?

A First, the Commission should support the enhanced bulk hot cut process that is being recommended by AT&T in this proceeding. This will, at minimum, preserve the existing levels of UNE-L competition, improve Verizon's performance and bring Verizon's hot cut charges down from the currently threatened $185 per line to something that might be commercially viable. What we are attempting to do here is to establish a more efficient and commercially priced process that can handle the current market scale – which might be called Scale Level 1. Only after Verizon, in consultation with CLECs and under guidance from the Commission has completed the enhancements necessary to establish such a bulk hot cut process, can the Commission truly evaluate its scalability. Second, the Commission must evaluate whether the bulk hot cut process that it eventually approves can deliver the number of hot cuts that will be necessary at Scale

Level 30, the level that it would be expected to serve in a mass market served by UNE-L in an efficient, financially viable and competitively equitable manner. The Commission should approve a hot cut process capable of handling the necessary volumes only after taking into account the effects on consumers and competition. A mass market in which residence and small business customers are served by UNE-L poses an enormous challenge. Not only will the existing CLEC customer base need to be migrated from UNE-P to UNE-L but, on a going forward basis, Verizon will have to be capable of provisioning new orders for CLEC customers in the same interval as they currently provision CLEC UNE-P customer orders in addition to performing the hot cuts that will be necessary for all the customers that will be migrating back and forth among CLECs and Verizon,. The Commission must ensure that such a scenario will not result in unacceptable levels of service failures and/or delayed local service that will harm both end users and competition.

Q. WHAT SHOULD THE COMMISSION DO TO DEVELOP AN IMPROVED BULK HOT CUT PROCESS IN THIS PROCEEDING?

A. To ensure development of an improved bulk hot cut process that can be established using today's manual

cross connection method, the Commission should incorporate the hot cut experience gained over the last several years by both Verizon and CLECs; Verizon should be ordered to work in a collaborative effort with AT&T and the other CLECs to develop this process, incorporating the recommendations that AT&T has presented in this proceeding. Moreover, it may be appropriate for the Commission to develop and approve more than one bulk hot cut process. Only when the Commission is satisfied that it has developed and implemented such a process, can it evaluate its scalability for a mass market.

Q. HOW CAN THE COMMISSION EVALUATE WHETHER THE BULK HOT CUT PROCESS THAT RESULTS FROM THIS PROCEEDING IS SCALABLE FOR A MASS MARKET?

A. The most effective manner for the Commission and Verizon to assess the functionality and scalability of this process is to put the process through a pre-implementation test. However, this trial should not require the CLECs to incur the expense and risk to CLEC customers to test whether Verizon can deliver on its promise. In lieu of the CLECs having to pay for the capital expansion that will be necessary to trial this process the Commission should require Verizon to

collocate equipment in a subset of its own central offices. Once Verizon has collocated this equipment and established the facilities necessary to connect the collocated equipment to other switches in its network Verizon can go through the process of bulk hot cutting its retail POTS customers from one Verizon switch to another. This actual experience using Verizon's imbedded base of customers as the trail candidates will give both Verizon and the Commission a readout on whether the bulk hot cut process is functioning as designed. In particular, the procedure will create a better picture of the time and labor requirements of high volume hot cut processes, and thus facilitate a reasoned evaluation of whether the manual process can handle the volume, geographic reach and scope characteristics of a mass market.

Q. IS THE TEST THAT YOU HAVE JUST DESCRIBED SUFFICIENT TO DETERMINE WHETHER VERIZON'S PROCESS IS WORKABLE?

A. No. It is necessary, but not sufficient. Even if Verizon is ordered to perform this trial across a broad base of its existing network the trial still cannot be robust enough to fully simulate the CLEC experience in a mass market environment. However, conducting a pre-implementation trial as I have

described will give the parties some sense of whether the process has a chance of succeeding prior to its implementation on a broader scale.

V. Hot Cut Volumes

Q. WHAT IS THE HOT CUT VOLUME THAT VERIZON WILL BE EXPECTED TO MEET IN A MASS MARKET ENVIRONMENT?

A. This is difficult to estimate because no one knows for sure how the competitive local service market will mature in this environment. However, when using the current CLEC aggregate UNE-P volumes and current UNE-L hot cut volumes as a proxy to develop this estimate, Verizon can experience approximately 103,238 hot cuts per month. I derived this number by taking the average number of hot cuts that Verizon performed in the first seven months of 2003 (3,097) and adding to it my estimate of the number of additional hot cuts that Verizon would perform if UNE-P were not available (i.e., 100,141).[11]

[11] AT&T has no way of accurately estimating what percent of the orders will involve multi-line accounts or exactly how many lines are on each of these multi-line accounts. This estimate, however, is very conservative in assuming that each order only involves a single line. For example, if only 8 percent of these accounts involved a multi-line customer and assuming each of these customers only had one additional line, a second line would add another 8,011 hot cuts to the additional 100,141 that will need to be performed.

Q. HOW DID YOU ARRIVE AT THIS ESTIMATE OF ADDITIONAL HOT CUTS?

A. My calculations rely on highly proprietary AT&T data. The data and method for my calculations are set forth in Appendix A, attached hereto.

Q. HOW DO THESE PROJECTED HOT CUT VOLUMES COMPARE TO VERIZON'S CURRENT LEVEL OF HOT CUT ACTIVITY?

A. For the seven-month period from January 2003 to July 2003, Verizon has performed a total of 21,678 individual hot cuts in New York.[12] As noted above, this amounts to an average of 3,097 individual hot cuts per month. When this current volume is added to the projected volume of 100,141 additional hot cuts, the total monthly hot cut volumes that Verizon may face is 103,238. This represents an increase in output of 33 times greater than the current levels. Obviously it is difficult to fathom how Verizon can even contemplate it will be able to accomplish this increased level of activity, without impacting service quality for the CLECs and end user customers **[Begin Verizon Proprietary]**.[13] **[End Verizon Proprietary]** That

[12] Based on Verizon's reported results for the PR-6-02-3520 metric in the January through July New York C2C reports.

[13] The individual hot cut volumes shown in this analysis, which were taken from Verizon's New York C2C reports, are significantly higher

concern is made greater by the fact that Verizon has not, to date, even acknowledged this level of scaling.

Q. IS THERE SOME DATA POINT, OTHER THAN CURRENT UNE-P VOLUMES, THAT CAN BE USED AS A PROXY TO ESTIMATE FUTURE POTENTIAL HOT CUT VOLUMES?

A. Yes. The highly competitive InterLATA long distance market Primary Interexchange Carrier (PIC) change volumes can also be used as a proxy to estimate these volumes. The long distance market is a highly competitive, mature market that involves many of the same firms as are now competing in the local market in New York – including Verizon. That market's systems permit efficient customer-initiated carrier changes. And, of course, with the entry of long distance carriers into the local market and Verizon into the long distance market, the selling of bundled service offerings combining local and long distance service have become increasingly commonplace. Thus, volumes of customer changes in the long distance market provide a proxy for the number of changes that could

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than the volumes that Verizon reflected in its response to Discovery Request ATT-VZ-2PS. In its response to this DR, Verizon indicated that its total hot cut volume for the first seven months of 2003 was **[Verizon Proprietary] [End Verizon Proprietary]** hot cuts for an average of **[Begin Verizon Proprietary] [End Verizon Proprietary]**hot cuts per month. For the purposes of this testimony AT&T chose to be on the conservative side and give Verizon the benefit of the doubt by using the greater volumes reflected in the C2C report.

be anticipated in a maturely competitive local exchange market.

In New York, there were a total of **[BEGIN VERIZON PROPRIETARY] [END VERIZON PROPRIETARY]** Interlata PIC changes for the six-month period of January through June of 2003. This equates to an average of **[BEGIN VERIZON PROPRIETARY] [END VERIZON PROPRIETARY]** InterLATA long distance PIC changes per month. Should local market competition become as robust as the competitively mature long distance market, each of these almost **[BEGIN VERIZON PROPRIETARY] [END VERIZON PROPRIETARY]** PIC changes would require a hot cut for the customer to be able to change their local service provider.

VI. Service Quality

Q. WHAT SERVICE QUALITY ISSUES ARISE OUT OF THE HOT CUT PROCESS?

A. In contrast to the software based Primary Inter-exchange Carrier (PIC) process that is used to allow customers to change their long distance carrier without a service interruption and the current software based process used for migrating customers to a CLEC using UNE-P also without a service

interruption, the hot cut process is very manual requiring a hand-manipulated physical disconnection of the customer's line from the network equipment thereby disrupting service during the cutover process. The manual nature of this process lends itself to human error that all too often leads to extended service outages and customer dissatisfaction.

Q. ISN'T THE OUTAGE EXPERIENCED BY THE CUSTOMER VERY BRIEF?

A. Only when everything is done perfectly. However, even with today's limited hot cut volumes in New York of only 3,097 hot cuts per month on average for the first seven months of 2003[14], the CLEC's too often experience outages in excess of the few seconds it should take when everything is done properly. Based on Verizon's New York Carrier-to-Carrier results for this same seven month period Verizon had a 1.2 percent trouble report rate for out-of-service troubles experienced as a direct result of a hot cut activity.[15]

Q. HOW LONG WERE THE CLEC's CUSTOMERS OUT OF SERVICE AS A RESULT OF THESE ERRORS?

[14] Based on Verizon's reported results for the PR-6-02-3520 sub-metric in the January through July New York C2C reports.
[15] Based on Verizon's reported results for the PR-6-02-3520 sub-metric in the January through July New York C2C reports.

A. The average time to restore the customer's service for hot cut related troubles ranged from a low of 14.7 hours in January to a high of 33.3 hours in April.[16] These outage times represent the average time to restore the customer's service indicating that there were many instances where customers were out of service for more than a day.

Q. WHAT CAUSES THESE OUT OF SERVICE CONDITIONS ASSOCIATED WITH HOT CUT ACTIVITY?

A. Any process such as the process for hot cuts that is manual in nature introduces human error into the process. Mistakes such as disconnecting the wrong loop, premature disconnects, cross-connecting the loop to the wrong CFA, inadvertently breaking cross-connection wires on the frame for end users not involved in the hot cut while running in the new or disconnecting the old jumper pairs and making poor connections on the terminal block (e.g. "cold" solder connections or loose wire wraps) will lead to a customer service outage which can be lengthy should the problem go undetected by the person who made the error.

[16] Based on Verizon's reported results for the PR-9-08-3520 sub-metric in the January through July New York C2C reports

Q. WILL ALL OF THESE TROUBLES BE REFLECTED IN THE TROUBLE REPORT RATE REPORTED IN VERIZON'S C2C HOT CUT METRIC RESULTS?

A. No. It is important to note that this report only reflects troubles on the lines that were directly associated with the hot cut. However, other troubles that were caused by the hot cut activity on the frame but are not associated directly with the line being cutover are not reflected in the failure rate reported in the C2C hot cut results. Examples of these trouble types are disconnects of the wrong loop and the inadvertent breaking of cross-connection wires or shorting terminal connectors on the frame for customer loops not involved in the hot cut.

Q. WHAT IMPACT WILL SERVING THE MASS MARKET USING UNE-L HAVE ON THE SERVICE QUALITY PROBLEMS CREATED BY HOT CUTS?

A. As hot cut volumes significantly increase to serve the mass market the additional workload and demands on the frame technicians will only tend to make these problems occur more frequently. Additionally, because of the volume of work and the increased number of outages that will occur the duration of these outages will tend to be longer before the problem can be

identified and repaired by a Verizon technician. Verizon's current poor performance at minimal hot cut volumes (a 1.2% failure rate with an average time to restore often in excess of 24 hours) will only worsen, with a commensurate impact on the CLEC's customers, when Verizon is faced with mass market volumes. Certainly any serious Verizon scalability plan must indicate some planning for significant increases in repair obligations.

Q. WHY DO YOU BELIEVE THAT VERIZON'S SERVICE QUALITY WILL LIKELY WORSEN WHEN VOLUMES INCREASE DRAMATICALLY?

A. Failure and service restoration rates will almost certainly increase given the tremendous increase in the level of activity and the number of additional people that will be necessary to work the hot cut process and to troubleshoot and repair the troubles caused by this process. Because the industry has absolutely no experience providing service to the mass market using a manual hot cut process or anything remotely comparable to it, it is impossible to accurately quantify the impact this process is going to have on service quality. But we do know the direction of the impact. It will worsen service quality. Anytime a process is subjected to human

intervention and manual steps there is a greater opportunity for failures to occur when using that process, and that opportunity increases disproportionately when rapid increase in volumes occur. For decades all industries, the telecommunications industry included, have sought out automated process improvements to reduce or eliminate manual touch points to a process. Attempting to serve the mass market using the manual hot cut process is contrary to all of these efforts and truly sets the industry significantly backward in time. At a minimum, any serious Verizon scalability plan must indicate some planning for significant increases in repair obligations.

Q. CAN YOU ESTIMATE THE IMPACT ON CUSTOMER SERVICE WHEN VERIZON EXPERIENCES AN INCREASE OF 33 TIMES THE CURRENT LEVEL OF HOT CUT VOLUMES AS DISCUSSED ABOVE?

A. As I indicated earlier in my testimony, Verizon is currently running a 1.2% trouble report rate on lines that were associated with a hot cut. Assuming that this failure rate does not get worse, an extremely unlikely assumption considering the increased activity on the cross connection frames, the additional less experienced people that will need to be involved and

the pressures that will be placed on Verizon's staff, 1,239 customers will experience an out-of-service failure each month. Of course, this failure rate assumes that Verizon has at least the nominal capability of performing the 103,238 hot cuts that will be required of them each month. If, as I expect, Verizon is unable to keep up with such volumes, some customer will be spared a service outage, although Verizon's failure to keep up with the volumes will do nothing to support a robust competitive local service environment. In fact, when a system begins to fall behind its ability to handle recurring obligations, backlogs develop which create even greater stress on the system until it breaks entirely. This is, of course, what happened to Verizon's OSS systems when overloaded by the commercial volumes of UNE-P orders that it was required to handle at the end of 1999 and the beginning of 2000.

Q. WHY ARE THESE SERVICE PROBLEMS PARTICULARILY TROUBLSOME FOR THE CLECs?

A. CLECs are obviously just starting out trying to establish themselves in the marketplace. It is difficult for a CLEC to promote itself as a quality

service provider when the very first experience the customer has with that CLEC is a service outage. These experiences tend to result in the customers migrating their service back to Verizon and/or the CLEC trying to overcome the negative word of mouth publicity that these outages cause. Service outages associated with customer attempts to change carrier are also communicated through the retail community. And the result is that customers decide not to leave Verizon, not because they are entirely satisfied with Verizon's service or its prices, but because they fear that their telephone service will be disrupted if they attempt to leave.

Q. WILL VERIZON'S BULK HOT CUT PROCESS ALLEVATE THESE SERVICE QUALITY ISSUES?

A. No. As I mentioned earlier the bulk hot cut process does not eliminate any of the physical work necessary on the frame to transfer a line to the CLEC, therefore, the same human error factors apply to the bulk hot cut process also.

VII. Factors Limiting Scalability

Q. WHAT ADDITIONAL PROBLEMS ARE ASSOCIATED WITH THE HOT CUTS PROCESS SPECIFICALLY WHEN ATTEMPTING TO USE IT TO SERVE THE MASS MARKET?

A. Because of the manual work involved with each and every hot cut, Verizon is limited in the number of hot cuts it is capable of performing on a daily basis thereby gating the CLECs ability to mass market their services. The gating process that exists today will not suffice in a mass market where thousands of new orders arrive every day. As a result, to handle Level 30 Scale would require that Verizon materially improve its current provisioning performance but for volumes at a scale 33 times its current level.

Q. WHAT FACTORS LIMIT THE NUMBER OF HOT CUTS VERIZON CAN PERFORM ON A DAILY BASIS?

A. One of the biggest limiting factors is that each hot cut requires numerous steps that must be manually performed by Verizon's frame technicians. For example, in a medium to large size central office the pre-wiring step to prepare for the cutover is typically performed by a minimum of two technicians. One of these technicians works the line side of the frame while the other works the switch (a.k.a. drop)

side of the frame. Additionally, there is often a third technician who coordinates the activity of the other two by calling out the block appearances and assignments on the frame associated with each work order. This teaming arrangement is the most efficient means to perform the pre-wiring task by allowing the two technicians to pass the cross-connection wires through the frame to each other for connection to the appropriate terminal blocks rather than having to walk completely around the frame for each cross-connection that needs to be run. As with all manual processes there is a limit to the number of cross-connections that this team of technicians can accurately pre-wire during their work shift.

Q. IN ADDITION TO DAY-TO-DAY HOT CUT VOLUMES THAT VERIZON WILL EXPERIENCE TO MEET COMPETITIVE MASS MARKET DEMANDS HOW LARGE IS THE IMBEDDED BASE OF UNE-P LINES THAT WILL NEED TO BE CONVERTED VIA THE HOT CUT PROCESS?

A. Based on Verizon's C2C Metrics report the total number of UNE-P lines in service at the end of July 2003 in New York was 2,229,808.[17]

[17] From the MR-2-02-3140 sub-metric results as reported in Verizon's July 2003 C2C results for New York.

Q. VERIZON HAS STATED THAT IT WOULD BE ABLE TO MEET ANY FUTURE HOT CUT DEMAND BY ADDING PEOPLE TO ITS STAFF TO PERFORM THIS WORK. IS THIS A REASONABLE EXPECTATION?

A. No, not at all. It is important to keep in mind that the Verizon personnel responsible for the hot cut frame work are not dedicated to this task. Verizon's frame personnel are also required to perform other frame duties such as making connections for new Verizon retail and wholesale lines and troubleshooting and repairing frame related troubles on existing lines. Assuming that Verizon's staffing for its central office frames is not already at its maximum level there would be some productivity gains by adding staff. However, because of the fixed size and work space available on the distribution frames there truly is a law of diminishing returns to the output that will be realized by adding people to the process. People working simultaneously on the frame tend to get in each others way. The more people that are added the more interference will be encountered. Because of this sliding scale in the productivity realized by the addition of people to the process Verizon cannot claim the ability to double or triple its current throughput by simply doubling or tripling its staff. It just

does not work that way. Besides which, based on the analysis previously stated in my testimony, Verizon will need to increase its output by more than 33 fold. It is not clear to me how they plan on accomplishing that by simply throwing bodies at the problem. Indeed, because Verizon has yet to fully acknowledge the scale issue, it has not offered any data on the number of additional employees it would need to add, where they would be added, how they would be supervised, how many would work at each office (including the many offices that today are entirely unstaffed but where there are thousands of UNE-P orders), or how they would be moved around to accommodate the peaks and valleys of demand by central office.

Q. WHAT OTHER FACTORS COME INTO PLAY THAT WILL LIMIT VERIZON'S ABILITY TO KEEP UP WITH THE NUMBER OF HOT CUTS REQUIRED TO SUPPORT THE MASS MARKET?

A. Because hot cuts are performed in the central office Verizon must have the proper staffing in the central offices where the demand is going to be. In a truly competitive market the CLECs are going to mass market their service offer. Neither the CLECs nor Verizon can predict the take rate per central office that the CLECs are going to achieve on a daily, weekly or even

monthly basis. As a result there are going to be daily peaks and valleys in demand at a central office level. In instances where Verizon does not have sufficient staffing in the high demand offices or, worse yet, if the demand in these offices exceeds Verizon's ability to keep up with the volumes at maximum staffing levels backlogs will begin to develop and the CLEC's ability to compete will be severely impaired.

Q. IF THE HOT CUT DEMAND PER CENTRAL OFFICE CANNOT BE PREDICTED ON A DAY-TO-DAY BASIS ARE THERE GOING TO BE INSTANCES WHERE VERIZON WILL HAVE IDLE STAFF IN SOME CENTRAL OFFICES.

A. Yes. Because the Verizon solution is based on having technicians in place to meet whatever demand it gets from the marketplace logically there are going to be times when some centrals are overstaffed in relation to the workload required for that day. Conversely, other offices are going to be overloaded and not be able to accomplish all that is required of them. Because of the limited work space of the MDF and the fluctuations in the day-to-day volumes that are going to occur this situation cannot be resolved by simply reassigning personnel from one office to another on a

day-to-day basis. Additionally, to do this reassigning Verizon would have to redesign its current force management plans which typically do not have central office staff reporting to a different central office on a daily basis.

Q. DOES VERIZON CURRENTLY STAFF ALL OF ITS OFFICES?

A. No. Verizon has indicated that **[Begin Verizon Proprietary] [End Verizon Proprietary]** of its central office are 'dark' or un-staffed offices. These offices account for **[Begin Verizon Proprietary] [End Verizon Proprietary]**percent of all the Verizon central offices in New York.[18]

Q. WHAT IS AT&T's UNE-P VOLUMES IN THESE DARK OFFICES?

A. At the end of 2002, AT&T had **[begin AT&T Proprietary] [End AT&T Proprietary]** UNE-P customers in these dark offices. Presumably other carriers also market in these areas and require provisioning for their customers. Additionally, AT&T has continued to markets its local service offer in the areas served by these dark offices and it continues to grow its customer base in these areas of the state. In July of this year AT&T issued over **[Begin AT&T Proprietary]**

[18] Response to Discovery request ATT-VZ-1PS

[End AT&T Proprietary] UNE-P orders for customers served by dark offices. Taking into account the **[Begin AT&T Proprietary] [End AT&T Proprietary]** migration-to-order ratio discussed earlier in my testimony these **[Begin AT&T Proprietary] [End AT&T Proprietary]** orders accounted for over **[Begin AT&T Proprietary] [End AT&T Proprietary]** migrations. AT&T's UNE-P migration activity in these dark offices alone exceeds Verizon's current monthly hot cut volumes for all carriers and for all offices.

Q. DO THESE DARK OFFICES CAUSE ANY UNIQUE CONCERNS FOR THE CLECs?

A. When CLECs are serving the mass market by migrating retail customers over to UNE-P the lack of staffing in these offices is a non-issue because the conversion to UNE-P is accomplished via a software change and does not require any physical activity. If UNE-L becomes the only connectivity option available to the CLECs to serve the customers located in these offices there is a concern that Verizon will not have the resources that can be dispatched to these offices to keep up with the level of hot cut activity that will be required. Of course this concern assumes that the CLEC is able to establish a collocation arrangement in

these dark central offices, which may be an issue in of itself.

Q. WHY IS COLLOCATION IN THESE OFFICES A CONCERN?

A. Typically, these unstaffed offices are small buildings that house remote switching equipment or smaller end office switches. It is not clear whether Verizon is going to have the space to accommodate the CLEC's that are going to be required to collocate equipment in these locations to convert the base of UNE-P customers to UNE-L and to further market their local service offer in these areas. Based on the data supplied by Verizon in response to Discovery Request ATT-VZ-1PS, only**[Begin AT&T Proprietary] [End AT&T Proprietary]** of the **[Begin AT&T Proprietary] [End AT&T Proprietary]** unstaffed offices currently contain a CLEC collocation arrangement indicating that Verizon has minimal experience with establishing collocations in these locations.

Q. ARE THERE ANY OTHER COLLOCATION ISSUES INVOLVED WITH SERVING THE MASS MARKET WITH UNE-L?

A. Yes. Though most, but not all, of the Verizon central offices that are staffed on a full time basis currently contain collocated equipment it is not clear whether these offices will be able to accommodate the

dramatic increase in the space that will be needed for the CLEC's to expand these collocations or for new CLECs, that were formerly UNE-P only providers, to install their equipment. The current collocation arrangements that the CLECs have installed in these locations were engineered and sized for the CLEC's UNE-L capacities in a Scale 1 Level marketplace where UNE-P was also an option. These CLECs, who are fortunate enough to already have a collocation arrangement, will have to expand their footprint in each central office to allow for the equipment, terminations and power cabling that will have to be installed to support the CLEC's base of UNE-P customers plus all newly acquired customers at a Scale 30 level. Other UNE-P CLECs who are not already collocated in each central office where they are serving customers will be required to establish a brand new collocation from scratch. [19]

Q. ARE THERE OTHER COLLOCATION ISSUES OTHER THAN THE CENTRAL OFFICE SPACE ISSUES?

[19] This assumes that these former UNE-P only providers can secure the capital that they will need to install their own switches and build out the facilities they will need to convert their UNE-P customers to UNE-L. Without this capital these CLECs will most likely simply go out of business thereby reducing competitive options in the marketplace.

A. Yes. CLECs are going to be strapped with the time and cost that it is going to take to establish their own networks and collocation arrangements in all of the locations where they currently compete with Verizon for customers. The cost issues alone may force many CLECs to reexamine their business plans and decide to suspend their marketing efforts in many locations of the state. Other CLECs may choose to stop competing altogether. Additionally, Verizon has not made it clear what, if any, impact the demand it is going to receive for these new collocation arrangements and for the expansion of existing collocation arrangements is going to have on its intervals to process these orders through to completion.

Q. OTHER THAN THE STAFFING ISSUES ALREADY MENTIONED IN THIS TESTIMONY ARE THERE ANY OTHER POTENTIAL STAFFING PROBLEMS THAT RESULT FROM HAVING TO SERVE THE MASS MARKET SOLELY WITH UNBUNDLED LOOPS?

A. When an existing retail customer is served by an IDLC loop, the migration to a different local service provider using a UNE-P connectivity option is not a problem because this migration is accomplished by a software change in Verizon's Operations Support Systems and does not require any physical changes to

the line being transferred. As I described earlier in my testimony, to move these same customers over to a UNE-Loop connectivity option, a field dispatch must be made to move the customer off of the existing loop facility onto either a copper facility or to a facility served by a UDLC system. This work is performed by a field technician who is also responsible for other field work such as repair work and new installation services. Since there is no reason to assume that CLEC competitive success rates differ for customers on IDLC loops as compared with customers on copper loops, we can anticipate that Verizon will experience an enormous increase in the number of field dispatches to handle the increased workload associated with the change in scale. It is not clear how Verizon will assume the additional work of migrating these lines off of the IDLC systems to make them ready for the hot cut to the CLEC without any impact to its ability to perform this work as well as the other work that Verizon's outside plant technicians are responsible for. This is particularly concerning because Verizon's current policy is to exclude IDLC loops from its bulk hot cut projects.

Q. DOES AT&T HAVE AN ESTIMATE OF HOW MANY CUSTOMER LINES WILL HAVE TO BE MOVED OFF OF AN IDLC SYSTEM EACH MONTH SO THAT THE CUSTOMER CAN BE MIGRATED TO THE CLEC VIA A HOT CUT?

A. AT&T believes that serving the mass market with UNE-Loops will result in over 8,300 lines that will have to be moved off of an IDLC system each month by Verizon's field technicians. This estimate is based on the projected migration rate of **[Begin AT&T Proprietary] [End AT&T Proprietary]** customers per month and Verizon's representation that **[Begin AT&T Proprietary] [End AT&T Proprietary]** percent of its lines are on IDLC systems.[20]

Q. WHY DOESN'T THIS PROJECTION INCLUDE A FACTOR FOR THE HOT CUTS THAT WILL BE RELATED TO CLEC CUSTOMER LOSSES?

A. An unbundled loop that is already with a CLEC cannot be on an IDLC system. Though these customer losses will require hot cuts for the customers to change their service provider they will not involve any migrations from an IDLC system.

Q. DOES VERIZON HAVE THE SPARE COPPER LOOP FACILITIES OR UDLC SYSTEMS TO MOVE THIS QUANTITY OF LINES OFF OF IDLC SYSTEMS?

[20] Response to Discovery Request ATT-VZ-16PS

A. Verizon, in its response to Discovery Request ATT-VZ-14PS, has stated that; **[Begin AT&T Proprietary]** **[End AT&T Proprietary]** of Verizon-New York access lines are served from terminals fed solely by IDLC, and they would not have existing parallel cooper or UDLC facilities available. The remaining access lines are in terminals that are fed, at least in part, by copper or UDLC".

Q. DOES THIS EXTREMELY LOW PERCENTAGE OF IDLC SYSTEMS THAT DO NOT HAVE PARALLEL COPPER OR UDLC FACILITIES ALLEVIATE AT&T'S CONCERN ABOUT VERIZON NOT HAVING THE SPARE FACILITIES TO MIGRATE CUSTOMERS OFF OF THEIR IDLC LOOPS WHEN NECESSARY?

A. No. All Verizon has stated is that the vast majority of its IDLC systems have parallel copper or UDLC facilities that are **[Begin Verizon Proprietary]** **[End Verizon Proprietary]** available. Verizon has not stated that there is sufficient capacity on these parallel facilities to accommodate the number of lines that will need to be migrated from IDLC facilities should UNE-P no longer be available. For example, assuming a given central office has 2,000 access lines on IDLC, all this answer states is that each of these IDLC facilities most likely has a

parallel copper and/or UDLC facility. However, there may only be 200 spare slots on these facilities thereby leaving 90% of the IDLC customers with no alternative facilities that could be used should that customer be an existing UNE-P customer or wishes to become a CLEC customer in the future. Verizon even states in its response to this discovery request;

[Begin Verizon Proprietary]

[End Verizon Proprietary]

Q. WHAT HAPPENS IN THOSE CASES WHEN VERIZON DOES NOT HAVE ANY SPARE COPPER FACILITIES OR UDLC SYSTEMS TO MOVE THESE CUSTOMER'S LINES?

A. In cases where there is no spare copper or UDLC capacity and UNE-P is not an available option, currently the CLEC has no choice but to inform its prospective customer that it is not capable of providing service to that customer even though the customer wishes to move its service from Verizon to the CLEC. However, the FCC's Triennial Review order

requires Verizon to develop an alternative that permits the customer's choice to be effectuated.[21]

Q. HOW WILL THIS HAMPER A CLEC'S MASS MARKETING ABILITIES?

A. Verizon's overall percent of **[Begin Verizon Proprietary] [End Verizon Proprietary]** of its access lines on IDLC paints a misleading picture. The IDLC problem must be explored at a central office level to be fully understood. Based on Verizon's response to Discovery Request ATT-VZ-8PS there are many large central offices in New York that have in excess of **[Begin Verizon Proprietary] [End Verizon Proprietary]** of the access lines that terminate in that office on IDLC systems. For example, there is one office in Queens **[Begin Verizon Proprietary] [End Verizon Proprietary]** access lines on IDLC systems. This means that over **[Begin Verizon Proprietary] [End Verizon Proprietary]** lines in this one central office are on IDLC systems. It is difficult to believe that Verizon will have that much excess copper and or UDLC facilities in its network serving that central office to accommodate customers who are currently on these

[21] TRO Paragraph 297.

IDLC systems and wish to migrate their service to a CLEC. This office in Queens is not unique. Verizon's data shows that it has **[Begin Verizon Proprietary] [End Verizon Proprietary]** central offices of more than **[Begin Verizon Proprietary] [End Verizon Proprietary]** lines that have in excess of **[Begin Verizon Proprietary] [End Verizon Proprietary]** of the lines on IDLC systems, including one office in Manhattan with **[Begin Verizon Proprietary] [End Verizon Proprietary]** of its lines on IDLC facilities. Additionally, **[Begin Verizon Proprietary] [End Verizon Proprietary]** of these offices have more than **[Begin Verizon Proprietary] [End Verizon Proprietary]** lines, the largest containing **[Begin Verizon Proprietary] [End Verizon Proprietary]** access lines with **[Begin Verizon Proprietary] [End Verizon Proprietary]** of them on IDLC. It is hard to fathom how many customers in these offices that are currently on these IDLC facilities will be able to change their local service provider once UNE-P is no longer available. Because of this prevalence of ILDC lines in many of Verizon's central offices the CLECs may find themselves having to caveat all of their service offer marketing materials with language such

as; "if available in your area". The CLEC's will also have to overcome the negative word of mouth publicity that they will receive because of this inability to provide service to a customer.

Q. WHAT OTHER TYPES OF MIGRATIONS WILL BE IMPACTED BY VERIZON'S THROUGHPUT LIMITATIONS ON HOT CUTS?

A. When local competition is discussed we tend to think of migrations from Verizon retail service to a CLEC. However, as the market matures migrations are going to occur much more frequently between CLECs. Thus, hot cut processes must not only address increases in scale of hot cuts but also increase in scope of hot cut types. Verizon has to be involved in all hot cuts to perform the necessary loop transfers. These CLEC-to-CLEC migrations are more difficult for the "winning" CLEC to order and for Verizon to cutover because the "winning" CLEC must obtain the existing POTS circuit identifier, known as the TXNU, of the "losing" CLECs customer that is to be migrated. Verizon's current process requires the "winning" CLEC to supply this information on its order before it will accept the order and perform the hot cut. Because of the various levels of quality that exists between the different CLEC's inventory processes and in the cooperation

levels between the CLECs, often times it is difficult for the "winning" CLEC to get accurate TXNU information. This current lack of an efficient and equitable ordering process for CLEC-to-CLEC hot cut migrations is going to create more delay, confusion and customer outages in the industry.

Q. DOES VERIZON EXPERIENCE THIS SAME PROBLEM WHEN IT WINS A CUSTOMER BACK FROM A FACILITIES BASED CLEC?

A. No. Because all customer lines terminate within Verizon's central office it keeps an inventory of all of the TXNU assignments for these lines. Therefore, Verizon is not dependent on the "losing" CLEC to obtain this information and consequently does not experience the same hardship as another CLEC does when winning a customer back from a CLEC. This means that whenever Verizon and a CLEC are competing for the business of a customer served by another UNE-L CLEC, Verizon has an enormous competitive advantage.

VIII. What Verizon Must Be Required to Produce

Q. HAS VERIZON CONDUCTED ANY STUDIES TO SUPPORT ITS CLAIM THAT IT WILL BE ABLE TO MEET ANY FUTURE DEMAND BY ADDING ADDITIONAL PEOPLE?

A. Not that I'm aware of. In its response to Discovery Request ATT-VZ-4 Verizon stated it has submitted hot cut cost studies "which include work time analyses that could be regarded as "records documenting the time required" for various hot-cut related work tasks". In this response Verizon goes on to state that "the only work time data that is collected by Verizon on a systematic basis is maintained in the Work Force Administration (WFA) system". However, Verizon states; "the manner in which work time is recorded for WFA purposes may not be consistent with the way in which it would be measured for cost-of-service studies. For these and other reasons, WFA may not be suitable as a primary data source for hot cut cost studies". Finally Verizon states, "data is maintained in WFA for 45 days, after which it is archived. Although Verizon has developed a platform for extracting archived data, that platform is still being validated, and collecting potentially hot-cut relevant, archived hot cut data would be both unduly burdensome and unreliable". This circular response not only indicates that Verizon has not conducted any formal studies to determine what its maximum hot cut capabilities are, it also indicates that Verizon does

not have the data which it could use to support a valid analysis of its hot cut capabilities.

Q. WHAT SHOULD VERIZON BE REQUIRED TO DEMONSTRATE TO THE COMMISSION TO DETERMINE ITS ABILITY TO MEET MASS MARKET HOT CUT DEMANDS?

A. Verizon's as yet unsupported assertion that it is capable of meeting these demands is not sufficient. Because of the potential for substantial and prolonged service outages, with attendant harm to both consumers and competitors, Verizon must be able to demonstrate on the basis of a serious study fully disclosed and explained that it is able to meet the hot cut demands of the mass market for a sustained period before it is allowed to eliminate UNE-P as a connectivity option for the CLECs. As I noted earlier in my testimony, the FCC in its Triennial Review Order has stated explicitly that promises of future performance are not satisfactory proof that an ILEC's bulk hot cut process can handle the volumes that would be required if CLEC access to unbundled switching at TELRIC rates were eliminated.[22]

Q. HOW DO YOU PROPOSE THAT VERIZON DEMONSTRATE THIS CAPABILITY?

[22] TRO, at footnote 1437.

A. Verizon must demonstrate that a valid time-and-motion study has been conducted to determine the time it takes a technician (or team of technicians) to perform all of the steps that are necessary on a frame for performing hot cuts to migrate a customer's loop from one local service provider to another using Verizon's current method of operation. Because of the different amount of time it takes to perform the frame work necessary for a hot cut based on central office size and frame architecture within the central office, this study must account for these variables. Moreover, some method most be proposed and employed for estimating how time intervals alter as volumes change.

Q. HOW SHOULD THIS STUDY BE CONDUCTED?

A. To insure that it is impartial this study should be conducted by an independent auditor under the direction of the Commission.

Q. HOW COULD THESE STUDIES BE USED TO ASSESS VERIZON'S HOT CUT CAPABILITIES?

A. Based on the findings of these time-and-motion studies the Commission should require Verizon to disclose at a central office level what its maximum daily hot cut throughput is based on the current staffing of qualified central office technicians who are dedicated

to performing frame cross connection work during regular work shift (non-overtime) hours. This study cannot include central office technicians who are qualified to perform frame work but are not assigned to work on the frame on a regular basis as this will overstate Verizon's true daily hot cut capabilities. Moreover, Verizon must explain in detail how it will deal with the problem of geographic dispersion: that is, how it proposes to staff and supervise a body of frame technician employees adequate to handle the simultaneous demands for hot cuts every day in hundreds of different central offices throughout the state.

Q. IS THERE OTHER INFORMATION THAT VERIZON SHOULD BE REQUIRED TO DISCLOSE TO THE COMMISSION PRIOR TO A FINDING OF NON-IMPAIRMENT AND THE SUBSEQUENT ELIMINATION OF UNE-P?

A. Yes. There are a number of critical areas that will impair a CLEC's ability to compete unless Verizon can demonstrate that it has thoroughly thought through and devised a strategy for dealing with each of these items and that such a strategy works. Verizon must make an accounting to the Commission on all of these

areas of concern before it is allowed to eliminate UNE-P as an ordering option for the CLECs.

Q. PLEASE EXPLAIN WHAT THESE AREAS OF CONCERN ARE.

A. The following is a summary of the potential problem areas on which Verizon must be required to make a full accounting to the Commission:

- Verizon's plans for converting the imbedded base of UNE-P customers over to UNE-L while continuing to perform the normal day-to-day frame work that is required.
- Verizon's plans for how it is going to convert existing line splitting arrangements in cases where the CLEC providing the voice service via UNE-P does not have collocated facilities in the central offices where these line splitting arrangements exist. Additionally, Verizon needs to disclose what its plans are for including line splitting loops in the bulk hot cut process in cases where the voice CLEC has existing collocated equipment or has installed a collocation arrangement.
- An inventory by central office of the number of access lines on IDLC facilities and an

accounting for the spare copper and/or UDLC facilities readily available for the migration of these lines if necessary.

- Verizon's plan for building new copper and/or UDLC facilities for those IDLC access lines that currently do not have sufficient parallel back-up facilities and the cost of this plan.
- An inventory of all of the collocation space available in each of Verizon's central offices in the state. This inventory must be broken down by the type of space available (i.e. physical, virtual or SCOPE) and must contain all of Verizon's central offices including remote switching offices.
- Verizon's plan for migrating the UNE-P customers of a UNE-P only CLEC that currently does not have the network infrastructure and/or collocation arrangements in place to accept these migrations.
- Verizon's plans and associated intervals for supporting the significant increase it will experience in new collocation requests and

requests for expansion of existing collocation arrangements.

- Verizon's estimate of the daily number of hot cuts it will have to perform in a non-UNE-P mass market and the details on how Verizon arrived at this estimate.
- Verizon's plan and the associated costs for expanding its tandem switching and transport network while maintaining satisfactory service levels to accommodate the increased tandem routed traffic it will be receiving from the CLECs.
- Verizon's plans for deploying new technologies to reduce or eliminate the manual efforts associated with a hot cut.
- Verizon's plan and associated cost for the additional workforce it will need to operate in this environment. This plan must include the following:
  - An estimate of the additional staff it will need by job title to support this hot cut centric environment.
  - How Verizon plans on recruiting, hiring and training the additional central

office frame technicians, work center personnel, field technicians and collocation support personnel it will need.

- Verizon's force management plan for reallocating on a daily basis frame technicians from central offices with light loads to central offices with heavy loads.
- The non-recurring and recurring cost associated with these new hires that Verizon plans on passing along to the CLECs.
- The performance measures and performance assurance plan structure that Verizon proposes the Commission use to monitor its performance and to penalize inferior performance.

Q. OTHER THAN A THIRD PARTY TIME-AND-MOTION STUDY IS THERE ANY OTHER METHOD THAT VERIZON CAN USE TO DEMONISTRATE ITS ABILITY TO MEET FUTURE VOLUMES?

A. Because the industry has absolutely no experience with operating in a mass market environment using a manual hot cut process I don't think there is any test that

can accurately gauge Verizon's ability to function efficiently without impacting customers and impairing CLEC's ability to compete. However, as I mentioned earlier in my testimony, once the bulk hot cut process is designed it could be subjected to pre-implementation testing. This pre-implementation testing would include third party monitoring of Verizon's migration of significant numbers of its own retail customers from a direct connection of the customer's line to the Verizon switch over to another Verizon switch connected via collocated transport equipment located in the original central office. Post implementation could include monthly monitoring of performance results and associated performance assurance penalties, with an expedited process to implement required changes, with an expedited process to implement required changes.

Q. WHAT ARE THE COST IMPLICATIONS OF VERIZON'S SOLUTION TO MEET THE HOT CUT DEMANDS OF A MASS MARKET BY ADDING PERSONNEL TO PERFORM THE HOT CUTS?

A. I suspect that this is a question that has not been explored in any detail by Verizon or any other party to this case. The cost models being discussed in this case by AT&T witnesses Kahn and Walsh are based on

current staffing levels and volumes. To the best of my knowledge Verizon has not presented any details on the level of additional staffing it is going to require, how it plans on recruiting and training the staff it will need and how the costs associated with these additional people are going to impact its cost models.

XI. Recent Example of Difficulties with Verizon's Hot Cut Process

Q. DOES AT&T HAVE ANY RECENT EXPERIENCE WITH VERIZON'S HOT CUT PROCESS IN NEW YORK?

A. Yes. Between June 1st and August 25th of this year AT&T worked with Verizon to migrate 5,100 AT&T customer lines over to Covad, all of which were located in New York. This cutover was accomplished by Verizon performing a hot cut of each line. These hot cuts removed the lines from the CFA connected to the AT&T[23] collocated equipment and reconnected the lines to CFA connected to Covad's equipment.

Q. DID THESE HOT CUTS INVOLVE POTS SERVICE?

A. Yes. Each hot cut involved moving the working line from an AT&T Line Splitting arrangement to a Covad

[23] These were collocation arrangements that were transferred to AT&T when it acquired Northpoint Communications.

Line Splitting arrangement. Once the hot cut was completed the customer's high speed data was provided by Covad and the voice (POTS) service was provided by AT&T using UNE-P.

Q. ARE THESE LINE SPLITTING HOT CUTS MORE COMPLEX THAN THOSE INVOLVING THE MIGRATION OF A POTS UNBUNDLED LOOP FROM VERIZON RETAIL TO A CLEC's COLLOCATED EQUIPMENT?

A. A Line Splitting hot cut will always require multiple cross-connections to accomplish the migration, as does a loop transfer when a Verizon central office has an IDF or Cosmic Frame. In other Verizon central offices a POTS cutover can, at times, be accomplished with a single cross connection. Other than the number of cross connections that are needed, the pre-wiring, testing and cutover process and steps for the POTS service are basically the same for the Verizon frame technicians regardless of whether they are performing a Line Splitting hot cut or a POTS loop hot cut.

Q. HOW MANY VERIZON CENTRAL OFFICES WERE INVOLVED WITH THIS CUTOVER?

A. The 5,100 lines that needed to be migrated were dispersed across 89 central offices.

Q. WERE THERE ANY LIMITS THAT VERIZON IMPOSED ON AT&T DURING THIS CUTOVER PROJECT?

A. Yes. Based on its other workload in each of the central offices involved Verizon typically limited the number of conversions that AT&T could schedule to five per day per central office.

Q. WERE THERE ANY EXCEPTIONS TO THIS FIVE PER DAY LIMIT?

A. The five cutovers per day was the limit in 78 of the 89 offices involved with this project. In the other 11 central offices Verizon imposed limits of six per day in four central offices, seven per day in six central offices and 11 per day in the remaining central office. These 11 offices where AT&T was permitted to exceed the five per day limit were the largest of the central offices involved in the project; as a result, they are staffed on a 24 hour basis.

Q. WHAT WAS THE ORDERING TO PROVISIONING INTERVAL THAT VERIZON REQUESTED ON THESE ORDERS?

A. The interval between the time an order was placed and the hot cut was performed during this project was 10 days. This compares to the current interval for a hot cut of six days.

Q. WHAT WAS AT&T's EXPERIENCE WITH VERIZON'S PERFORMANCE DURING THIS PROJECT?

A. Prior to the start of this project AT&T and Verizon discussed the process that would be used to make this transition as seamless as possible for the end user customer. However, throughout the conversion it was apparent that Verizon's technicians and management could not be counted upon to execute the process as planned. During the project AT&T's customers experienced no dial tone troubles on 284 (5.6%) of these lines as a direct result of the hot cut over to the new CFAs.

Q. ON AVERAGE HOW LONG DID IT TAKE VERIZON TO RESTORE THESE OUT-OF-SERVICE TROUBLES ONCE THEY WERE REPORTED TO VERIZON BY AT&T?

A. Unfortunately, AT&T didn't track the mean time to repair (MTTR) on the troubles that were specifically caused by the hot cut activity. However, AT&T's MTTR for all troubles on these 5100 lines during the July and August time frame ranged from a low of 6 hours to a high of 3.7 days. Most troubles typically took in excess of one day to have the service restored.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM THIS EXPERIENCE?

A. In this situation, we had a process that on paper looked very good and that both AT&T and Verizon agreed to. However, it did not work as expected. It did not

work in large part because Verizon had a difficult time ensuring that its technicians actually complied with the task guidelines and requirements. In short, a process, however good it appears on paper, does not work if it is not implemented properly. For present purposes it means that, until Verizon demonstrates that it can execute a hot cut process at high volumes, we do not have a process that can handle mass market volumes in a post-UNE-P world.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. Competition in the local telecommunications industry in New York is at a cross-road with the contemplation of eliminating unbundled switching through a finding of non-impairment. My testimony has attempted to portray the difficulties the industry will be faced with when serving the mass markets with unbundled loops. These difficulties include; i) the manual effort that will be required every time a customer wishes to transfer from one service provider to another, ii) the enormous increase in hot cut volumes that Verizon will face, iii) the aspects of the current network architecture that will prevent Verizon from being able to transfer customers in this environment or keep up with the volumes it will face

and iv) the service impact of this environment to customers. Because of the magnitude of these issues and their impact on CLECs and competitive choice in the state, Verizon must demonstrate to the Commission that it has thoroughly thought through how it is going to address all of the problems identified in my testimony by presenting its plans for resolving each of these issues to the Commission. The Commission cannot simply rely on a Verizon promise of performance and it should order such a disclosure from Verizon as there is too much at stake.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.