COMMONWEALTH OF MASSACHUSETTS

DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

Proceeding by the Department on its own Motion to Implement The Requirements of the Federal Communications Commission's Triennial Review Order Regarding Switching for Mass Market Customers	))))	D.T.E. 03-60 (Track B)

RESPONSIVE TESTIMONY OF EARLE JENKINS
ON BEHALF OF WORLDCOM, INC. ("MCI")

PUBLIC VERSION

February 6, 2004

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I. INTRODUCTION AND SUMMARY

A. INTRODUCTION AND BACKGROUND

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

A. My name is Earle Jenkins. I am President of SHS Consulting, a consulting practice specializing in telecommunications issues. My business address is PO Box 192, Holderness, N.H.

Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.

A. I received a B.A. *cum laude* from Franklin Pierce College and an M.B.A. from Boston University.

Q. PLEASE SUMMARIZE YOUR PROFESSIONAL BACKGROUND.

A. I have over thirty–five years of operations experience in the telecommunications industry. My consulting practice, which I established in June 1996, focuses on telecommunications operations management, process evaluation and improvement. My consulting clients have included equipment manufacturers, CLECs, long distance carriers and large telcos in the United States as well as in Holland, England, Hungary and Canada. Prior to launching my consulting business, I was employed by NYNEX Corp. (n/k/a Verizon, Inc.) for 29 years. My career spanned all levels of operations responsibility, as I progressed from central office craft technician to Operations Vice President. As Vice President, I was responsible for the implementation of maintenance and workforce management process improvements throughout the NYNEX footprint. In 2001, I was recruited by a United Kingdom-based company, FLAG Telecom, to establish a field, customer care, provisioning, and Network Operations Center (“NOC”) organization. As

Vice President–Operations, I supervised the successful development and implementation of an Operations Plan for a worldwide organization responsible for the management of a global fiber-optic submarine and terrestrial network. In 2002, I returned to the United States and resumed my private consulting practice.

I have testified a number of times before state regulatory commissions on matters regarding nonrecurring charges and unbundled network element pricing. The details of my background are included in my curriculum vitae, attached hereto as Attachment ESJ-1.

Q. PLEASE STATE THE PURPOSE OF YOUR TESTIMONY.

A. MCI has asked me to review the testimony and hot cut processes submitted by Verizon, and to provide an analysis with recommendations to improve the efficiency and effectiveness of the processes and to enable MCI able to handle mass market volumes of hot cuts.

B. EXECUTIVE SUMMARY

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. Verizon has presented three varieties of its hot cut processes in its Initial and Supplemental Testimony[1]:

- ?? The Basic WPTS Hot Cut Process,
- ?? The Large Job ("Project") Hot Cut Process
- ?? The Batch Hot Cut Process.

My principal conclusion is that although Verizon's testimony reflects some improvements in the coordination phases of its hot cut processes, as compared to processes proposed by Verizon in other jurisdictions, no matter how Verizon packages its hot cut processes, all three versions of its process rely exclusively on manual provisioning. By virtue of the fact that Verizon's hot cut processes are entirely dependent upon manual provisioning, and because Verizon as a whole has not taken advantage of currently available technologies resident in its existing network that could automate or mechanize hot cut provisioning, Verizon's hot cut processes remain unable to handle mass market volumes of hot cuts.

I have reached the following additional conclusions:

- ?? Verizon's hot cut processes are not forward looking.

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[1] Verizon Initial Panel Testimony on Hot Cut Process, dated November 14, 2003 ("Initial Testimony") and Supplemental Initial Panel Testimony on WPTS Process, dated December 17, 2003 ("Supplemental Testimony").

- ?? Verizon's processes are not seamless.
- ?? Verizon's processes are not scalable to handle large volumes of mass market customers.

Furthermore, Verizon's Initial and Supplemental Testimony presents extraordinarily high non-recurring charges for all varieties of hot cuts. The pricing proposed by Verizon – including the indefensible IDLC surcharge – is not TELRIC-compliant and cannot be considered low cost under any definition.

These deficiencies could be overcome, however, if the Department were to direct Verizon to:

- ?? Mechanize frame related wiring tasks.
- ?? Fully utilize the capabilities of GR303-compliant IDLC to remotely unbundle loops.
- ?? Continue implementing enhancements to its Wholesale Provisioning and Tracking System (WPTS).[2]
- ?? Reduce "fallout" and minimize instances of planned "drop out."
- ?? Establish the following hot cut NRCs proposed by MCI:

2-Wire Coordinated Initial	$6.51
2-Wire Coordinated Additional	$5.32
2-Wire Mass Market (FTD Type) Initial	$5.70
2-Wire Mass Market (FTD Type) Additional	$4.50

[2] Id., at pp. 21-22.

Q. DOES YOUR ANALYSIS INCLUDE A NEW OR REVISED COST MODEL?

A. Yes. The testimony discusses the proper costing and pricing of a coordinated and mass market hot cut process. Our forward-looking process model uses Verizon's existing processes as a baseline and follows the Federal Communications Commission's ("FCC's") *Triennial Review Order* that explicitly requires that a batch hot cut process be priced at TELRIC.[3] This approach is consistent with the FCC's recent *Virginia Arbitration Order* where it rejected Verizon's existing non-recurring cost model based on the fact that it fails to model a forward looking network/operation, but instead, relies almost exclusively on "…existing processes and the existing network."[4]

From a network perspective, the cost model presented by MCI is based on 100% IDLC and GR303 compliant technology, which is how costs for Verizon's hot cut processes should be determined. Utilizing Verizon's existing processes as a starting point and introducing the efficiencies associated with GR303 over IDLC in order to develop rates is far more consistent with the FCC's TELRIC standard than those rates proposed by Verizon.

MCI presents two cost models in this proceeding. (Attachment ESJ - 2) The first is a coordinated hot cut cost model (Attachment ESJ – 2, 2 Wire Coord.), which is designed

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[3] *In re the Sec. Review of 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecomm's Act of 1996, and Deployment of Wireline Services Offering Advanced Telecomm's Capability*, CC Docket Nos. 01- 338, 96-98 & 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36 (rel. Aug. 21, 2003) ("*Triennial Review Order*" or "*TRO*") at ¶ 489.

[4] See *In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes*

to replace Verizon's "Basic" and "Project" processes. The second is a mass market hot cut cost model (Attachment ESJ - 2, 2Wire MM) that incorporates forward-looking improvements to Verizon's new "batch" process. Included with MCI's model is a Cost Model Description document (Attachment ESJ - 3) and a process map depicting both process flows. (Attachment ESJ - 4) In addition, MCI has included a transition batch process map, which depicts the next logical step in the evolution of Verizon's present hot cut process. (Attachment ESJ – 5)

Q. PLEASE DESCRIBE THE PURPOSE OF THE TRANSITION BATCH PROCESS MAP.

A. As mentioned previously, the cost model presented by MCI is consistent with the FCC's *Triennial Review Order,* which explicitly requires that a batch hot cut process be priced at TELRIC.[5] Since it is unrealistic to expect a flash cut from the current technologies to those that MCI recommends, a transitional process map was developed to provide a view of the process incorporating currently available technologies and process enhancements, which can be incorporated immediately to transform Verizon's current manually intensive process into a more automated and efficient process. While these proposed improvements impact the coordination phase of the process, the provisioning phase is the major focus of the process improvement, introducing existing technologies such as Automated Distribution Frames ("ADFs") and electronic provisioning via GR303 compliant Integrated Digital Loop Carrier ("IDLC") systems.

With Verizon Virginia Inc., and for Expedited Arbitration, Memorandum Opinion and Order, CC Docket Nos 00-218 *et al*., (rel. August 29, 2003) at ¶ 567.

Q. HOW IS THIS TESTIMONY ORGANIZED?

A. The testimony is divided into three sections. The first section provides an analysis of each of Verizon's processes and cost model. The second section addresses the issue of scalability. The third section addresses Verizon's proposed IDLC surcharge.

Q. VERIZON CLAIMS (AT P. 5)[6] THAT ITS HOT CUT PROCESSES "COMPLY WITH VERIZON'S OBLIGATIONS … UNDER THE FCC'S *TRIENNIAL REVIEW ORDER.*" PLEASE RESPOND.

A. Verizon is wrong. Presumably, Verizon is referring to the Department's obligation to approve a bulk hot cut process that meets the *Triennial Review Order*'s standards. As currently constituted, Verizon's hot cut processes do not come close to complying with the FCC's requirements.

- Verizon's processes **are not seamless**. In particular, all varieties of its "basic," "batch," and "project" hot cut processes exclude large groups of orders, including loops served by IDLC, CLEC-to-CLEC migrations, EELs, and lines with DSL. At a minimum, Verizon's processes must include all types of customer loops and must process them in a manner that does not create service degradation.

- Verizon's processes **are not scalable**. As I will demonstrate in this testimony, Verizon's manually provisioned hot cut processes cannot handle mass market volumes of hot cuts.

- Verizon's processes **are not timely**. Because they are neither seamless nor scalable, the processes cannot process mass market volumes of orders in a timely manner.

- Verizon's processes **are not low cost**. The prices proposed by Verizon in its Initial Testimony are outrageously high and would further impair CLECs and chill competition.

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[5] *Triennial Review Order* at ¶ 489.

[6] Except as otherwise noted, page citations to Verizon's claims that are noted in this testimony refer to Verizon's November 14, 2003 Initial Panel Testimony.

Throughout the *Triennial Review Order*, the FCC identified a number of operational issues giving rise to impairment as it relates to CLECs' ability to serve the mass market without UNE switching. The FCC specifically pointed to the cost, timeliness and highly manual and error-prone nature of the "hot cut" process, however, as the primary cause of impairment.

The FCC based this finding primarily on the ILECs' hot cut processes:

> Accordingly, we conclude that the operational and economic barriers arising from the hot cut process create an insurmountable disadvantage to carriers seeking to serve the mass market, demonstrating that competitive carriers are impaired without local circuit switching as a UNE.[7]

The FCC directed states to implement a seamless, timely and low-cost batch hot cut process for transferring large volumes of mass market customers based on its belief that such a process *could* reduce or eliminate the causes of impairment.[8]

While the FCC found that a bulk hot cut process that meets the *Triennial Review Order*'s standards could mitigate impairment, it is critical to understand that implementation of a batch hot cut process should not be considered dispositive of all mass market switching impairments that CLECs face. A bulk or batch process may be appropriate to transition a base of UNE-P customers to UNE-L *en masse.* While this will be an important process for a CLEC seeking to move to a UNE-L service delivery mechanism from UNE-P, once customers are on UNE-L, Verizon must offer a hot cut process that can handle volumes

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[7] *Triennial Review Order* at ¶475.

[8] *Id.* at ¶423.

of hot cuts that will result from day-to-day ordering. ***A batch process is not an adequate substitute for robust and scalable basic hot cut processes.***

As discussed in detail in this testimony, Verizon's batch process cannot be considered to meet the basic requirements set forth by the FCC. It is neither seamless, nor low-cost, nor timely. Therefore, pursuant to the FCC's rule 51.319(d)(2)(ii)(A)), the Department must establish a seamless, low cost, and timely batch hot cut process in this proceeding. That process should be tested and implemented with the appropriate performance measures and related incentives included.

II. VERIZON'S HOT CUT PROCESSES

A. OVERVIEW

Q. PLEASE DISCUSS THE HOT CUT PROCESSES THAT VERIZON HAS PRESENTED DURING THE COURSE OF THIS PROCEEDING.

A. To date, Verizon has provided the following processes related to 2-wire hot cuts:

- Basic WPTS Hot Cut Process
- Large Job ("Project") Hot Cut Process
- Batch Hot Cut

At first glance it may appear that the processes are different. However, they all have very similar characteristics. Hot cuts fall into two distinct categories or types, (1) project managed (coordinated) and (2) frame due time (FDT) (non-coordinated). As discussed in the *Triennial Review Order*:

> With FDT cutovers both the incumbent and the competing carrier perform necessary work at pre-arranged times, with no communication required at the time of the hot cut. Project managed cutovers involve the conversion of a number of lines at

> one time, pursuant to provisioning requirements and intervals negotiated by the incumbent and the competitive LEC.[9]

Verizon's Basic and Large Job (Project) Hot Cut processes are project managed or coordinated types of hot cuts. The Batch Hot Cut process is basically a modified non-coordinated FDT type of process.

Both project managed processes (Basic and Large Job) contain two basic functions or phases: coordination and provisioning. On the other hand, the Batch Hot Cut process recently presented by Verizon calls for both parties (ILEC and CLEC) to perform their work at pre-arranged times (specific dates) with no communication (other than system reporting) required at the time of the hot cut. In this process, the manually intensive coordination phase is replaced by system notification transactions by all parties, and the times are stated in date ranges rather than specific hourly times. All three hot cut processes are said by Verizon to be able to accommodate the conversion of a number of lines at one time, and the provisioning requirements and intervals are generally negotiated by the ILEC and CLEC.

Q. PLEASE EXPLAIN WHAT YOU MEAN WHEN YOU TALK ABOUT THE COORDINATION PHASE AND THE PROVISIONING PHASE OF THE HOT CUT PROCESS.

A. The steps and work functions specific to any hot cut process, whether it be a coordinated or frame due time process, can be segmented into two general functional categories: (1) *Coordination* and (2) *Provisioning*. When I refer to the *Coordination* phase, I am referring to nearly all of the steps that involve communication between the ILEC and the

[9] *Id.* at ¶474.

CLEC. When I refer to the *Provisioning* phase, I am referring to the physical disconnection of the UNE-L and physical reconnection of the loop to the new carrier's switch.

Q. VERIZON HAS DESCRIBED ITS BATCH HOT CUT PROCESS AS A "NEW" PROCESS. DO YOU AGREE THAT THE PROCESS IS NEW?

A. Parts of the Batch Hot Cut process are new and parts are not. The new parts relate to the coordination phase of the process, where Verizon has proposed a new way of grouping orders for batch processing. But the parts that are not new are where the key bottlenecks occur. That is, Verizon has made no attempt to mechanize its manual provisioning processes, and therefore the Batch Hot Cut process, just like all other varieties of Verizon's hot cut process, relies entirely on manual provisioning and as such cannot be scaled to handle mass market volumes.

Q. HAS VERIZON MADE ANY CHANGES TO THE PROVISIONING PHASE OF THE HOT CUT IN ITS "NEW" BATCH HOT CUT PROCESS?

A. By introducing the concept of collecting orders until a "critical mass" is reached in a given central office, Verizon plans to eliminate the requirement of dispatching a frame technician prior to the due date to pre-wire the hot cut. However, with respect to the provisioning phase, this new approach has not changed the fact that a Verizon technician must manually "lift and lay" every loop that is to be cutover, and therefore, with respect to that bottleneck function, Verizon has made no changes.

Q. WHAT IS "LIFT AND LAY"?

A. Generally, with coordinated hot cuts, the ILEC must perform two manual wiring activities on the main distribution frame ("MDF") when performing a hot cut. The first

step involves pre-wiring in preparation for the cut over. During this step, the technician places a jumper (cross-wire) between the CLEC tie facility and the customer loop. The jumper is initially connected only at the tie facility and not on the loop side. When the cut is scheduled to begin, the jumper that is connected to the loop side of the UNE-P arrangement is disconnected (lift) and the jumper connected to the CLEC tie facility is connected in its place (lay). This method of wiring requires two dispatches. One to pre-wire the cut, and the second to perform the cut over (lift and lay) on the scheduled due date. Since the Batch process proposed by Verizon is not coordinated, the pre-wiring step is eliminated. The technician is dispatched only once to the frame to do the complete hot cut.

Q. HAS VERIZON PROPOSED TO MECHANIZE OR AUTOMATE THE WIRING STEPS OF THE PROVISIONING PHASE OF THE HOT CUT IN ANY OF ITS THREE HOT CUT PROCESS SCENARIOS?

A. No. Although automated MDF technology exists and is deployed in some of Verizon's Central Offices in other states, Verizon does not utilize the systems to do hot cuts. I will expand on this issue later in my testimony.

Q. PLEASE DISCUSS THE SIMILARITIES BETWEEN VERIZON'S VARIOUS HOT CUT PROCESSES.

A. The most obvious similarity is that all the hot cut processes suffer from the same bottleneck that cripples the process from a scalability perspective. All of the processes are designed to utilize the same manual provisioning method that requires frame technicians to place and remove cross wire. In addition, all of the processes (except the Non-Automated Hot Cut) utilize Verizon's WPTS system to facilitate the performance of hot cuts. However, the latest versions of the process contain WPTS enhancements that

appear to have been recently developed as a result of collaborative sessions hosted by the commissions in other states. With the exception of the enhancements mentioned above, it should also be noted that the processes presented by Verizon in this filing are fundamentally the same as those presented in New York and other jurisdictions.[10] Accordingly, I will reference interrogatory responses from the New York proceeding in an effort to reduce redundant data requests.

Q. ARE THERE DIFFERENCES BETWEEN EACH HOT CUT PROCESS?

A. Yes. There are differences associated with the due date negotiation and coordination steps, and the batch process does not contain a pre-wiring step. There are other minor differences, which I will point out later in this testimony in association with a detailed analysis of each individual process.

B. INDIVIDUAL HOT CUT PROCESS ANALYSIS

1. Basic WPTS Hot Cut Process[11]

Q. WHAT IS THE PURPOSE OF THIS PROCESS?

A. Verizon describes this process as the process that is used in the normal course of business for orders ranging from single lines to high volumes of lines. It is Verizon's default process.

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[10] Verizon NJ Initial Panel Testimony, dated December 10,2003, at p. 27 states that "Verizon's Hot Cut process is the same process used throughout Verizon."

[11] Verizon describes its Basic WPTS Hot Cut process in its Supplemental Initial Testimony, filed December 17, 2003.

Q. IS THERE A LIMIT TO THE NUMBER OF ORDERS THAT CAN BE REQUESTED?

A. Verizon asserts that there is currently no limit on the number of Basic cuts that can be ordered on a single local service request ("LSR").[12]

Q. WHAT IS THE DUE DATE INTERVAL ASSOCIATED WITH THE "BASIC" HOT CUT PROCESS?

A Verizon's interval guide[13] states that 1-10 lines have a five-business-day interval. Orders for 11-20 basic hot cuts have a 10-day interval, and any orders for more than 20 lines require a negotiated due date. Therefore, all orders for any significant number of hot cuts push a CLEC into a negotiated interval situation were the due date is normally dictated by Verizon, based on its workload.

Q. WHAT IS THE FIRST STEP IN THE COORDINATION PHASE FOR A SINGLE 2-WIRE FULL-MECHANIZED "BASIC" HOT CUT?

A. The CLEC submits an LSR that electronically generates orders within Verizon to perform the activities associated with the hot cut including: disconnection of existing service, change to new service, number porting, and record order for listing and 911 data.

Q. IS THIS STEP TOTALLY AUTOMATED?

A. The process is designed to allow the LSR to electronically flow through Verizon's ordering systems. Nevertheless, at times orders fall out of the systems (i.e. are rejected)

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[12] See Supplemental Testimony, at p. 4; Verizon NY's Response to MCI-VZ-40 (Attachment ESJ-6).

[13] Hot Cut Intervals are posted at: www22.verizon.com/wholesale/attachments/une_intervals.xls.

and must be processed manually. According to Verizon, this requirement for manual intervention occurs with *****BEGIN VERIZON PROPRIETARY *** END VERIZON PROPRIETARY***** of the LSRs received. Each time this occurs, it allegedly takes Verizon *****BEGIN VERIZON PROPRIETARY ***** END VERIZON PROPRIETARY*****minutes to get the order "back on track".[14] In addition, *****BEGIN VERIZON PROPRIETARY *** END VERIZON PROPRIETARY***** of the orders require manual intervention to either change the due date or cancel the request as a result of the fallout described above or for issues associated with other steps in the process. Each time this occurs it allegedly takes Verizon an additional *****BEGIN VERIZON PROPRIETARY **** END VERIZON PROPRIETARY***** minutes per order to process the change.[15]

a. FALLOUT

Q. WHAT IS FALLOUT?

A. "Fallout" is a term used to label the occurrences of errors in flow-through (automated) processing. For example, suppose several operational support systems (OSS) were electronically linked to create a flow-through electronic ordering process. If one of the OSS receives erroneous or incompatible information from another OSS, the order will "fall out" of the electronic process and will require manual intervention to correct or complete the order.

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[14] Verizon Supplemental Testimony, Exhibit SUPP- III, p.3 NMC lines 2 and 4.

[15] Verizon Supplemental Testimony, Exhibit SUPP- III, p.3 NMC line 6.

There are four general categories of electronic errors that trigger fallout:

1. Database synchronization errors
2. Network element denial
3. Communication errors
4. Synchronization errors

Database synchronization errors occur when databases at different levels of the OSS fail to contain matching data, or agree as to the availability or status of needed resources. Typical database synchronization errors that fallout include street names that exist in one database that are not duplicated (i.e. not entered exactly the same way) in other databases. Additional fallout occurs when facilities marked as 'spare' in one database are in reality in use or defective, and reflected as such in other databases.

Network element denial happens when a needed intelligent network element (for instance, a Local Digital Switch) responds that it cannot perform a task requested by another component of the network for whatever reason. For example, the element management system might believe that a certain version of software, needed to activate certain features, exists on a network element, when in reality that installation has not yet been performed.

Communication errors represent the failure of the network to convey needed information at a point in time between the OSS, and element management systems (EMS), a database, and/or the EMS and the intelligent network element (INE). These errors take place

because a valid communication path cannot be found between the elements. This can occur either due to overflow or damage.

Synchronization errors occur when two separate components attempt to communicate, but fail to establish the necessary communications protocols, even though the link may be functioning. In addition, Verizon has coined the term "dropout" to distinguish non-automated steps where orders are stopped or diverted and must be processed on a manual basis.

Generally, a progressive user of this type of technology has a root cause analysis ("RCA") process in place, which examines the reasons for the fallout problems and implements action steps to improve flow-through. From a "dropout" perspective, this same type of analysis is used to improve the flow-through capability of the overall process. This is a basic quality process known as continuous improvement.

Q. IS FALLOUT UNIQUE TO THE BASIC HOT CUT PROCESS?

A. No. Fallout (and "dropout")[16] is an issue with respect to all of Verizon's hot cut process varieties, and this discussion applies equally to all of them.

Q. DOES FALLOUT CONSTRAIN HOT CUT PERFORMANCE?

A. Yes. Fallout clearly impacts the overall efficiency of the hot cut process. In New York, Verizon pointed out that fallout is not a constraining factor, as demonstrated by the "achieved" flow-through rate (fallout counterpart) reported to the New York Commission

of 99%.[17] However, when mirrored against the higher fallout rate utilized in its cost model in the hot cut proceeding and asked to reconcile the difference, Verizon responded: "Because we are looking at data from an operational perspective" in the model,[18] as opposed to the measurements provided to the New York Commission under the New York C2C Guidelines. Similarly, under the Massachusetts Guidelines, the November 2003 "achieved flow through" reported by Verizon was 98.82%, suggesting a much lower level of fallout than that used in the cost model.

MCI agrees that the impact that fallout has on the process should be looked at from an "operational perspective" since operational efficiency impacts scalability, timeliness and cost, which I will discuss in more detail later in this testimony.

Q. ARE THE ROOT CAUSES FOR THIS FALLOUT IDENTIFIED?

A. Verizon asserts that it generally notifies the CLEC about any error(s) that cause a manual order to be generated.[19]

Q. SINCE THIS INITIAL ORDERING FALLOUT IS LARGELY DRIVEN BY THE CLECS, DOES VERIZON PREDICT ANY IMPROVEMENT?

Yes. Verizon is obviously optimistic about the CLECs' response to these problems, as evidenced by the ***BEGIN VERIZON PROPRIETARY ******END VERIZON

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[16] For ease of reading, I will use the term "fallout" generically to represent fallout and dropout in the remainder of this testimony.

[17] *Proceeding on Motion to Examine the Process and Related Costs of Performing Loop Migration on a More Streamlined Basis*, 02-C-1425, NY Batch Hot Cut Collaborative Workshop. Verizon NY Comments at pp. 29 –30 (May 23, 2003).

[18] Verizon NY Response to NY interrogatory ATT-VZ-38 (Attachment ESJ-7).

PROPRIETARY forward looking adjustment that Verizon has incorporated into its model calculations.[20]

Q. HOW DOES VERIZON ACCOUNT FOR FALLOUT IN THE MODEL THAT IS INTERNALLY GENERATED BY VERIZON?

Verizon incorporates fallout at each step where it occurs, but it does not appear to measure its performance by organization or process step as evidenced in response to a MCI data request in New York, where Verizon stated that: "Verizon does not measure the percentage of hot cut orders that require manual assignment by the Assignment Provisioning Center ("APC")."[21] However, Verizon's cost model asserts that presently*****BEGIN VERIZON PROPRIETARY ***END VERIZON PROPRIETARY** of the orders fallout, allegedly requiring *****BEGIN VERIZON PROPRIETARY** *** **END VERIZON PROPRIETARY***** minutes to resolve each one.[22]

Q. DOES VERIZON APPLY AN IMPROVEMENT FACTOR INTO ITS MODEL CALCULATIONS?

A. Yes. The model does contain a forward looking adjustment for this step, *****BEGIN VERIZON PROPRIETARY** *** **END VERIZON PROPRIETARY*****[23] In fact, there are a number of process steps containing adjusted fallout occurrences to that level which appears to be

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[19] Verizon NY Response to NY interrogatory ATT-VZ-46S (Attachment ESJ-7).

[20] Verizon Supplemental Testimony, Exhibit SUPP- III, p. 3, NMC lines 2 &4.

[21] Verizon NY Response to NY interrogatory MCI-VZ-35 (Attachment ESJ-6).

[22] Verizon Supplemental Testimony, Exhibit SUPP- III, p.3, APC line 1, Columns C & D.

[23] Verizon Supplemental Testimony, Exhibit SUPP- III, p.3, APC line 1, Columns D & E.

more consistent with a fall out rate ordered by the Department rather than as a result of a good quality improvement plan.[24]

Q. DO YOU AGREE WITH VERIZON'S APPROACH TO THOSE CALCULATIONS?

A. I agree that CLEC generated errors should be recognized as part of the model and should appear at each process step where the error could potentially create manual work beyond Verizon's control. However, I do not agree with Verizon's approach to fallout that Verizon generates internally.

Q. PLEASE EXPLAIN.

A. For fallout that Verizon internally generates, applying a fallout rate at each step where the fallout occurs, compounds the effect that fallout has on the process from an efficiency and cost perspective. Instead, fallout of this nature should be viewed from a total process (end-to-end) perspective.

To clarify this point, consider the following example: MCI and Verizon may both state that a 10% fallout rate is acceptable for a network element connection, however, using Verizon's approach applying that 10% fall out rate to 100 orders at 9 individual work steps creates 90 additional expense item calculations (and process delays), versus applying the 10% fallout rate once to the entire connection process results in 10 expense item calculations.

[24] In response to interrogatory MCI Set#1, MCI-4 (c) & (d),Verizon stated that in D.T.E. 01-20, the Department set the fallout rate at 2%.

In addition, as mentioned earlier in my testimony, a progressive user of technology has a root cause analysis ("RCA") process in place, which examines the reasons for the fallout problems and implements action steps to improve flow-through.

Q. WHAT ARE YOUR RECOMMENDATIONS REGARDING FALLOUT INTERNALLY GENERATED BY VERIZON

A. It is important to view fallout in the context of the complete process. By only measuring fallout at individual steps and only reporting results relative to the initial ordering step in the process, Verizon has chosen to overlook the throughput potential of the process that is being impacted by orders "dropping out," which require manual intervention. As a result, there is a circular problem with Verizon's existing process.

- The process is manually intensive, limiting throughput, and impacting scalability.
- Verizon acknowledges that orders "drop out" of the process, increasing the need for manual intervention.
- Verizon does not measure or analyze the root cause of orders "dropping out."
- No plans are developed and implemented to improve the process.
- The process remains manually intensive, limiting the overall throughput potential of the process.

Verizon's cost model clearly demonstrates that these types of problems exist and that manual processing is required to resolve the issues. However, Verizon has consciously decided not to look for ways to improve the efficiency of the overall process.

MCI therefore makes the following recommendations as the appropriate approach to fallout. First, fallout should be assessed as a complete end-to-end process. Second, by

conducting a root cause analysis, Verizon should determine which process steps contain problems that could be eliminated by changing the process, introducing technology, correcting data base errors, etc. Once the problems are identified, they should be prioritized by the degree of impact that they have on the process. Next, a cost/benefit analysis should be performed based on the recommended solution. Following implementation of the recommended solution, the effectiveness of the improvement should be measured, and the focus should shift toward the next improvement opportunity. This basic quality improvement process is a fundamental requirement in order to minimize the amount of manual intervention that is then incorporated into the foundation of the current process.

Q. WHAT IS "THROUGHPUT"?

A. "Throughput" refers to the maximum number of transactions that a process can handle in a give time frame. For example, if a given process could handle up to ten transactions each day and every day, but could not handle eleven, then the maximum throughput of the process would be ten. Throughput impacts the scalability of Verizon's hot cut process.

Q. HAS VERIZON PROVIDED ANY ESTIMATES OF THE THROUGHPUT OF ITS "BASIC" HOT CUT PROCESS?

A. No. Verizon has not provided throughput estimates for any of its processes. Verizon has been asked to estimate its maximum throughput, but Verizon has taken the position that throughput somehow is not relevant to the examination of the scalability of its processes, since the volume of hot cuts that can be completed is only constrained by the number of

people that are applied to the workload. [25] This approach obviously overlooks the advantages associated with improving the efficiency of the process.

Q. CAN YOU PROVIDE ANOTHER EXAMPLE OF A PROCESS STEP THAT CONTAINS ISSUES ASSOCIATED WITH FALLOUT OR DROPOUT?

A. Yes. One manual activity description under the RCCC department appearing in the cost model is: "Resolve Order Problems and Reschedule."[26] According to the worksheets, currently, roadblocks occur on ****BEGIN VERIZON PROPRIETARY *** END VERIZON PROPRIETARY**** of orders. Looking at the forward-looking adjustment for this process step on the worksheet, one will find that Verizon does not anticipate any change in the percentage of roadblocks or the time it takes to resolve them.

Q. WHAT IS THE NEXT STEP IN THE COORDINATION PHASE OF THE "BASIC" HOT CUT PROCESS?

A. Once a valid order is in the system, Verizon's RCCC organization coordinates the order through to completion. This is the major coordination phase of the hot cut. It is encouraging to note that Verizon has utilized WPTS to streamline the process. A number of the enhancements that Verizon now says it will implement were recommended in association with collaborative workshop sessions held in other states.

While on one hand, there appears to be some genuine progress relative to improvement of the coordination phase of the process, the Verizon panel noted at page 15 of their Initial Testimony that there are additional coordination process steps that could be eliminated if

[25] Verizon Initial Testimony, p. 66.

the CLECs assumed a greater level of responsibility. When asked for specific detail relative to these steps, Verizon's response listed a number of examples[27], most of which could not be directly traced to a specific cost model activity description. Consequently, without more concise information, it is nearly impossible to gauge the total extent of the potential opportunity for efficiency improvement at this phase of the process.

Nevertheless, it is MCI's position that additional CLEC specific requests for manual intervention should be treated outside the process and not be included in Verizon's cost model.

Q. PLEASE DESCRIBE YOUR FINDINGS RELATIVE TO THE PROVISIONING PHASE OF THE BASIC HOT CUT PROCESS?

A. This phase generally begins with a process step known as pre-wiring. At this step a frame technician places a jumper wire between the CLEC facility appearance and the end users loop on the MDF. This wire is placed in preparation for the hot cut but not terminated (connected).

Q. DOES THIS STEP OCCUR 100% OF THE TIME FOR BASIC HOT CUTS?

A. No. This step is not being performed in this manner when the customer is served via IDLC or in instances when the CLEC is seeking a UNE-L in a central office equipped with an automated distribution frame ("ADF").

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[26] Verizon Supplemental Testimony, Exhibit SUPP- III, p. 3, NMC lines 2 &4; p.3, RCCC line 8.
[27] Verizon NY Response to NY interrogatory MCI-VZ-16 (Attachment ESJ-6).

Q. ARE YOUR COMMENTS REGARDING PROVISIONING UNIQUE TO THE BASIC HOT CUT PROCESS?

A. No. Because all of Verizon's hot cuts are provisioned manually, these comments apply equally to all of its hot cut processes, regardless of how they are packaged.

. **b. IDLC**

Q. WHAT IS THE DIFFERENCE IN THE HOT CUT PROCESS WHEN A CUSTOMER IS SERVED VIA IDLC?

A. For loops that are equipped with IDLC, Verizon shifts the customer from the IDLC-equipped loop to an all-copper loop or to a loop served via Universal Digital Loop Carrier ("UDLC") technology.[28] Verizon dispatches a technician to the Serving Area Interface ("SAI") associated with the copper distribution pair that serves the customer. The distribution pair for an IDLC-equipped loop is cross-connected at the SAI to a copper "sub-feeder" pair that is in turn connected to IDLC electronics at the Remote Terminal ("RT"). In order to permit a hot cut to be made, the distribution pair must be moved at the SAI so that it will be cross-connected either to a pair in a cooper feeder system or to a sub-feeder pair associated with a UDLC system in the RT. If spare copper or UDLC facilities are not available at the SAI, then a "line and station transfer" ("LST"; also known as a "pair swap") may be required. In an LST, the technician moves another Verizon retail customer from copper or UDLC facilities to IDLC equipment. The customer for whom the hot cut was requested can then be moved to the freed-up copper or UDLC facilities. Indeed, in some cases, even more complex rearrangements of the

[28] Verizon Initial Testimony, pp. 11-12.

outside plant will be required in order to free up copper or UDLC facilities. Generally, two outside dispatches will be required for a hot cut on an IDLC-equipped loop, the first to confirm the availability of suitable replacement facilities and the second, on the due date, to actually move the customer's service to the facilities.

Q. IT SOUNDS LIKE VERIZON PERFORMS MANY ADDITIONAL STEPS TO PERFORM A HOT CUT OF A CUSTOMER WHO IS SERVED BY AN IDLC-EQUIPPED LOOP. ARE THESE STEPS CONSISTENT WITH A FORWARD-LOOKING, EFFICIENT TECHNOLOGY?

A. No. Hot cuts of IDLC-equipped loops can be performed without downgrading the customer's loop to all-copper or UDLC. Verizon's process takes the customer off of the more modern and efficient fiber feeder and associated electronics and puts the customer on the old all-copper network or the anachronistic UDLC technology. This cannot be forward-looking.

Q. VERIZON STATES THAT "THERE IS NO TECHNICALLY FEASIBLE, PRACTICABLE MEANS OF OBTAINING ACCESS TO INDIVIDUAL VOICE-GRADE LOOPS AT THE CENTRAL OFFICE WHEN SUCH LOOPS ARE PROVISIONED OVER AN IDLC SYSTEM." (INITIAL TESTIMONY P.11) PLEASE RESPOND.

A. Verizon is wrong and is blissfully ignoring the capabilities of the equipment that it is deploying in its network. Verizon is also ignoring the Telcordia guidelines that outline a "variety of technical feasible" options for unbundling IDLC. In the New York proceeding, MCI asked Verizon to comment on the Telcordia document that states that a "variety of technical feasible" options exist to unbundle IDLC-equipped loops at the individual line level. MCI also asked Verizon to comment on the options, with specific focus on the two options that do not require a field dispatch. Verizon in its response

acknowledged that the options that do not require a dispatch exist, but insisted that they are not "technically feasible and practical." [29] When questioned about this issue during the evidentiary hearings in New York, Verizon's technical expert stated that: "the only options that exist in Verizon require some field activity to move the wires." When asked to explain his answer in relationship to the options outlined by Telcordia, which do not require a dispatch, Verizon acknowledged that the non- dispatch options exist.[30] Verizon's position merely reflects the fact that Verizon has chosen options that require a field dispatch and a change of facilities, which impact the cycle time required to complete a hot cut and increase the cost, rather than more efficient options.

Both of the options that do not require a field dispatch (discussed below) have been documented by Telcordia and tested by MCI. In addition, recent testimony submitted by BellSouth in Florida endorses one of the two non- dispatch options as a viable alternative.[31]

Q. PLEASE DESCRIBE THE OPTIONS PROVIDED BY TELCORDIA FOR UNBUNDLING OF IDLC LOOPS.

A. Telcordia has developed a variety of "technically feasible" options[32] available to the ILEC to unbundle an IDLC loop. However, no single standard exists; consequently, each

[29] Verizon NY Response to NY interrogatory MCI-VZ-113. (Attachment ESJ-6)

[30] See NY Evidentiary Hearing Transcript, dated Jan. 13,2004 Case 02-C-1425, pp 324- 328 (Attachment- ESJ-9).

[31] Direct Testimony of Kenneth Ainsworth on Behalf of BellSouth Telecommunications, Inc., Before the Florida Public Service Commission, Docket 030851-TP, Dec. 4, 2003, at pp. 26-28. (Attachment ESJ-8).

[32] Examples taken from: Telcordia Notes on the Networks, Issue 4, October 2000.

ILEC has established its own set of options along with the corresponding methods, procedures, and practices needed for implementing these options.

Some common IDLC options are:

OPTION #1 - Bypass the IDLC system and transfer the loop to an all-copper pair. If there are available spare copper facilities serving the customer's neighborhood, transferring the IDLC customer to a spare all-copper circuit is an option. While this procedure appears to be relatively simple, it requires central office and outside plant rewiring to complete the new UNE-L circuit from the MDF to the customer. In established areas, issues relative to maintaining the copper facility along with the newer facility that the ILEC is utilizing to serve its customers can become problematic. In new neighborhoods/housing developments, ILECs frequently utilize IDLC systems and install a very limited number of copper pairs to support certain services. In these areas, spare copper facilities can be quickly exhausted if used for unbundled loops.

OPTION #2 - Bypass the IDLC system and transfer the loop to a UDLC system. If there are no spare copper facilities in the customer's neighborhood, the ILEC may transfer the customer's circuit from the IDLC system to a UDLC System. This option is dependent on the availability of UDLC in the serving area and spare capacity within the UDLC systems to support transfers from IDLC systems. In addition, this transfer will involve both central office and outside plant work activity.

OPTION #3 - Utilize the UDLC capability of the IDLC system. If the IDLC system is equipped to support UDLC functionality, the ILEC can electronically re-provision the circuit from IDLC to UDLC. No outside plant work activity is needed. However, manual central office work is required to run jumpers from the MDF to the collocation cage and, if necessary, place a UDLC plug-in (circuit pack) at the Central Office Terminal ("COT"). This option is a technological step backwards as a UNE-L serving arrangement because it introduces additional digital to analog conversions, which I will discuss later in this testimony.

OPTION #4 - Utilize a separate GR-303 Interface Group for the CLEC customers. The field Remote Digital Terminal ("RDT") must support the MIG (Multiple Interface Group) capability defined in the GR-303 specification. This configuration allows a CLEC switch to connect to the ILEC's RDT at the GR-303 interface level.
This arrangement may be cost effective for those CLECs having a "critical mass" of subscribers served by the RDT. Once connectivity is established, unbundling can be done electronically, eliminating the need for field and central office manual work activities.

OPTION #5 - Share a GR-303 Interface Group and use the side door port of the switch to transport CLEC traffic out of the ILEC switch. This option utilizes a GR-303 Interface Group sharing ILEC and CLEC traffic. All CLEC traffic is routed through side door port DS1s out of the ILEC's switch. CLEC circuits are provisioned as non-switched, non-locally switched circuits within the IDLC system. The addition of a Digital Cross-connect

System ("DCS-1/0") also provides an advantage if the CLEC is not fully utilizing a DS1 from the ILEC Local Digital Switch ("LDS") to the CLEC, and multiple switch modules with digital interface capability are used by the ILEC. If a DCS-1/0 were placed between the LDS DS1 side door port and the CLEC DS1s, it would permit full utilization of the side door hardware by enabling CLEC DS0s to be rearranged in the DCS-1/0 and placed on the individual CLEC DS1s. This option also has the potential of eliminating manual work steps required for unbundling.

OPTION #6 - Utilize separate TR-008 Interface Groups to transport CLEC traffic. This option dictates the use of separate TR-008 Interface Groups to carry CLEC traffic while utilizing the GR-303 Interface for ILEC traffic. This is another very inefficient solution that requires manual work activities in the field and Central Office.

Q. HOW DOES VERIZON PROVISION HOT CUTS FOR IDLC LOOPS?

A. Verizon utilizes the copper and UDLC options for IDLC loops, both of which require the dispatch of a field technician. Verizon has explained the rationale for its approach as follows:

> IDLC technology multiplexes groups of 24 voice grade channels to specially formatted IDLC interfaces within the central office. There is no direct access to an individual voice grade channel on an IDLC system. If a CLEC orders UNE-P to serve a Verizon end user whose loop facility is currently provided using IDLC, no transfer and thus no dispatch is required because Verizon continues to provide both the switching and the loop to the CLEC. However, if a CLEC orders an UNE Loop only, to serve a Verizon end user whose loop facility is currently provided using IDLC, all such "IDLC orders" require a transfer to alternative facilities (i.e., copper or UDLC) and must be dispatched. The field technician must move one or more non-IDLC portion(s) of the loop (either sub-feeder cable, distribution cable and service wire, or just

distribution cable and service wire, or just service wire) to the alternative facility.[33]

Q. DO ANY OF THE IDLC UNBUNDLING OPTIONS THAT YOU DESCRIBED ELIMINATE THE NEED FOR A DISPATCH TO PERFORM THE HOT CUT?

A. Yes. If Verizon adopted either option 4 or 5 as its operating standard, customers served by this type of network configuration could be migrated from UNE-P to UNE- L and CLEC to CLEC migrations could be accomplished without a dispatch.

Although remote unbundling of IDLC-equipped loops is technically feasible, the work required to establish necessary processes and techniques to unbundle IDLC in this fashion in a commercial setting has never been undertaken in earnest by Verizon. Verizon has simply been provided no incentive to support this type of process, which would serve to enhance competition in the local markets that Verizon currently dominates. As such, Verizon must be compelled to put forth the time and effort toward making remote unbundling of IDLC-equipped loops a reality.

Despite the technical feasibility of remote unbundling of IDLC equipped loops, there are issues that need to be overcome, including:

- Since each CLEC circuit requires a dedicated DSO, absent additional software functionality or other processes, the ILEC may encounter blocking over the IDLC system as other circuits compete for DSO channels.

- The number of side door ports that can be engineered varies depending on the LDS supplier and no standard appears to have emerged, hence, a concerted effort on the part of the ILEC may be required to standardize this technology for this purpose.

[33] Verizon NY Response to NY Interrogatory MCI-VZ-2. (Attachment ESJ-6)

- There is limited support in existing special services design systems and databases to support side door port circuits. Again, this results primarily from the fact that the vendors design systems based upon the needs of their primary customers and the ILECs have had little incentive in the past to pursue this type of unbundling technology. Hence, this issue could undoubtedly be overcome with the vendors if ILECs were provided the proper incentives to pursue unbundling technology.

- Additional issues regarding the ability for an IDLC system providing multiple Interface Groups ("IGs") to multiple CLECs, such as sharing test resources, and alarms, also need to be addressed.

Verizon and MCI both agree that these options exist and that a number of issues such as those listed above must be resolved; however, Verizon chooses to ignore the potential while MCI embraces it.[34] Nevertheless, it is important to remember that Telcordia developed the specifications for the GR-303 platform and has demonstrated its commitment to resolving the issues associated with unbundling by providing the methods described above. Furthermore, the equipment that Verizon is deploying in its network today is completely compatible with this technology.

As discussed below in the pricing portion of this testimony, at a minimum, Verizon should incorporate this functionality for the purpose of developing forward looking pricing of hot cuts, as opposed to pricing hot cuts based on its embedded, short sighted processes, which yield the absurd proposed IDLC surcharge in Verizon's Initial Testimony.

Q. BECAUSE VERIZON WILL NOT UNBUNDLE AN IDLC-EQUIPPED LOOP AT THE INDIVIDUAL LOOP LEVEL, IN ORDER TO PERFORM A HOT CUT FOR A CUSTOMER SERVED BY AN IDLC-EQUIPPED LOOP, THE CUSTOMER

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[34] see NY Evidentiary Hearing Transcript dated Jan. 13,2004 Case 02-C-1425, p. 328 (included in Attachment ESJ-9).

MUST BE SHIFTED FROM AN IDLC-EQUIPPED LOOP TO AN ALL-COPPER LOOP OR TO A LOOP SERVED VIA UNIVERSAL DIGITAL LOOP CARRIER ("UDLC"). (P. 12) HOW WILL THIS IMPACT THE CUSTOMER'S SERVICE?

A. As described in Section 12.13.3 of Telcordia Notes on the Networks (SR-2275, Issue 4, October 2000), entitled "Unbundling Issues Associated with UDLC and IDLC systems," UDLC contributes to multiple problems, including (a) increased dial tone delay, (b) degradation of on-hook transmission services, such as caller ID, (c) degradation of signal quality as a result of multiple analog/digital ("A/D") and digital/analog (D/A") conversions and (d) reduction in analog modem operation speeds because of the number of A/D conversions.

This last issue is of particular concern to MCI. Because IDLC avoids additional A/D and D/A conversions inherent in the UDLC system, the IDLC system avoids problems associated with dramatically reduced bit rate speeds for voice band data connections that plague UDLC systems (e.g., faxes or analog modems). This issue is described more fully in Microsoft's Windows 2000 support website, which explains that: "there can be only one analog connection between your modem and the host computer" if a PC modem is able to support a V.90 dial-up connection that operates at speeds of 56 kilobits per second. In short, UDLC systems can dramatically reduce the access speed enjoyed by dial-up Internet customers, while IDLC systems avoid these problems entirely.

When the customer is migrated to a copper loop, once again the procedure requires central office and outside plant rewiring to complete the new circuit from the MDF to the customer. Aside from the potential interruption of service due to work errors or facility problems, the CLEC (and the end customer) will ultimately be provided with a facility

that is likely to have different transmission characteristics than that which the customer enjoyed when receiving service from Verizon and would likely enjoy again if the customer returned to Verizon.

Q. ARE IDLC SYSTEMS WIDELY DEPLOYED?

A. Presently, the majority of Central Offices in Massachusetts serve customers via IDLC.[35] Indications are that the number of Verizon customers served via IDLC is increasing. This results primarily from the fact that most packet-capable DLC platforms (platforms that support both voice and DSL functionality) are IDLC platforms. Hence as carriers like Verizon institute DSL- based network upgrade initiatives, the number of IDLC terminals in their networks increase substantially, and more and more customers are moved to IDLC facilities. As such, the IDLC related issues identified above are becoming more important.

Q. IS MCI'S PROPOSAL FOR EFFICIENT LOOP PROVISIONING FOR GR-303 COMPLIANT IDLC LOOPS THE SAME PROPOSAL AS AT&T'S "ELP" PROPOSAL THAT THE FCC DISCUSSED IN THE TRIENNIAL REVIEW ORDER?

A. No. AT&T's ELP proposal "proposes to 'packetize' the entire public switched telephone network for both voice and data traffic."[36] The FCC declined to order ELP in the *Triennial Review Order*, citing the costs and the required changes to the existing network. MCI's proposal is fundamentally different. First of all, the proposal is not a packet-

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[35] Verizon FLM Exhibit IV-A contains data associated with % of UNE-P customers served via IDLC on a wire center basis. Since the exhibit was not provided in an electronic format and the total for the state was not provided, a scan of the wire centers reveals that very few wire centers contain UNE-P customers with 0% served via IDLC.

[36] *Triennial Review Order* at ¶491.

switched solution, and as such does not require packetization of traffic. Second, the proposal makes use of the existing equipment and technologies that Verizon has deployed and continues to deploy in its network, rather than requiring wholesale changes to the existing network architecture. Verizon acknowledged the differences and confirmed that the MCI proposal is promising in the long run.[37]

c. ADFs (Provisioning All Cooper Loops)

Q. What is an ADF?

A. ADF is an Automated Distribution Frame, which is a type of technology used to automate the manual wiring functions associated with the main distribution frame.

Connecting the "outside" facilities to the "inside" facilities currently is accomplished by manually placing cross wire (x-wire) connections, known as jumpers. This is a very labor-intensive "on-site" process requiring the dispatch of a technician to the MDF to physically place the jumpers required to change a service connection. Two dispatches are often required, one to pre-wire the CLEC connecting facility, and a second dispatch on the cut over date, when the existing connection is disconnected and the CLEC connection extended to the loop. In order to gain an appreciation of the magnitude of mechanizing this manual cross-wiring activity, it is helpful to reflect on the impact that the evolution of technology has had on the processes associated with the provisioning of service.

[37] See NY Evidentiary Hearing Transcript, dated Jan. 13,2004, Case 02-C-1425, pp. 320-322 (Attachment ESJ-10).

During the 1950s and 1960s, most connect and disconnect activities were performed on a manual basis. During the 1970s and early 1980s, mechanization of these activities through the utilization of stand-alone databases began to emerge. Examples include the replacement of paper records with databases, which could be accessed to find information (for example: customer service records or cable pairs). As technology evolved during the 1980s and early 1990s system-to-system interfaces were developed. This technology breakthrough eliminated the need for a lot of manual intervention (hand-offs) and began the era of "flow-through."

Flow-through in this context refers to activities that occur by way of systems interacting directly with other systems to provide a given output. For example, using the two databases mentioned above, instead of manually extracting the address information from a customer service record ("CSR") database and manually typing this information into another system which would then query the cable pair database to look for a spare pair if a new line is requested, an entry on an input screen by a customer service representative, who has received the request from a customer, would automatically trigger an automated request that would query both databases and print out information on the availability of the spare pair. The 1990s produced the next step, which basically is an integration of the automation described above, with all of the support systems and related databases.

Periodically, Bellcore and others have studied the subject of frame mechanization. In fact, the concept of cross-connect mechanization can be traced back to a technical

advisory TA-NPL-000407, issued in May of 1989 titled: Fundamental Generic Requirements for Metallic Automated Cross-Connect Systems (MAXS). Bellcore abandoned these efforts since cost-effective and scalable technologies did not exist at that time. Since that time, micro relay and robotic technology has evolved to a point where they are now being utilized for systems that have the ability to automate the manual wiring function in small central offices serving less than 10,000 lines. These systems are called Automated Distribution Frame (ADFs).

Q. HAS VERIZON INTRODUCED THIS ADF TECHNOLOGY INTO ITS NETWORK?

A. No, Verizon has not introduced this technology; however,Verizon has installed a number of these devices in Massachusetts and other areas within its territory. Examples include Ashby, Bernardston, Boulton, and Northfield.[38] Verizon acknowledges that this technology is deployed in some Verizon central offices. "Devices do exist that automatically make copper-to-copper physical connections between any of a set of input positions and any of a set of output positions. For the most part, Verizon uses these ADF devices in small, un-staffed central offices that serve, on average, a few thousand lines."[39]

Q. HAS VERIZON DEPLOYED ADF TECHNOLOGY IN LARGER CENTRAL OFFICES?

A. No. Verizon states that ADFs "cannot, however, be efficiently scaled up to serve larger central offices."[40]

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[38] Verizon Initial Testimony, p.16

[39] Verizon Initial Testimony, p.16.

[40] Verizon Initial Testimony, p.16.

Q. DO YOU AGREE WITH VERIZON'S ASSERTION THAT ADF TECHNOLOGY CANNOT BE USED TO FACILITATE HOT CUTS IN A LARGE CENTRAL OFFICE?

A. No. Verizon agrees that ADFs are capable of connecting and disconnecting circuits automatically. And while ADF systems large enough to accommodate large offices do not exist, Verizon argues that even if an application did exist and was installed in a large office manual wiring would still be required to establish connectivity from the MDF through the automated system to the loops served by the central office.[41] While it is true that these systems still require the pre-wiring manual work associated with establishing connectivity from the MDF through the automated system, Verizon has overlooked an option that can be beneficial to the hot cut process. Specifically, if a small ADF system were placed into a large central office, designed to manage the CLEC tie cable facilities, it would be possible to pre-wire hot cut connections manually in advance of the hot cut date, and remotely cut over the lines on the cut over date without requiring another frame technician dispatch. This approach would free the technician to do additional pre-wiring for other hot cuts while reducing the overall cycle time of the process by providing the capability to handle thousands of hot cuts remotely without respect to the negotiated interval throttle that Verizon uses to pace demand.

Q. WOULD THIS FACILITATE ALL TYPES OF MIGRATIONS ON ALL-COPPER LOOPS INVOLVING CLECS?

A. Yes. The ADF system could easily be configured to facilitate remote hot cut migrations between CLECs and handle Verizon win backs without requiring a frame dispatch. This is a significant value advantage considering the fact that the system will be serving a base

of customers that have already demonstrated their willingness to migrate to another carrier. It is generally accepted that this customer base will have a higher probability of "switching" again, creating churn[42] that can now be handled in an automated fashion.

Q. IN OFFICES THAT CURRENTLY HAVE THIS TECHNOLOGY, IS THE HOT CUT PROCESS DIFFERENT?

A. Unfortunately no. As Verizon admits, the ADF eliminates the need for technicians to connect and disconnect jumpers on the frame for all available cable pair and office connections. While these systems exist, currently the systems are not used by Verizon to perform hot cut connections and special services are not typically terminated on the Auto-MDF.[43] However, when questioned during the hearings in New York about the feasibility of using these devices to perform hot cuts in central offices where CLEC collocation arrangements exist, Verizon acknowledged that it will use the technology.[44] However, to date, Verizon is not aware of any situations where hot cuts have been performed in this manner.

Q. WHY IS THIS IMPORTANT?

A. As I mentioned previously, the manual process associated with dispatching a technician to place and remove cross wire on the frame is the bottleneck that cripples the hot cut process from a scalability perspective. ADFs are the key to the elimination of the bottleneck.

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[41] Verizon Initial Testimony, p. 17.
[42] Churn can be defined as customers changing from one carrier to another.
[43] Verizon NY Response to NY interrogatory ATT-VZ-23. (Attachment ESJ-7)
[44] see NY Evidentiary Hearing Transcript dated Jan. 13,2004, Case 02-C-1425, pp. 290-293 (Attachment ESJ-11).

CLECs presently provide service on a UNE-P basis to customers serviced from small central offices. In the event that a request is submitted to migrate a customer from UNE-P to UNE-L, the CLEC may utilize an existing collocation arrangement or EEL network configuration for interconnection. Verizon has essentially blocked the use of this efficient technology by stating that systems are not being used for hot cuts of special services, including EELs. This is not only a roadblock from an efficiency and cost perspective, it is also a roadblock from a cycle time perspective.

Q. PLEASE EXPLAIN FURTHER.

A. While these systems eliminate the requirement to dispatch a technician, Verizon has no intention to utilize them to reduce its hot cut provisioning intervals. In response to New York data request ATT-VZ-135, Verizon describes how cross- connections utilizing ADF technology are done remotely from a "regional center." [45] When asked if completion date intervals will be shorter in offices equipped with ADFs, Verizon responded: "Currently, no special intervals apply to such offices, and according to the responses to data requests, Verizon has no immediate plans or proposals to differentiate offices on this basis for interval purposes." [46] A review of the typical occurrence and forward looking adjustment factors in Verizon's cost model related to frame wiring reveals a *****BEGIN VERIZON PROPRIETARY ***** [47] **END VERIZON PROPRIETARY***** occurrence of these activities, which reinforces that position. However, as stated earlier, Verizon acknowledged during hearings in New York that it will use the technology where it exists

[45] Verizon NY Response to NY interrogatory ATT-VZ-135. (Attachment ESJ-7)

in conjunction with CLEC collocation arrangements, but these plans are not reflected in the forward looking adjustments associated with its cost model, a point that Verizon readily acknowledges.[48] This is problematic not only because this technology is currently available in small offices, but also because next generation technology developments are in progress that will make ADF scalable for large central offices.

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE USE OF THIS TECHNOLOGY TO PERFORM HOT CUTS?

A. First of all, we know that ADF systems are deployed today in some of Verizon's small offices. It would be very easy to conduct a trial in one of those offices to determine the impact that the technology has on the hot cut process. A successful trial will dictate the next steps associated with further deployment, including use in larger offices. Therefore MCI recommends that this Department order a trial with ADF technology in a Verizon central office.

Q. IS THIS APPROACH AN ULTIMATE SOLUTION?

A. If engineered properly, this approach, coupled with the ongoing enhancements to WPTS, could lead to an ultimate solution for all-copper loops.

Q. PLEASE EXPLAIN FURTHER.

A. We know that these small robotic ADFs exist and work. We also know that larger systems are presently under development. During the New Jersey Hot Cut workshop

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[46] Verizon NY Response to NY interrogatory ATT-VZ-141. (Attachment ESJ-7) Verizon response to Massachusetts interrogatory AT&T-VZ- 3-142 confirmed that the same situation exists in Massachusetts.
[47] Verizon Supplemental Testimony, Exhibit SUPP- III, p.4, CO Frame lines 1-7, Column E. .
[48] see NY Evidentiary Hearing Transcript, dated Jan. 13, 2004, Case 02-C-1425, pp. 322-323 (Attachment ESJ-12).

sessions, Simpler Networks made a presentation relative to the next generation of ADF that is currently under development.[49] In addition, these devices can be installed in a matter of months.[50] Putting all of this together suggests an initial roll out of these existing types of robotic systems, targeting offices with a large concentration of UNE-P-served lines. The systems could be configured as described above and utilized for hot cuts until the larger systems that can handle the entire MDF became available.

Once the larger systems are installed, the smaller systems could be reused in smaller remote offices. At a minimum, from a pricing perspective, this type of technology should be incorporated into Verizon's cost models as a forward looking adjustment.

2. Large Job ("Project") Hot Cut Process

Q. WHAT IS THE STATED PURPOSE OF THE PROJECT, OR LARGE JOB, HOT CUT PROCESS?

A. Verizon states in its testimony that this process was designed for use "in cases in which CLECs are willing to aggregate their orders by central office and due date."[51]

Q. WHAT IS THE DUE DATE INTERVAL ASSOCIATED WITH THE "PROJECT" HOT CUT PROCESS?

A. Verizon's "project" hot cut process does not have standard due date intervals. The due date is negotiated utilizing a strict volume limitation mechanism, known as the

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[49] According to Simpler Networks, www.simplernetworks.com, a larger system will be available in 2006.

[50] See Verizon Response to NY data request MCI-VZ-122S, Attachment ESJ-6

[51] Verizon Initial Testimony, p. 24.

"Manager's Area Policy". This mechanism limits the number of hot cuts to 150 per day within two central offices within a Verizon manager's area for the entire industry.

Q. ARE THE ISSUES YOU DISCUSSED EARLIER IN YOUR DISCUSSION OF THE BASIC HOT CUT PROCESS, SUCH AS FALLOUT AND MANUAL PROVISIONING, APPLICABLE TO THE PROJECT HOT CUT PROCESS?

A. Yes. The same issues present themselves and hamper the Large Job process.

Q. VERIZON ASSERTS THAT THE LARGE JOB PROCESS IS ISO 9000 CERTIFIED. (INITIAL TESTIMONY PG. 24) HOW DO YOU REACT TO THAT?

A. I do not agree that Verizon's Large Job process, as designed, meets the requirements of CLECs or end user customers, which is a requirement to meet the ISO 9000 certification that Verizon claims for the process.[52]

Q. PLEASE EXPLAIN.

A. From a CLEC and end user perspective, it is clear that some hot cuts require coordination. The coordination steps presented by Verizon in this proceeding represent improvements from prior processes. However, from a process perspective, there are too many restrictions. Furthermore, there is no reason why this process and the "Basic" hot cut process cannot be combined.

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[52] ISO is the International Organization for Standardization, a "network of national standards institutes from 145 countries working in partnership with international organizations, governments, industry, business and consumer representatives." (http://www.iso.ch/iso/en/ISOOnline.openerpage) ISO 9000 is a set of generic management system standards, including a family of "quality management" standards. "[T]he standardized definition of 'quality' in ISO 9000 refers to all those features of a product (or service) that are required by the customer. 'Quality management' means what the organization does to ensure that its products conform to the customer's requirements." (www.iso.ch/iso/en/iso9000-14000/tour/plain.html)

Q. WHY DO YOU ASSERT THAT FROM A PROCESS PERSPECTIVE, THE BASIC HOT CUT PROCESS AND THE LARGE JOB PROCESS COULD BE COMBINED?

A. On page 25 of its initial testimony, Verizon lists the principal differences between the "Basic" and "Project" processes. The following is an analysis of each of the differences:

1. The due date is negotiated rather than being the five-business-day standard interval.

Analysis: According to Verizon, there is no limit on the number of "Basic" cuts that can be requested on a single LSR.[53] However, the five-business-day interval only applies to small volume (1-10 lines) orders for the basic hot cut process. Orders for 11-20 basic hot cuts have a 10-day interval, and any orders for more than 20 lines requires a negotiated due date. Therefore, any orders for any significant number of hot cuts, whether they are ordered as basic hot cuts or large job hot cuts, push a CLEC into a negotiated interval.

Beginning on page 29-30 of Verizon's Initial Testimony, Verizon discusses its "Manager's Area Policy." This policy limits the number of lines that can be cut over in the eight "Manager's Areas" to 150 per day for all CLECs. Verizon explains that the rationale for this throttling mechanism is to "allow Verizon's managers to balance their force with minimal need for additional overtime."

Verizon's response to NY interrogatory MCI-VZ-49 revealed that "all pending future work is taken into account" when negotiating due dates.[54]

The bottom line is that all multiple line hot cut requests (20 lines or more), regardless of process, are scheduled to meet Verizon's force/load balancing requirements. Consequently, the term "negotiated" is really a misnomer from a customer perspective. As is evident from Verizon's process flows, "negotiated" really means "dictated to the CLEC by Verizon."

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[53] Verizon NY Response to NY interrogatory MCI-VZ-40. (Attachment ESJ-6)

[54] Verizon NY Response to NY interrogatory MCI-VZ-49. (Attachment ESJ-6)

2. A single PON prefix is assigned to all orders included in the project.

Analysis: This item is not a radical difference that dictates complex interactions on the part of Verizon or the CLEC. It is simply a means to track multiple lines associated with a single project.

The CLEC is really caught in a "Catch 22" situation in regard to the coordination of a multiple line hot cut request. It can issue one LSR with multiple lines in order to save the individual service order charge levied on a "per order" basis. However, if it chooses this route and one of the lines needs to be changed or renegotiated, the status of the entire order and related lines is jeopardized from a due date perspective.

Alternatively, a CLEC can issue a single LSR for each line, incurring the service order charge for each line. This option allows changes to be line specific. From a "Basic" process perspective, the LSR could be related for tracking purposes or tracked via a PON if ordered on a project basis. In either scenario, Verizon's WPTS system will track the orders.

3. A "project" spreadsheet is used.

Analysis: On pages 26-27 of Verizon's initial testimony, Verizon proposes eliminating this "Difference" mentioned on page 25.

4. The CLEC is notified by telephone and electronically rather than solely electronically through WPTS of the completion of each batch of cuts in the "Project."

Analysis: This is an interesting benefit of the "Project" process as compared to the "Basic" process. Assuming that the RCCC, which Verizon defines as the Project Managers, actually does the notifying, it appears that it takes less time and is cheaper to take advantage of the call in addition to the WPTS notification.

Q. PLEASE EXPLAIN WHY IT APPEARS TO BE CHEAPER TO RECEIVE A MANUAL COMPLETION NOTIFICATION?

A. Exhibit III-A (Verizon cost model) lists two RCCC activities associated with the due date, coordination on the due date and order completion. A review of the total time taken for these activities for a 2-wire initial order utilizing the "Basic" process vs. the 'Project" process reveals the following:

*****BEGIN VERIZON PROPRIETARY**

?? Basic –****minutes (System notification only)

?? Project – **** minutes[55] (System notification and manual phone call)[56]

*** **END VERIZON PROPRIETARY*****

When the above minutes are multiplied by the labor rate per minute, the total cost for system only notification in the Basic Hot Cut process is more than the cost for both the system and phone notification in the Project Hot Cut Process. The same comparison holds true for each additional order. This not only challenges the "value" of the extra notification step, it also calls into question the accuracy of the times and statistical cross checks conducted by Verizon.

Q. WHAT DID YOUR ANALYSIS REVEAL RELATIVE TO THE FINAL DIFFERENCE BETWEEN THE "BASIC" AND "PROJECT" PROCESS?

A. The final difference presented by Verizon is that "loops included in a 'Project' are typically cut over after business hours." MCI's analysis reveals that the labor costs for both processes are the same. [57] Therefore, there is no cost difference because the "Project" cut over is done after business hours. Verizon lists an expedite charge as part of its cost summary[58], however according to Verizon's footnote 4, appearing on page 2 of Exhibit SUPP-III and validated in the response to NY data request ATT-VZ-47, the expedite charge only applies in cases of due date expedites outside of standard intervals.

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[55] Verizon Initial Testimony, Exhibit III-A, pp. 3 and 15, RCCC Lines 6-7.
[56] Verizon Initial Testimony, p. 25.
[57] Verizon Initial Testimony, Exhibit III-A p. 3 Column K vs. p. 15 Column K.

Further, since multiple line requests (>20 lines) call for a negotiated due date, I assume that the time can also be negotiated. So, there is really no difference.

Q. DOES MCI HAVE A PREFERENCE AS TO THE TIMING OF MASS MARKET HOT CUTS?

A. Mass market hot cuts should be performed at times when residential customers are least likely to be on the phone. For business customers, that typically means evening hours, but mass market customers are likely to be using their phones in the early evening. MCI therefore prefers that hot cuts for residential customers take place as late in the evening as possible, and that the customer's service be interrupted for the shortest possible amount of time.

Q. GIVEN YOUR ANALYSIS OF THE DIFFERENCES BETWEEN THE "BASIC" AND "PROJECT" PROCESS, WHAT ARE THE ADVANTAGES FROM A CLEC PERSPECTIVE?

A. While there is clearly a need for a coordinated hot cut process for special types of serving arrangements (for example, multi-line hunt groups), from a process perspective, the differences between the processes are minimal. Consequently, from a CLEC perspective, there are no advantages to having two separate coordinated processes.

3. Batch Hot Cut Process

Q. WHAT IS THE PURPOSE OF THE BATCH HOT CUT PROCESS?

A. In essence, the batch process is a poor attempt by Verizon to meet the FCC's requirement that each state commission approve a seamless, scalable, timely and low-cost "batch" cut

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[58] Verizon Supplemental Testimony, Exhibit SUPP III pg2. Line 9.

migration process.

According to Verizon:

> The "Batch" hot cut optimizes the efficiencies of the Project process regardless of the CLECs' ability to aggregate orders on a CO-by-CO basis. It also allows the accumulation of orders for multiple CLECs, whereas Project hot cuts are CLEC-specific. More significantly, it eliminates the need to coordinate since Verizon proposes to manage the entire process from order acceptance to port activation. All of this results in virtually seamless migrations and lower CLEC costs.[59]

Q. IS THE BATCH HOT CUT PROCESS A "COORDINATED" HOT CUT PROCESS?

A. No. First of all, we need to define this process for what it is - a disguised FDT non-coordinated process. Work is done independently by Verizon and the CLEC, with no direct communication required at the time of the hot cut. This is the essence of an FDT process, as the FCC recognized in the *Triennial Review Order*. This appears to be Verizon's initial attempt at providing a hot cut process that will satisfy mass market day-to-day provisioning needs. While MCI is glad that Verizon recognizes the need for such a process, this process falls well short of anything that could support mass market provisioning and the FCC's requirements.

Q. WHY DO YOU SAY THAT THE BATCH PROCESS COULD NOT SUPPORT MASS MARKET PROVISIONING NEEDS?

A. While Verizon has improved the coordination phase of the process and continues to do so through WPTS enhancements, Verizon has failed to apply any improvements to other

[59] Verizon Initial Testimony, p. 31.

areas of the process, including fallout and the provisioning phase. As mentioned previously, Verizon's hot cut processes are not scalable to handle mass market volumes as long as they rely exclusively on manual provisioning. This batch process uses the same work force, follows the same manual provisioning procedures, and experiences the same provisioning bottlenecks as Verizon's other hot cut procedures. Furthermore, perhaps in part because Verizon has not implemented any mechanized or automated provisioning processes, Verizon is imposing restrictions and requirements that minimize the value of its proposed batch process.

Q. PLEASE DISCUSS THE RESTRICTIONS AND REQUIREMENTS THAT DIMINISH THE VALUE, IF ANY, OF THE BATCH HOT CUT PROCESS.

A. First, each request is initially assigned a due date of 26 business days (5+ weeks) during which time Verizon collects what it calls a "critical mass" of orders.[60] Once the "critical mass" reaches an acceptable level, a due date is issued and the order is completed. Verizon has provided the CLECs with no guidance whatsoever as to what will constitute a critical mass. This time period is really just another force/load matching algorithm designed to pace the load through the frame wiring step "bottleneck."

In the interim, CLECs have the option of ordering UNE-P to bridge the cycle time gap,[61] however, once the order is placed, no changes can be made to the pending migration order or the customer's current UNE-P service. The customer is therefore put into a

[60] Verizon Initial Testimony, pg. 32 states that the interval is 35 business days; however, in response to Massachusetts interrogatory AT&T 3-147(b), Verizon stated that the date has been reduced to 26 days.
[61] Verizon Initial Testimony, pg. 34-35.

"holding pattern" in which no changes can be made to the customer's account until the customer is cutover from UNE-P to UNE-L. This holding pattern can be lengthy.

Q. DOES THE LENGTHY HOLDING PERIOD THAT WOULD RESULT FROM VERIZON'S PROPOSAL NEGATIVELY IMPACT CLECS AND THEIR CUSTOMERS?

A. Yes. The lengthy holding period completely defeats any attempt to make the hot cut transparent to the customer, because the customer will be unable to make any changes to his or her account while on hold. This includes making feature changes like adding or removing Caller ID or Call Waiting. Furthermore, the CLEC is unable to tell the customer how long the holding period will be.

Q. DO YOU HAVE ANY RECOMMENDATIONS REGARDING THE HOLDING PERIOD?

A. Any holding period will mean an inconvenience to the customer and a lack of transparency. The holding period should therefore be as short as possible, no longer than 10 calendar days.

Q. RATHER THAN BLINDLY PLACING A HOT CUT ORDER WITH AN UNDEFINED DUE DATE, WOULD CLECS BENEFIT FROM SOME SORT OF AUTOMATIC SCHEDULER, SUCH AS THE SMARTS CLOCK?

A. Yes. The ability to schedule due dates automatically or, at a minimum, to query a system that will demonstrate the availability of due dates would be a benefit for CLECs, who would gain at least some insight into when their orders would be provisioned. However, although Verizon has informally talked about considering a "Smarts Clock" type scheduler, Verizon has stated that it will only consider implementing a "Smarts Clock"

approach in lieu of the current approach, when it is cost effective to implement. This is no commitment whatsoever to consider or implement this option.[62]

Q. WHAT ARE SOME OF THE OTHER RESTRICTIONS ON THE AVAILABILITY OF THE BATCH HOT CUT PROCESS?

A. Verizon limits the application of the process to lines that are, before the submission of the CLEC LSR, either Verizon retail lines, resold lines, or UNE-P lines.

Q. DOES THIS MEAN THAT THE BATCH HOT CUT PROCESS IS NOT AVAILABLE FOR CLEC-TO-CLEC, UNE-L-TO-UNE-L MIGRATIONS?

A. Correct. Again, this demonstrates the extremely limited utility of Verizon's proposed process. Even if the batch process was beneficial to move customers from Verizon retail to UNE-L, or from UNE-P to UNE-L, it cannot be used for any subsequent migrations. If a customer wants to move from one UNE-L CLEC to another – which is likely to occur regularly in a market where residential service is provided by CLECs via UNE-L and not via UNE-P – one of Verizon's other processes must be used. Of course, none of those processes have been demonstrated to be able to handle any volumes of CLEC-to-CLEC migrations whatsoever, not to mention the volumes that would result in a mass market scenario.

Q. IS THE BATCH HOT CUT PROCESS AVAILABLE FOR LINE SPLIT LINES?

A. Neither DSL nor line splitting is mentioned in Verizon's Initial Testimony, for any of its hot cut processes. One has to assume that Verizon would like to hide the fact that its hot cut processes are not equipped to handle lines with DSL. But it is very clear, from Verizon NY's responses to data requests, that ***none of its hot cut processes can handle***

[62] Verizon NY Response to NY interrogatory ATT-VZ-158. (Attachment ESJ-7).

lines with DSL on them.[63] Verizon's policy is to require a customer to disconnect the DSL service before the customer can migrate to another UNE-L CLEC.

In response to NY interrogatory ATT-VZ-167, Verizon NY explained that hot cuts for neither line sharing nor line splitting can be ordered via an LSR. Verizon NY's response to NY interrogatory ATT-VZ-168 is even more troubling, as it makes clear that the only way to hot cut a customer with a line shared or line split arrangement is for the customer to disconnect the data service -

> Initially, we note that a Verizon retail voice customer would not have his or her DSL service provided through "Line Splitting." Also, we assume that "facilities based voice provider," as used in this interrogatory, refers to a switch-based provider utilizing Verizon-provided UNE-L, rather than a carrier utilizing its own switching and loop facilities. With those clarifications, Verizon states that such a migration is currently handled through the following process: (a) the data service would have to be disconnected; (b) a standard hot cut LSR would be submitted for the line; (c) after the hot cut, the facilities based voice provider would be free to install data service on the line. Verizon is currently investigating the feasibility of an alternative migration method for such lines that would not involve disconnecting the data service in situations in which the customer wishes to retain the same data provider, and in which the data provider and the new voice provider are willing to enter into a line splitting arrangement.[64]

It is critical to note that this applies to all variations of Verizon's hot cut processes. None of Verizon's processes support a hot cut of a loop with voice and DSL on it.

Q. HOW CAN A HOT CUT PROCESS THAT REQUIRES CUSTOMERS TO DISCONNECT THEIR DSL SERVICE BEFORE THEY CAN MIGRATE TO A CLEC BE CONSIDERED SEAMLESS?

A. Obviously, it cannot be. Disconnecting DSL service is a hassle and is not easily accomplished. Requiring a customer to disconnect their DSL service before switching

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[63] Verizon NY Response to NY interrogatory ATT-VZ-167& 168 (Attachment ESJ-7)
[64] Verizon NY Response to Interrogatory ATT-VZ-168. (Attachment ESJ-7).

voice service to a UNE-L CLEC is bound to have a chilling effect on migrations. Customers may decide that it simply is not worth it to make the switch of voice providers.

Q. OTHER THAN CLEC UNE-L LOOPS AND CLEC LINE SPLIT LOOPS, DOES VERIZON EXCLUDE OTHER LOOPS FROM THE BATCH HOT CUT PROCESS, BASED ON THE TYPE OF LOOP IS INVOLVED?

A. Yes. Verizon will not permit IDLC lines to be included in a batch hot cut. [65]

Q. ARE THERE OTHER RESTRICTIONS ON THE BATCH HOT CUT PROCESS?

A. On page 35-36 of Verizon's testimony, it lists six (6) restrictions associated with the process. However, as it turns out, these are not the only restrictions associated with this process. Data requests issued in New York uncovered the following additional limitations that were not outlined in Verizon's Initial Testimony in this proceeding:

ATT-VZ-37: Critical mass takes all inward and migration orders into account when setting "Batch" limits.[66]

ATT-VZ-119: No designated cut over time (other than the date).[67]

ATT-VZ-132: No specific performance metrics have been developed.[68]

MCI-VZ-55: The following loops have been excluded from the initial Batch Hot Cut process, in addition to IDLC and CLEC-to-CLEC loop-to-loop migrations:

- ?? Digital accounts: ISDN, xDSL, SWXX, etc.
- ?? EEL migrations

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[65] Verizon Initial Testimony, p.33.
[66] Verizon NY Response to NY interrogatory ATT-VZ-37 (Attachment ESJ-7)
[67] Verizon NY Response to NY interrogatory ATT-VZ-119 (Attachment ESJ-7)
[68] Verizon NY Response to NY interrogatory ATT-VZ-132 (Attachment ESJ-7)

- ?? CSS (Customer Specified Signaling) loops
- ?? RSU (Remote Switch Units; where service is provisioned via Verizon owned Remote Switch, shares NNPA/NNX with Host)
- ?? Foreign Exchange Lines[69]

ATT-VZ-150: Multi-line hunt groups are eligible for the process but there is no assurance that they will be cut in sequence.[70]

Q. DOES VERIZON CURRENTLY UTILIZE THIS PROPOSED BATCH HOT CUT PROCESS IN ANY OF ITS SERVICE AREAS?

A. No. In mid-November, responding to NY interrogatory MCI-VZ-56, Verizon NY said that a complete list of participants for a trial of the proposed process had not been developed, nor had a date for a trial been set.[71] In its testimony, Verizon states that it is still developing a trial program and is "working towards commercial availability" by the end of the 2nd quarter in 2004.[72]

Q. ARE THERE ANY BENEFITS AT ALL TO THE PROPOSED BATCH PROCESS?

A. MCI does support one proposed process change, by which Verizon would submit the final number port notification to NPAC, reducing the coordination that needs to take place between Verizon and the CLEC on the due date. In fact, MCI would like Verizon to explore handling the NPAC transaction in a similar fashion for all hot cuts, not just batch hot cuts.

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[69] Verizon NY Response to NY interrogatory MCI-VZ-55 (Attachment ESJ-6)
[70] Verizon NY Response to NY interrogatory ATT-VZ-150 (Attachment ESJ-7)
[71] Verizon NY Response to NY interrogatory MCI-VZ-56 (Attachment ESJ-6)
[72] Verizon Initial Testimony pg. 36

Q. BASED ON ALL OF THESE LIMITATIONS, WHAT IS YOUR ASSESSMENT OF THE BATCH HOT CUT PROCESS?

A. Taken as whole, it is obvious that Verizon's newly hatched batch hot cut process is not ready for "prime time." Just as obvious is that as currently constituted, with so many exclusions, limitations, and customer-impacting restrictions, the batch hot cut process will have minimal value, if any.

III. SCALABILITY

Q. VERIZON CLAIMS THAT ITS HOT CUT PROCESSES ARE SCALABLE. (INITIAL TESTIMONY PG. 65). DO YOU AGREE?

A. No. Verizon claims that all of its hot cut processes are scalable, and maintains that scalability is really a force load match issue that is dictated by the availability of frame technicians and work center personnel.[73] The issue of scalability goes beyond pure volume. Timeliness is another critical factor. Although Verizon applies different due date interval algorithms to each of its processes -- ranging from standard due dates by range of lines (Basic), to 150 lines per day per managers area (Project), to 26 days pending critical mass (Batch) -- at the end of the day, all types of hot cuts end up in the same work pool.

Q. PLEASE EXPLAIN.

A. When asked how due dates were determined for each type of hot cut in relationship to each other, Verizon responded that: "When the local frame managers are contacted by the NMC in order to set the negotiated date, all pending future work is taken into account."[74]

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[73] Verizon Initial Testimony, pg.66
[74] Verizon NY Response to NY interrogatory MCI-VZ-49. (Attachment ESJ-6)

Consequently, at the end of the day, regardless of what hot cut process a CLEC utilizes to migrate a customer, Verizon will place all of the work into a single pool and simply continue to push out the completion intervals until a sufficient force/load match is achieved.

Q. WHY IS SCALABILITY A CRITICAL FACTOR IN EVALUATING VERIZON'S PROPOSED HOT CUT PROCESSES?

A. One of the primary benefits of a fully mechanized process (such as UNE-P) is its ability to accommodate a continual flow of CLEC orders and likewise provision the service in a truly automated fashion, largely free of manual intervention. This fully mechanized process ensures that CLECs can issue large numbers of orders with the assurance that customers will receive service with a limited number of errors, and in a timeframe independent of other staffing requirements Verizon might be facing relative to its retail or other wholesale obligations. With a primarily manual process like Verizon's hot cut process, however, these same assurances are not available, especially when Verizon is likely to see the demand for hot cuts increase dramatically in the near future. In a scenario wherein CLECs would be required to rely upon the primarily manual hot cut process in lieu of the mechanized UNE-P process, MCI has real concerns related to Verizon's ability (as well as its incentive) to properly staff its hot cut processes at levels required to provision services for its competitors without substantial delay, errors and/or service outages.

Q. ARE VERIZON'S PROPOSED HOT CUT PROCESSES SUFFICIENTLY SCALABLE TO ACCOMMODATE MASS MARKET VOLUMES OF HOT CUTS?

A. Until we actually see mass market volumes of hot cuts – which, depending upon CLEC business decisions and the outcome of this and other pending cases, could happen in the near future – any answer is going to be somewhat speculative. Nonetheless, the data does not support Verizon's robust claims that it will be able to support all hot cut requests with its proposed processes in an efficient and timely manner.

Q. PLEASE EXPLAIN.

A. Verizon in its Initial Testimony spends a good deal of time estimating the number of incremental hot cuts it will likely face in markets where UNE-P is no longer available. Verizon likewise produces a model (Force-Load Model, hereafter "FLM") intended to demonstrate that even with these dramatically increased hot cut demands, it could, using its proposed hot cut processes, deploy its work force in such a way to accommodate the increase. Nonetheless, even if the Department were to accept Verizon's claims that use of its proposed processes meets the hot cut needs of the CLECs, it is important for the Department to understand that Verizon admits that it would need to increase its Massachusetts workforce by as many as *****BEGIN VERIZON PROPRIETARY *** END VERIZON PROPRIETARY***** employees to accommodate the increased load.[75]

Q. ASSUMING VERIZON'S ESTIMATES ARE ACCURATE, PLEASE EXPLAIN MCI'S CONCERNS RELATED TO THE WORK FORCE EXPANSION

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[75] Verizon Initial Testimony Exhibit IV-A, Results tab.

VERIZON WOULD HAVE TO UNDERTAKE TO HANDLE THE INCREASED DEMAND FOR HOT CUTS.

A. Given the fact that Verizon's approach to handling demand is work force constrained, the standard appointment interval will increase as the volume of orders exceeds the workload capacity of the existing workforce. Managing force/load balance is a difficult process. It has been my experience that ILECs do not staff positions for peak demand. The workforce level is established based on average forecasted demand, with built in assumptions relative to overtime levels and force transfers to meet short peak demand loads. Frequently, reacting to short-term peak demands involves a trade off associated with work prioritization. For instance, storm conditions are a good example. Technicians working on provisioning or routine work activities are routinely shifted to work on the repair problems that a storm generates. It the storm damage is extensive, requiring multiple days or weeks to restore, the work activities that were set aside build to a point where a backlog develops. Once everyone returns to their normal duties, the size and importance of the backlog work content will dictate the completion of new work requests that enter the queue.

Seasonal demand is another example. Seasonal areas routinely experience a fluctuation of appointment intervals during peak periods as a result of force/load match issues. When the workload exceeds the capacity of the workforce for a long period of time, the process described above breaks down as the backlog of work builds. Managers must decide if this load is going to continue for a long enough period to substantiate hiring additional employees to handle the new load level. This is normally the start of lengthy process involving approvals, hiring, training, etc. The backlog continues to build and the

completion dates continue to grow longer during this period. Once the new force is in place, the backlog must be addressed before the force/load balance can be regained.

Verizon's current collective current bargaining agreement dictates a process by which a percentage of jobs need to be offered to current employees before "going to the street" to add new hires.[76] This churn slows down the hiring process. NY data request MCI-VZ-64 asked Verizon about the average time it would take to net one additional employee given the time required to offer jobs internally. Verizon responded that the average time to add employees is approximately 60 days.[77]

Also, looking at the impact of the additional volume and workforce from a process perspective reveals the potential for more congestion at the present "bottleneck" point in the process, the frame.

Q. ARE THERE LIMITS TO HOW MANY TECHNICIANS CAN WORK ON A FRAME AT THE SAME TIME, OR HOW MANY HOT CUTS A SINGLE TECHNICIAN CAN PERFORM IN A GIVEN TIME PERIOD?

A. Yes. There are limits both to how many hot cuts a single technician can perform in a day, and how many technicians can work on a single frame at a time. Verizon's FLM model forecasts an initial embedded base of *****BEGIN VERIZON PROPRIETARY *********[78] **END VERIZON PROPRIETARY ***** UNE-P lines, coupled with incremental steady state UNE-L, churn, winback and throwback volumes substantially increase the workload for the CO technician staff. NY data request MCI-VZ-66 inquired

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[76] Verizon Initial Testimony, p. 72.
[77] Verizon NY Response to NY interrogatory MCI-VZ-64 (Attachment ESJ-6) Response to Massachusetts interrogatory MCI-13 confirmed that the same situation exists in Massachusetts.

about the physical limitations associated with doing the actual wiring: "How many technicians can connect cross-wires in a single 100 pair count appearing in a single vertical on a MDF at the same time?" Verizon NY's response: "One".[79]

In addition, according to Verizon's Cost Model, it takes a Verizon technician *****BEGIN VERIZON PROPRIETARY** ***** **END VERIZON PROPRIETARY *****minutes to perform all of the wiring related functions that occur for the initial line involved in a two wire Basic hot cut. For the same functions associated with each additional line, *****BEGIN VERIZON PROPRIETARY** ***** **END VERIZON PROPRIETARY *****minutes are required. Consequently, according to the Cost Model, the maximum number of hot cut related activities that a single technician could wire in an eight hour work day is approximately *****BEGIN VERIZON PROPRIETARY** ** **END VERIZON PROPRIETARY *** ..**[80]

Verizon's force/load matching algorithm starts by placing all types of work ("Basic", "Project", "Batch" Hot Cuts and Normal Work) into the same pool, and matches the work pool to the force available to determine the appointment interval. Established performance measurement requirements associated with the provisioning intervals for many types of service (including hot cuts) will dictate situations where multiple technicians are simultaneously working on projects involving loops appearing in the

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[78] Verizon Initial Testimony, Exhibit IV-A FLM model. .
[79] Verizon NY Response to NY interrogatory MCI-VZ-66 (Attachment ESJ-6)
[80] Verizon Initial Testimony, Exhibit III-A pg.4 &8 CO Frame Column F.

same physical location where other technicians are working in order to meet the interval requirements. This type of congestion can lead to time delays and quality errors.

Q. DO YOU BELIEVE VERIZON'S ESTIMATES RELATED TO INCREMENTAL HOT CUT DEMAND ARE ACCURATE?

A. No, I do not. While I think overall, Verizon's method of estimating increased hot cut demand is a credible effort, given the scope of the attempt related to multiple variables and uncertain circumstances, it seems more realistic to estimate a range of potential demand increases that might result, as opposed to the simple data-point estimate used by Verizon in populating its FLM for purposes of estimating increased force-load levels.

Q. CAN YOU PROVIDE AN EXAMPLE OF WHY YOU BELIEVE THAT RANGES MAY BE A MORE APPROPRIATE METHOD OF ESTIMATING?

A. Yes. For example, the way in which Verizon counts its embedded base of UNE-P lines for purposes of its analysis may underestimate the work volumes. In the description of its underlying data, Verizon indicates that actual UNE-P *line counts* are reported as systems rather than voice-grade equivalents and exclude digital and hi cap lines such as ISDN PRI and DS1.[81] To the extent that there is a ruling of non-impairment for UNE switching, carriers using UNE-P to provide these types of services would be required to convert them to UNE-L in the 27 - month timeframe established in the *Triennial Review Order*. Under Verizon's scenario that all the embedded UNE-P lines are to be converted to alternative provisioning methods, there would be an understatement of the embedded UNE-P base because of the exclusions and would lead to an understatement of the monthly conversions of this base during the transitional period. Using ranges would

[81] Testimony of William Taylor, Exhibit II.

provide some latitude relative to the availability of the workforce to meet the workload demand on a timely basis.

Q. DO YOU HAVE OTHER CONCERNS?

A. While MCI's above concerns regarding digital and hi-cap lines are specific to Verizon's initial conversion analysis, the underlying Verizon data fueling both its monthly volume estimates and its FLM model is also unclear about whether those same lines were likewise excluded in its analysis of relevant ongoing *migrations*. Because Verizon estimates incremental migration hot cut volumes as a sum of currently observed UNE-P migrations plus a forecast for "winbacks", to the extent digital and other hi-cap lines were excluded from the base of UNE-P lines today, it seems clear that Verizon's analysis regarding ongoing migrations would likewise under- estimate its total anticipated hot cut volume.

Q. WHY DID VERIZON EXCLUDE THESE LINES FROM ITS ANALYSIS?

A. Verizon's rationale is not provided, however, it is worth noting that the omitted line types constitute 4-wire rather than "typical" 2-wire connections and therefore, require more labor than an incremental hot cut of a 2-wire loop. In other words, exclusion of 4-wire loops from total line and migration counts results in a more significant understatement of the additional labor force requirements than exclusion of an equal number of 2-wire loops.

Q. DO YOU HAVE ANOTHER EXAMPLE?

A. Yes. Verizon's FLM model assumes that there will be zero new UNE-L additions during the first 5 months of the study period. This contradicts Verizon's own scenario where some UNE-P lines are already converted to UNE-L in the 3rd, 4th and 5th months.[82] Remember that these incremental hot cuts are associated with CLECs that currently provide their service via UNE-P, but under a new regime would utilize UNE-L, so that migrations to these CLECs would require a hot cut.

Consider a CLEC that today uses only UNE-P and no UNE-L. When some lines of this CLEC are converted to UNE-L, it is reasonable to expect that at least a portion of new customers of this CLEC would be provisioned via UNE-L (without first using UNE-P) on a going forward basis. The CLEC's collocation, transport and switching arrangements necessary to support UNE-L must already be in place in order to accept UNE-P to UNE-L conversions, so it is logical to assume that some amount of new growth would be placed on these facilities as well, and therefore, require a hot cut.

Q. ARE THERE OTHER PROBLEMS WITH VERIZON'S ASSUMPTION IN THIS REGARD?

A. Yes, although in Verizon's scenario CLECs can continue ordering UNE-P for the first five months of the conversion period, CLECs have several economic reasons not to order UNE-P but instead provision their customers through UNE-L. One reason is to save money on non-recurring charges: "why order a UNE-P line if it has to be converted to

UNE-L in several months?" By ordering UNE-L initially rather than UNE-P, a CLEC would avoid additional service order and rearrangement charges. Another reason is economies of scale in switching and transport: if a CLEC is providing its own switching and transport, it becomes economical to make the most use of the available capacity by transferring as many customers as possible to its UNE-L platform. This means that at least some notable proportion of new lines migrating from another carrier to the CLEC after UNE-P to UNE-L conversions have begun, are likely to be provisioned via UNE-L and require a hot cut. Therefore, it is reasonable to assume that incremental hot cuts associated with migrations to former UNE-P will be greater than zero in the first five months of conversion, as assumed in Verizon's model.

IV. IDLC SURCHARGE

Q. PLEASE DESCRIBE VERIZON'S "IDLC SURCHARGE."

A. At pages 10 through 12 of its Initial Panel Testimony, Verizon describes the work activities it believes it must undertake to complete a hot cut for a loop served via IDLC technology. In simplest terms, Verizon indicates that it must, when served with a request to cut an IDLC-served loop to a CLEC's switch, find another alternative non-IDLC loop feeder facility (i.e., F1 facility) that it can provision to the same customer, so as to remove that customer from the IDLC technology before the cut is made. According to Verizon, this activity introduces additional work steps into the hot cut process (including dispatching a Verizon technician to the customer's serving-remote terminal) and as such,

[82] Verizon Initial Testimony, Exhibit IV-A FLM model.

generates additional costs for Verizon that should be recovered from the carrier requesting the hot cut. This $105.13[83] charge is assessed in addition to Verizon's other hot cut rates depending upon the particular hot cut process chosen by the carrier.

Q. DO YOU BELIEVE VERIZON'S PROPOSED IDLC-RELATED RATES ARE REASONABLE?

A. No. Verizon should not be allowed to assess additional rates associated with performing hot cuts on loops utilizing IDLC. Neither its surcharge nor its dispatch charge is appropriate and the Department should reject both.

Q. WHY SHOULDN'T VERIZON BE ALLOWED TO ASSESS AN IDLC SURCHARGE AND A FIELD DISPATCH CHARGE FOR HOT CUTS OF IDLC LOOPS?

A. As stated earlier, Verizon acknowledges that options exist that allow hot cuts of IDLC loops without requiring a dispatch, however, since there are still some unresolved issues associated with these methods, Verizon has chosen to ignore the opportunity. In addition, TELRIC methodology does not permit Verizon to incorporate work activities and costs into its non-recurring charges, when those work activities could be avoided by more efficient technology or processes. Allowing a company like Verizon to recover costs associated with inefficient processes and/or technology in its NRCs would provide incentives exactly the opposite of those envisioned by the FCC in its TELRIC rules. That is, if allowed to recover costs associated with inefficient processes and/or a failure to incorporate the most efficient technologies, incumbents would have little incentive to improve their processes (or deploy new technology) so as to improve the efficiency of

[83] Verizon Initial Testimony, Exhibit III-A Line 10.

processes used only by its competitors (while all the while dramatically improving the processes used by its own retail operations). Verizon's proposed IDLC surcharge is perhaps the perfect case study relative to this important point.

Q. PLEASE EXPLAIN.

A. IDLC is a technology providing substantial benefits to services that can be provided using an integrated loop and port arrangement (i.e., Verizon's retail service, UNE-P and resale). It results in lower costs (e.g., lower switch interface costs, potentially lower transport costs, lower CO termination costs, etc.) and improved service quality. However, IDLC technology poses unique challenges in a UNE environment where the specific task at hand is "unbundling" the integrated loop and port arrangement so that a competitor can access only the loop. Indeed, although MCI has shown otherwise, and despite Verizon's admission that the option exists, Verizon steadfastly refuses to embrace the potential, stating that unbundling a loop currently served via IDLC is neither "technically practicable" nor "feasible."[84]

Q. YOU DISCUSSED ABOVE THAT YOU DO NOT AGREE THAT PROVIDING A CLEC ACCESS TO AN UNBUNDLED LOOP SERVED VIA IDLC IS NEITHER "TECHNICALLY PRACTICABLE" NOR "FEASIBLE.

A. Correct. Earlier in this testimony, I recommended that the Department develop rates for Verizon's hot cut processes based upon an assumption that 100% of Verizon's loops were served via IDLC, and that Verizon could rely solely upon software (as opposed to technicians) to perform a hot cut in that scenario. MCI continues to believe that this

[84] Verizon Initial Testimony, pg.11.

approach squares most readily with the FCC's TELRIC rules requiring rates based upon forward looking technology. It simply cannot be disputed that using newer IDLC technology can allow for software generated loop provisioning functions that could transition a loop from one carrier's circuit switch to the circuit switch of another carrier without manual intervention (either in the C.O. or in the field). As such, Verizon's suggestion that using IDLC in this way (or using IDLC at all in a hot cut scenario) is neither "technically practicable" nor "feasible" is not credible.

Q. WHY IS VERIZON'S CLAIM IN THIS REGARD NOT CREDIBLE?

A. Verizon's claim fails on several grounds. As previously mentioned, Telcordia Technologies (formerly "Bellcore") has, in its *Notes on the Network*, issued a number of detailed scenarios describing how carriers like Verizon can offer CLECs access to loops served via IDLC.[85] Verizon acknowledges that these options exist. And finally, in recent testimony filed by BellSouth in response to the FCC's *Triennial Review Order*, Verizon's sister ILEC, BellSouth, has agreed to provide CLECs unbundled access to IDLC using any one of 8 different technological scenarios, including those described in this testimony.[86]

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[85] *Telcordia Notes on the Network*, Telcordia Technologies Special Report, SR-2275, Issue 4, October 2000 (see pages 12-52 to 12-61).

[86] Direct Testimony of Kenneth L. Ainsworth, BellSouth Telecommunications, Inc., Before the Florida Public Service Commission, Docket No. 030851-TP, December 4, 2003, see pages 25-28. (Attachment ESJ-8)

Q. IF IDLC CAN BE UNBUNDLED, AND USING IDLC IN AN UNBUNDLED FASHION CAN ALLOW FOR SOFTWARE DRIVEN PROVISIONING, SHOULD VERIZON BE ALLOWED TO CHARGE AN IDLC SURCHASE (AND DISPATCH) ASSOCIATED SOLELY WITH INCREASED MANUAL INTERVENTION?

A. No, it should not. If Verizon is allowed to charge its competitors a dispatch and surcharge for each IDLC loop included in a hot cut request, Verizon will have little incentive to re-evaluate its unfounded position that a more technologically sound, efficient and least-cost method of performing hot cuts for IDLC loops exists. The proper forward looking costs associated with performing a hot cut for any loop, including (and perhaps, especially) a loop served by IDLC, are those costs I have identified in this testimony. Where IDLC is unbundled, and the software capabilities of the equipment are used to provision services mechanically, instead of manually, carriers can move loops between their switches efficiently and cost effectively (and with a high degree of scalability). By ignoring this technology in its cost studies, and instead developing a 100% manual provisioning process where a technician must be dispatched to roll any IDLC customer to a different loop, Verizon breaks one of the FCC's most important TELRIC rules, i.e., that the proper process/technology to be studied is the most efficient, least cost technology currently available (in this case, unbundled IDLC). Furthermore, Verizon has opted to actually digress by ignoring the potential functionality residing in the ADF technology that it has deployed.

Q. HOW DOES VERIZON'S IDLC SURCHARGE COMPORT WITH THE FCC'S RECENT VIRGINIA ARBITRATION ORDER?

A. It does not. The IDLC surcharge is totally inconsistent with the FCC's Virginia Arbitration Order. The FCC found that costing based on Verizon VA's existing,

embedded processes is not consistent with TELRIC. The FCC made this point clear when it rejected Verizon VA's existing non-recurring cost model based on the fact that it fails to model a forward looking network/operation, but instead, relies almost exclusively on "existing process and the existing network".[87]

Q. WHAT IS YOUR RECOMMENDATION REGARDING THE PROPOSED IDLC SURCHARGE?

A. The IDLC surcharge should be disallowed in its entirety. To do otherwise would be to reward inefficiency, create disincentives for implementation of forward-looking technology, perpetuate harm on consumers, chill competition, and violate basic principles of TELRIC, as recently clarified by the FCC's Virginia order.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

[87] *Memorandum Opinion and Order*, CC Docket Nos. 00-218 and 00-251 (rel. August 29, 2003) at ¶567.