BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 030851-TP

In the Matter of

IMPLEMENTATION OF REQUIREMENTS ARISING FROM FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL UNE REVIEW: LOCAL CIRCUIT SWITCHING FOR MASS MARKET CUSTOMERS.

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VOLUME 21

Pages 2878 through 3097

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN BRAULIO L. BAEZ
COMMISSIONER J. TERRY DEASON
COMMISSIONER LILA A. JABER
COMMISSIONER RUDOLPH "RUDY" BRADLEY
COMMISSIONER CHARLES M. DAVIDSON

DATE: Thursday, February 26, 2004

TIME: Commenced at 9:00 a.m.

PLACE: Betty Easley Conference Center
Room 148
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: JANE FAUROT, RPR
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Administrative Services
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APPEARANCES: (As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS

NUMBER:		ID.	ADMTD.
110	Exhibits to Witness Van De Water's prefiled testimony	2882	
111	Exhibits to Witness Wood's prefiled testimony	2883	

P R O C E E D I N G S

(Transcript follows in sequence from Volume 20.)

CHAIRMAN BAEZ: Van De Water.

MR. HATCH: Yes, sir. Mr. Van De Water filed direct, rebuttal, and surrebuttal testimonies. I would request that his direct, rebuttal, and surrebuttal testimonies be inserted into the record as though read.

CHAIRMAN BAEZ: Show the direct, rebuttal, and surrebuttal testimony of Mark Van De Water entered into the record as though read.

MR. HATCH: And Mr. Van De Water had Direct Exhibits 1 through 22, which would be -- I forget his designations. Rebuttal Exhibits 1 through 7, and Surrebuttal Exhibits 1 through 4.

CHAIRMAN BAEZ: Show MDV-1 through 22, Rebuttal MDV-1 through 5, I'm showing, is that correct?

MR. HATCH: It's 1 through 22, 1 through 7, and then --

CHAIRMAN BAEZ: 1 through 7, I'm sorry. MDV Rebuttal 1 through 7, and MDV Surrebuttal 1 through 4 marked as Composite 110.

(Composite Exhibit 110 marked for identification.)

CHAIRMAN BAEZ: Next is Witness Wood.

MR. HATCH: Yes, Don Wood. Mr. Wood filed direct, rebuttal, and surrebuttal. AT&T would request that the

testimonies of Mr. Wood be inserted into the record as though read.

CHAIRMAN BAEZ: Show Mr. Wood's direct, rebuttal, and surrebuttal testimony entered into the record as though read.

MR. HATCH: And Mr. Wood had five exhibits, one direct, three rebuttal, and one surrebuttal exhibits.

CHAIRMAN BAEZ: Show those marked as Composite Exhibit 111.

(Composite Exhibit 111 marked for identification.)

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Mark David Van de Water. My business address is 7300 East Hampton Avenue, Room 1102, Mesa, AZ, 85208-3373.

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

A. I hold a Bachelors of Arts in Psychology and a Masters of Arts in Organizational Management. I am employed by AT&T, operating in Florida as AT&T of the Southern States, LLC ("AT&T"). For the past 5 years I have worked in the Local Services and Access Management organization of AT&T with responsibility for negotiating and implementing operational support system ("OSS") requirements and interfaces, and for resolving operational issues between AT&T Local Services and Southwestern Bell Corporation ("SBC"). In particular, I participated with SBC in formalizing their documented coordinated and uncoordinated unbundled network element-loop ("UNE-L") with local number portability ("LNP") hot cut processes. During 2003, I negotiated with SBC, on a business-to-business basis, to create a process by which AT&T is able to convert multiple unbundled network element-platform ("UNE-P") customers to UNE-L. A trial is currently being conducted of this process. Further, this process is the foundation of SBC's current "batch" hot cut proposal presented throughout its 13-state region. Before this assignment, I worked for over 16 years at Western Electric Company in various positions.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE REGULATORY COMMISSIONS?

A. Yes. I have testified before the California, Kansas, Missouri, Illinois, and Texas commissions in matters related to SBC's applications for in-region long distance authority under Section 271 of the Federal Telecommunications Act of 1996.

Q. WHAT ISSUES DOES YOUR TESTIMONY ADDRESS?

A. My testimony provides information directly related to the Commission's consideration of issues 3 and 6.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to address the operational constraints associated with the hot cut process, to describe issues this Commission should consider in developing any bulk migration process for unbundled loops, and to recommend the parameters that should be included in any bulk migration process. My testimony covers four key areas in this proceeding.

First, I address the operational and economic barriers presented by the hot cut process. This section of my testimony explains the findings of the Federal Communications Commission ("FCC") in the Triennial Review Order ("TRO").[1] It summarizes the FCC's conclusions that competitive carriers are impaired without access to unbundled local switching as a result of economic and operational impairment due to the hot cut process and describes the FCC's directions to state commissions to approve and implement a batch loop migration process.

Second, I describe the specifics of the current hot cut process and AT&T's experience with hot cuts in the BellSouth region. My testimony summarizes why AT&T's experience led it to choose UNE-P to provide local service and describes specific concerns related to BellSouth's performance of hot cuts.

[1] *Report and Order and Order on Remand and Further Notice of Proposed Rulemaking*, In the matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Federal Communications Commission, CC Docket No. 01-338, Released August 21, 2003 (hereafter referred to as the "Triennial Review Order" or "TRO")

Third, I describe the challenges that must be addressed in implementing any batch loop migration process. I address the volume of hot cuts that will be required and the evaluation standards by which any batch migration process should be considered. My testimony discusses the number of UNE-L hot cuts that should be expected if unbundled local switching is no longer available and the segments of the market that pose unique challenges for development of a bulk migration process. My testimony also addresses new operational constraints that will arise if customer conversions require migration of a loop because unbundled local switching is no longer available to Competitive Local Exchange Carriers ("CLECs").

Fourth, my testimony includes recommendations for a batch hot cut process. Because CLECs have restricted insight into the operations of the Incumbent Local Exchange Carrier ("ILEC"), this recommended process addresses the parameters of a reasonable batch migration process. Development of a batch hot cut process rests primarily with the ILECs, in cooperation with the CLECs. Further, while my testimony points out the advantages of its recommended process, it also illustrates why no manually based process is capable of ensuring the seamless, low cost migration of loops that is required by the TRO and is equivalent to the ease and efficiency with which customers are migrated today when changing LD carriers and when using the unbundled network element platform.

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

Q. WHAT IS A HOT CUT?

A. When a mass-market (residential and small business) customer seeks to move his or her local service from one switch-based carrier to another, the connection between the

customer's analog loop and the original carrier's switch must be broken and a new connection must be established between that analog loop and the new carrier's switch. Because the customer's loop is lifted or "cut" while it still is provides active service to a customer (i.e., the loop is "hot"), the process used to transfer analog loops has become known as a "hot cut." The hot cut process involves two separate changes to the customer's service that must be coordinated to occur at approximately the same time: (1) the manual transfer of the customer's analog loop from one carrier's network to another's (the loop cut); and (2) the porting of the customer's telephone number (including the associated software changes and the disconnection of the original carrier's switch translations), so that inbound calls to the customer can be routed to the new carrier's switch using the customer's existing telephone number.

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

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

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

A. In short, it concluded that hot cuts cause impairment. In the TRO, the FCC reviewed substantial data and descriptions of this hot cut process provided by both ILECs and CLECs and found, on a national basis, that competing carriers providing voice service to mass market customers are impaired without access to unbundled local circuit switching. TRO ¶ 459. This finding was based in part on clear evidence regarding the economic and operational barriers caused by the hot cut process. *Id.* *See also* ¶ 473 ("Our national finding of impairment is based on the combined effect of all aspects of the hot cut process on competitors' ability to serve mass market voice customers.") The FCC recognized that "whether a customer was previously being served by the competitive LEC using unbundled local circuit switching [i.e., using UNE-P], or by the incumbent itself, a hot cut must be performed [if unbundled local switching is no longer available]. *Id.*¶ 465.

Q. DID THE FCC MAKE SPECIFIC FINDINGS?

A. Yes. The FCC found:

> "[H]ot cuts frequently lead to provisioning delays and service outages, and are often priced at rates that prohibit facilities-based competition for the mass market. The barriers associated with the manual hot cut process are directly associated with incumbent LECs' historical local monopoly, and thus go beyond the burdens universally associated with competitive entry. Specifically, the incumbent LECs' networks were designed for use in a single carrier, non-competitive environment..." Id. ¶ 465.[2]

The FCC recognized that, as a result, "for the incumbent, connecting or disconnecting a customer is generally merely a matter of a software change. In contrast, a competitive carrier

[2] For a full discussion of the impairments created by the incumbents' current network architecture, see the Direct Testimony of AT&T Witness Jay Bradbury.

must overcome the economic and operational barriers associated with manual hot cuts." *Id*. (citations omitted).

Upon review of the evidence, the FCC concluded that the economic and operational barriers of the hot cut process include "the associated non-recurring costs, the potential for disruption of service to the customer, and our conclusion, as demonstrated by the record, that incumbent LECs appear unable to handle the necessary volume of migrations to support competitive switching in the absence of unbundled switching." *Id.* ¶¶ 459. The FCC further concluded that "[t]hese hot cut barriers not only make it uneconomic for competitive LECs to self-deploy switches specifically to serve the mass market, but also hinder competitive carriers' ability to serve mass market customers using switches self-deployed to serve enterprise customers." *Id.*

Q. HOW DID THE FCC PROPOSE TO ADDRESS THESE PROBLEMS?

A. The FCC found that "[c]ompetition in the absence of unbundled local circuit switching requires seamless and timely migration not only to and from the incumbent's facilities, but also to and from the facilities of other competitive carriers." TRO ¶ 478 (citations omitted). Having reached this conclusion, the FCC indicated that "loop access barriers contained in the record *may* be mitigated through the creation of a batch cut process . . . ." TRO ¶ 487 (emphasis added). The FCC then directed state commissions to approve and implement a batch process that attempts to address the economic and operational barriers caused by hot cuts, or make detailed findings why such a process is not necessary in a particular market. *Id.* ¶ 488; *see also* ¶ 423. The FCC identified issues that must be addressed by any batch hot cut process developed, *id.* ¶ 489, and outlined the

detailed findings that must be made if a state commission declines to institute a batch hot cut process for a particular market. *Id.* ¶ 490.

Critically, however, the FCC recognized that even after such a process is implemented, competitive carriers may still face barriers associated with loop provisioning -- even problems arising from newly improved cutover processes -- that may continue to be a significant barrier to competitive entry into the mass market. *Id.* ¶ 512. The FCC asked state commissions "to consider more granular evidence concerning the incumbent LEC's ability to transfer loops in a timely and reliable manner." *Id.* Some of the evidence the FCC suggested commissions should consider includes "commercial performance data . . . and the existence of a penalty plan with respect to the applicable metrics" and "whether the incumbent's facilities, human resources, and processes are sufficient to handle adequately the demand for loops, collocation, cross connects and other services required by competitors for facilities-based entry into the voice market." *Id.*

II. OPERATIONAL AND ECONOMIC IMPACTS WHEN USING UNBUNDLED LOOPS: WHY AT&T USES UNE-P RATHER THAN UNBUNDLED LOOPS

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

A. AT&T is currently acquiring virtually all its mass market (residential and small business) customers using the Unbundled Network Element Platform ("UNE-P"). For example, from January through June 2003, BellSouth has only completed REDACTED hot cut orders for AT&T for the entire nine-state BellSouth region. Below are the numbers of hot cut orders by month and the number of UNE-P orders per month.

Month	UNE-P Orders	Hot Cut Orders
January, 2003		
February, 2003		
March, 2003		
April, 2003		
May, 2003		
June, 2003		

From BellSouth's BellSouth Performance Measurement and Analysis Platform ("PMAP')

Further, according to PMAP's Customer Trouble Report Rate reports, as of October 2003, while AT&T had over REDACTED UNE-L lines in service in BellSouth territory, it had over REDACTED UNE-P lines in service.

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

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

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

A. Yes. As confirmed by the FCC, AT&T's experience was that the hot cut process frequently led to provisioning delays and service outages that led to an untenable level of customer dissatisfaction. Naturally, this dissatisfaction was directed at AT&T as the retail provider of the service, not BellSouth, the underlying wholesale provider. In particular, BellSouth's provisioning delays included its substandard performance in returning timely firm order confirmations, its failure to provide a reliable schedule for performing hot cuts, and its failure to notify AT&T consistently and timely that customer loops had been

transferred to AT&T, so that AT&T could complete the final steps necessary to port the customer's telephone number to ensure the customer could receive incoming calls.[3] Factors that contributed to customer service outages included BellSouth's erroneous disconnection of end users' lines and, when erroneous disconnections occurred, undue delay in reconnection. In addition, BellSouth's high charges for hot cuts make facilities-based competition using UNE-L for mass market customers uneconomic.

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

A. AT&T has existing business customers that it serves using its own switch and unbundled analog loops dating back to the time when AT&T was using UNE-L to provide local service. When these customers wish to change their service by adding lines or migrating additional lines from the ILEC, AT&T will continue to use UNE-L to satisfy this request. Additionally, when a large customer migrates more lines to AT&T than can be provisioned on a single DS1, but less than can economically be provisioned on two DS1's, AT&T will provide service to this customer by using a DS1 loop, and unbundled analog loops for the additional lines that could not be supported on the DS1.

AT&T follows this practice because it maintains separate processes and databases for its customers served via loop facilities and its customers served via UNE-P. Having all of a customer's lines provisioned using the same network configuration allows AT&T to provide more efficient and effective on-going customer service, maintenance, and repair. AT&T does not actively market analog services to small business mass market customers using a UNE-L strategy, due to the provisioning problems and the high costs of hot cuts and

[3] Timely firm order confirmations are essential to communicate when the order is to be provisioned so that number porting activities can began and service migration can be confirmed with the customer. Late firm order

backhaul costs, *i.e.*, the costs of extending the loop from the ILEC central office to AT&T's switch.

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

A. UNE-P is a simple process that is ordered and provisioned electronically. With UNE-P, there should be no need to perform physical work in the ILEC's central office or outside loop plant to migrate an existing ILEC customer to a CLEC that is providing service using UNE-P. The migration from ILEC-retail to CLEC-UNE-P service only requires the ILEC to perform software changes. Thus, there is little chance for error and the customer does not have to lose service during the migration, because the service, both before and after the change, is being provided through the use of the ILEC's switch. This eliminates the need for a physical transfer of the customer's loop, as well as the need to port the customer's telephone number to another switch. Consequently, this service is almost always provided to the customer very quickly.

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

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confirmations also cause the customer's order to be delayed past the times originally requested by the customer.

Q. PLEASE DESCRIBE THE MAJOR STEPS IN MIGRATING A CUSTOMER FROM AN ILEC TO A CLEC USING UNE-P.

A. There are only a few significant steps involved in migrating a mass-market customer from the ILEC to a CLEC using UNE-P:

- After completing the sale to the customer, the CLEC accesses the ILEC's pre-ordering OSS in order to obtain the necessary customer information, such as the correct name and address. A CLEC agent enters this information into the CLEC systems to create the CLEC customer service record and establish the CLEC bill. The agent must take special care to ensure the information used by CLEC matches the ILEC's records in order to avoid an order rejection by the ILEC.
- The CLEC's agent prepares the Local Service Request ("LSR") and submits it electronically to the ILEC interface. The large majority of UNE-P migration orders can be processed by the ILEC without the need for any manual intervention by ILEC personnel. Thus, most UNE-P migration orders electronically flow-through the ILEC's OSS, and can be provisioned on a same day or next day basis.
- Upon receipt of the LSR, the ILEC electronically validates that the order is error-free, and electronically sends the CLEC a Firm Order Confirmation ("FOC").
- Upon receipt of the FOC, the CLEC updates its systems to reflect the due date of the order.
- Thereafter, the remaining processes are electronic. On the due date, which is typically the next day, the ILEC's OSS implement the order by making appropriate software changes that (i) transfer ownership of the account to the CLEC and establish wholesale billing to the CLEC for the customer and (ii) cause the ILEC's internal systems to send a final retail bill to the end user.
- When the CLEC receives the provisioning completion notice electronically from the ILEC, the CLEC closes out the order in its systems including such items as establishing the customer's new billing arrangement.[4]

For UNE-P, the migration process is electronic with little opportunity for human error. According to BellSouth's Response to AT&T Interrogatory 32 (see Exhibit MDV-1), with UNE-P migrations, over eighty four percent (84.4%) of orders flowed through completely electronically, eliminating opportunities for human error. However, only about twenty four percent (23.7%) of UNE-L migration orders flowed through. (See BellSouth's

[4] If the customer has requested voicemail, the CLEC must also build and test the voice mailbox, if applicable.

response to AT&T Interrogatory No. 28, attached as Exhibit MDV-2) Additionally, there is rarely a service interruption when a customer is migrated to a CLEC using UNE-P. After ordering service from a competitive carrier, the entire customer migration process is completely hidden from the end-user in a manner that makes changing local carriers as seamless as changing long distance carriers. These electronic processes are the rough equivalent of the Primary Inter-exchange Carrier "PIC" process that was developed to support the highly competitive long distance market.

Q. PLEASE DESCRIBE THE ADDITIONAL SIGNIFICANT STEPS OF MIGRATING A CUSTOMER FROM AN ILEC TO A CLEC USING A HOT CUT.

A. When a CLEC seeks to use its own switch to serve mass market local customers using a UNE-L architecture, the processes needed to change local carriers are much more complex, manual and costly than for UNE-P, requiring physical work to transfer the customer's analog loop from one carrier's switch to another's. For example, the CLEC must assign the customer to facilities in its switch and equipment; both the CLEC and the ILEC must conduct a series of number porting activities; and the ILEC must perform numerous manual provisioning and testing activities in its central office and sometimes in the field. Before the CLEC even submits an order for a hot cut, the CLEC must conduct the following activities in addition to those required for a UNE-P migration:

- The CLEC negotiates a due date with the customer based on the standard intervals for loop migrations that are lengthier than UNE-P intervals. For business customers, a cutover time must also be negotiated to ensure the service outage does not impact the operation of the customer's business.
- The CLEC conducts an inventory of facilities and electronically assigns the customer's loop to specific facilities in the CLEC's switch, to equipment located in CLEC-owned collocation space and to a Connecting Facility Assignment ("CFA") that will be used by the ILEC to connect the customer's loop to the CLEC's collocated equipment.

- The CLEC accesses the ILEC's Loop Facility Assignment Control System ("LFACS") database to confirm that the availability of the CFA information in both companies' databases match.

After completing these activities, the CLEC prepares and submits the LSR. After submission of the LSR, the ILEC begins its activities.

- The ILEC checks its CFA database to ensure the CFA on the order matches its inventory.
- The ILEC issues the number portability "trigger" order by setting switch triggers which will ensure the customer receives intra-switch calls between the period of time the CLEC ports the number to its switch until the ILEC disconnects the telephone number in its switch.
- The ILEC inputs the order into its backend systems to create the internal service orders that will be needed to accomplish the migration.

Then the ILEC returns the FOC to the CLEC. Unlike UNE-P, after receiving the FOC, in a UNE-L migration the CLEC and the ILEC cannot rely on the electronic systems to flawlessly provision the service. Instead, the following complicated set of activities occurs, activities that must be coordinated if the cut is to be successful for the customer:

- The CLEC confirms with the customer the specific time and date when the hot cut is scheduled to take place based on the information in the FOC.
- The CLEC verifies that dial tone is being delivered from its switch to the CFA in the collocation cage.
- The CLEC alerts the National Number Portability Administration Center ("NPAC") that reprogramming is needed to move the customer's telephone number from the ILEC to the CLEC by sending an electronic "create" message to the Administrator. This begins the process of porting the customer's telephone number. This "create" message prompts NPAC to send a message to the ILEC to ensure the ILEC consents. The ILEC has eighteen (18) hours to respond.

After the CLEC completes these activities, the ILEC completes other activities necessary to a hot cut that are not required for a UNE-P conversion.

- The ILEC determines whether the facilities currently being used by the customer can be reused. For example, if the customer is on Integrated Digital Carrier Loop ("IDLC"), the facilities cannot be reused and spare non-IDLC facilities must be identified and assigned to this customer.
- The ILEC pre-wires the cross-connection frames.

- The ILEC confirms the presence of dial tone from the CLEC's switch on the cross-connects in the CLEC's collocation space.
- Upon receipt of the "create" message from NPAC, the ILEC will send a "concur" message back to NPAC.
- The ILEC verifies that the proper phone number is on the loop that is to be cut over.

After these activities, the ILEC contacts the CLEC to determine whether the cut can proceed as scheduled. During this call the ILEC may also provide essential information such as test results. Assuming nothing has gone wrong, on the day of the cut over, the ILEC and the CLEC will continue the following activities:

- The ILEC ensures it has the correct line for the cut.
- The ILEC verifies dial tone on the line at the ILEC Main Distribution Frame ("MDF").
- The ILEC monitors the line and, when idle, removes at the MDF the old cross connection jumper that connected the customer's loop to the ILEC's switch and terminates the pre-wired cross connection from the CLEC's CFA to the customer's loop.
- The ILEC provisioning center contacts the CLEC to advise that the conversion is complete.
- The CLEC then conducts its own tests to ensure that all lines have been successfully migrated.
- If testing is successful, the CLEC sends an "activate" message to NPAC advising that the customer's number should be ported to the CLEC's switch.
- The CLEC then calls the ILEC to accept the service.

The cut, however, is still not complete.

- Upon receipt of the activate message from NPAC, the ILEC completes the disconnect order and sends an "unlock" message for the E911 database administration to allow the CLEC access to the E911 database record for the ported number.
- Then the CLEC migrates the 911 record by updating the Automatic Location Indicator ("ALI") database to identify the CLEC as the local service provider. This ALI information supports the Public Safety Answer Point ("PSAP") that receives 911 calls.
- The ILEC must remove the old cross connections from its frame to free up the ILEC's switch port for another customer.

Only then is the hot cut complete. Not only are there significantly more steps involved in a hot cut, those steps must be coordinated if a cut is to be successful in limiting the time the customer is out of service.

To demonstrate the flow and order of activities, I have attached as Exhibit MDV-3 a process flow document for a hot cut. The first three pages show by numbered tasks the activities the ILEC must conduct to complete a hot cut. Page Four shows by lettered tasks, the activities the CLEC must complete. Beginning with Task A on Page Four, one can follow the flow of the simplest type of error-free hot cut. As the exhibit reveals, the ILEC must conduct at least twenty-three (23) separate tasks and the CLEC must conduct at least twelve (12). These tasks cannot be conducted at the same time but must move forward in a back and forth flow and often must be coordinated with the other party. In addition, I have attached to my testimony as Exhibit MDV-4 a video depicting the extensive changes to the network architecture required to perform the hot cut process, the numerous manual steps involved in the actual hot cut, and an efficient and effective alternative to the manual hot cut process.

Q. HOW DO THESE ADDITIONAL STEPS IMPACT CLECS THAT ATTEMPT TO USE THEIR OWN SWITCHES?

A. First, these additional steps add time. UNE-P orders are completed much more quickly than UNE-L orders. The completion interval for a UNE-P order without any field work is from less than ½ day to less than 1 ½ days:

Dispatch Type	Volume	Order Interval (excluding FOC Interval)
Switch based Completions	95,704	0.35 days
Central Office Based Completions	16,164	1.20 days

In contrast, the completion interval for UNE-L orders that do not require field work is as follows:

Loop Type	Volume	Order Interval (excluding FOC Interval)
2 wire analog loop (designed)	33	5.85 Days
2 wire analog loop (non-designed)	142	3.62 Days
2 wire analog loop with LNP (designed)	17	5.47
2 wire analog loop with LNP (non-designed)	420	4.82

(See measure P-4, Order Completion Interval--September, 2003 Florida Monthly State Summary ("MSS") report)

Second, the multi-step, highly manual UNE-L process introduces numerous opportunities for human error and degradation of service quality. The greater the opportunity for error, the more likely the service migration date may be delayed or changed, which causes customer dissatisfaction with the CLEC. Moreover, introduction of errors also significantly increases the likelihood that the customer may be either completely out of service for an extended period or be unable to receive incoming calls. For example, when customers in Florida experience service outages during a hot cut, the outage duration has lasted from a monthly low average of 2.8 hours to a high average of 13.6 hours. (See Florida's September, 2003 MSS Chart Reports (B.2.22.2).)

Mass market customers will not accept such delays or errors. As the FCC noted, these customers *"have come to expect the ability to change local service providers in a seamless and rapid manner."* TRO ¶ 471 (citations omitted) (emphasis added). They "generally demand reliable, easy-to-operate service and trouble-free installation." *Id.* at 467 (citations omitted). Moreover, when troubles occur, end-user customers blame the CLECs. The FCC recognized that "[s]ervice disruptions also will influence customer perceptions of

competitive LECs' ability to provide quality service, and thus affect competitive LECs' ability to attract customers." *Id.* at 466.

These critical service quality concerns and others are reflected in the following table that illustrates the inferior performance BellSouth provides for analog loops compared to UNE-P in Florida obtained from the recently BellSouth-reported performance data.

	UNE-P	Analog Loops/with LNP
FOCs-% on time	95.56%	Design –34.74% Non-design –31.87%
FOCs-average interval	4.48 business hours	21.65 business hours-Design 22.94 business hours-Non-design
Flow-Through for migration orders	84.4%	23.7%
% Orders Placed in Jeopardy	Dispatch--6.60%	Design/Dispatch—55.00% Non-Design/Dispatch—13.86%
% Orders requiring Field Dispatch[5]	2%	13%
Non-dispatch Order Completion Intervals	.35 days for switch based 1.20 days for central office	Design 5.47 days Non-design 4.82 days

From September MSS Reports, October PMAP reports, and Exhibits MDV-1 and MDV-2.

As is depicted above (even with the current minimal UNE-L volumes), far fewer UNE-L orders flow-through and thus more orders have to be handled manually, fewer UNE-L Firm Order Confirmations are returned on time and take longer to return on average, significantly more UNE-L orders require a field dispatch, more orders are placed in jeopardy, and due date intervals are longer for UNE-L than UNE-P. In sum, the enormous increase in physical work in the central office to provision hot cut customers is exacerbated by significantly more manual work and delay in every step of the process.

Third, these additional steps add significant cost. The cost for processing and provisioning a UNE-P order in BellSouth Florida is $1.62. In sharp contrast, the cost for

most hot cuts in BellSouth Florida is $83.11. Similarly, a CLEC's internal costs for UNE-P are significantly less than UNE-L. This is because once the UNE-P orders are submitted, they are tracked electronically and generally do not require individual work. For UNE-L orders, however, the CLEC bears labor costs to prepare, track and implement its orders. As represented more fully in Exhibit MDV-3, these additional CLEC costs include the following work activities: (1) connecting facility assignments ("CFA") inventory management, (2) dial tone and conformance testing, (3) internal pre-cut and day of cut coordination with ILEC, and (4) separate systems and activities required to support number portability. In addition, if the CLEC's customer wants the conversion completed during "non-business" hours in order to avoid service disruption during the time when service is most critical to the customer, the CLEC must pay overtime for any involved personnel. And critically, the CLEC will never recover these costs if the CLEC loses the customer as a result of problems incurred during the hot cut itself, or in situations where the industry is experiencing rapid customer churn. TRO ¶ 471.

Q. WHAT COST DOES AT&T BELIEVE IS APPROPRIATE FOR MIGRATING CUSTOMERS?

A. AT&T believes that the cost for migrating customers among providers must be based on forward-looking technology (electronic) technology, and should be as equitable as possible among types of service migrations. For example, the cost of a PIC change in BellSouth Florida is $1.95, and the cost of a migration to UNE-P in BellSouth Florida is $1.62. Methods other than electronic provisioning of service migrations lead to discriminatory price differences that are impossible to overcome.

[5] The 2% field dispatch for UNE-P is likely to be applicable to new installations only (not migrations), creating an even greater disparity between field dispatch for UNE-P than UNE-L than the data indicate.

Q. ARE THE OPERATIONAL ISSUES YOU DISCUSS UNIQUE TO BELLSOUTH?

A. No. While, as discussed below, BellSouth has created some unique issues due to its refusal to respond reasonably to requested improvements in its hot cut process, most of the operational barriers inherent in the hot cut process exist simply because it is a burdensome manual process that must be performed on a loop by loop basis. Any manual process, by nature, introduces significant potential for human error. Mistakes such as (1) disconnecting the wrong loop, (2) premature disconnects, (3) cross-connecting the loop to the wrong CFA, (4) inadvertently breaking cross-connection wires on the frame for end-users not involved in the hot cut while connecting the new or disconnecting the old jumper pairs, or (5) making poor connections on the terminal block (*e.g.*, loose wire wraps) all can lead to customer service outages that can be lengthy if the problem goes undetected by the person who made the error. The hot cut process is inherently labor-intensive, inefficient, prone to error, and incapable of sustaining the volumes necessary to allow effective competition in the mass market.

Q. WHY DO YOU SAY THE HOT CUT PROCESS IS INHERENTLY INCAPABLE OF SUSTAINING VOLUMES NECESSARY TO ALLOW EFFECTIVE COMPETITION FOR MASS MARKET CUSTOMERS?

A. The failure and service restoration problems that occur at low volumes will only be exacerbated by the tremendous increase in the level of activity that will be required if unbundled local switching were not available and CLECs are forced to use UNE-L to serve mass market customers. These problems will be further compounded with the number of additional inexperienced people that will be necessary to work the hot cut process and to troubleshoot and repair the increased troubles that are likely to occur. Because the industry

as a whole has absolutely no experience providing service to mass market customers using a hot cut process -- or anything remotely comparable to it -- it is impossible to accurately qualify the impact this process will have on service quality. We do know, however, that service quality is likely to decline, because any time a process requires human intervention and manual steps, there is greater opportunity for failures to occur. Moreover, the opportunity for failures increases disproportionately when rapid increases in volumes occur. For decades, all industries, including the telecommunications industry, have affirmatively sought out and implemented technological improvements that reduce or eliminate manual activity in their transaction processes. Attempting to serve the mass market using the manual hot cut process on each and every customer's analog loop runs counter to that trend and can only turn back the clock on the technological advancements that have been made.

Q. DOES BELLSOUTH CURRENTLY HAVE A BULK OR BATCH HOT CUT PROCESS?

A. No. BellSouth currently has a bulk ***ordering*** process, but the hot cut provisioning is not done in a batch mode. In fact, if a CLEC requests that a group of hot cuts be done together, BellSouth places more restrictions on those hot cuts than if they are performed on an individual basis. For example, BellSouth currently offers time-specific hot cuts for individual analog loop migrations, but does not allow time-specific cuts when using its batch ordering process.

Q. HAS AT&T ASKED BELLSOUTH TO DEVELOP A BULK HOT CUT PROCESS?

A. Yes. AT&T has twice requested BellSouth to develop a bulk conversion processes with BellSouth. These requests were made because AT&T had found the individual hot cut

process to be inadequate. Therefore, these requests were intended to provide AT&T a more efficient and effective means to migrate customers to its facilities, when it was otherwise feasible to do so.[6] In particular, it was intended to provide AT&T an additional *optional* tool for use at its discretion when the determination was made that a limited migration from UNE-P to UNE-L in unique circumstances for certain sets of customers was economically feasible.[7] AT&T did not contemplate, nor is it feasible that the processes it requested, even if implemented properly, would be capable of being used as a replacement for UNE-P.

Q. WAS A BULK HOT CUT PROCESS AS REQUESTED BY AT&T TIMELY IMPLEMENTED?

A. No. AT&T made its first request, via the BellSouth change control process, in November 2000. In March 2003 -- nearly 28 months later, BellSouth implemented a bulk ordering (not provisioning), process as a result of AT&T's change request.[8] However, that process did not meet AT&T's needs as described in the change request. In fact, the provisioning (or actual hot cut portion) of BellSouth's "new" process appears to be "business as usual," with the critical exception that it does not allow time-specific cuts, which are essential to customer satisfaction. The process implemented was simply the bulk ordering process mentioned earlier.

[6] It was also anticipated by AT&T that these new BellSouth "bulk" methods would cost less than a "one at a time" process. (See Exhibit MDV-5 August 30, 2002 letter from Denise Berger of AT&T to Jim Schenk of BellSouth)

[7] Such conditions include a high concentration of customers, facilities are "on network" using CLEC owned fiber, and spare DLC equipment is in place and effectively represents a sunk cost to AT&T.

[8] See Exhibit MDV-6, which attaches BellSouth's UNE-P to UNE-L Bulk Migration CLEC Information Package.

Q. WHAT SPECIFIC CONCERNS DID AT&T HAVE WITH BELLSOUTH'S BULK PROCESS OFFERING?

A. The process had numerous flaws that made it at least as inefficient and expensive as the old process, if not more so. Among other things, (1) the process did not allow for after-business-hours hot cuts, (2) did not provide any assurances that all end users' lines or services would in fact be provisioned at the same time or even on the same day, (3) failed to guarantee any number of total lines that BellSouth would provision in a single day, and (4) lacked a process for timely restoration of customer service in the event of a problem. Moreover, there were no cost-savings from the process.

Q. IS THIS THE SAME PROCESS THAT BELLSOUTH PRESENTED AT THE FLORIDA COMMISSION WORKSHOP ON OCTOBER 28, 2003?

A. Yes, it appears to be exactly the same. And, as I discuss below in my testimony, and contrary to BellSouth's assertions at the workshop, this process does not meet the requirements set forth by the FCC for batch hot cuts.

Q. PLEASE DESCRIBE YOUR SECOND REQUEST OF BELLSOUTH TO IMPLEMENT A BULK PROCESS.

A. In August 2002, AT&T requested, on a business-to-business basis, that BellSouth adopt a new process to address the insufficiency in the individual loop hot cut process. AT&T requested that the process include among other things:

- The ability to convert between 100 – 250 lines within a single Local Serving Office (LSO) in a single batch;
- That BellSouth complete its conversion readiness, including dial-tone/Automatic Number Identification ("ANI") testing, loop qualification testing and pre-wiring, in advance of the conversion;
- That BellSouth commit to immediate service restoration if a service outage occurred during the conversion process;
- The development of appropriate measurements and tracking to ensure the quality of the process, and if necessary, to further improve the process; and

- Substantially reduced prices for hot cuts.

Q. WHAT WAS BELLSOUTH'S RESPONSE TO THIS REQUEST?

A. BellSouth refused to commit to any volume of lines that could be included in a batch. BellSouth responded that AT&T's request was technically feasible except "the quantity of physical facilities and telephone numbers cut per evening will vary based on the load at the time the request is submitted, and will be driven by the actual lines per customer." It also indicated it would charge AT&T $134.32 per working telephone number, *in addition* to regular ordering and provisioning charges, as well as other unspecified overtime charges for technicians and service representatives.[9] In other words, the costs for the requested process were much higher and completely unpredictable. AT&T, of course, was unable to accept such a cost prohibitive proposal since the purpose of the request was to move customers' analog loops from UNE-P to AT&T facilities when it was economic to do so.

Q. IF BELLSOUTH WERE TO IMPLEMENT NOW THE PROCESS AT&T REQUESTED, WOULD SUCH IMPLEMENTATION SATISFY THE FCC'S DIRECTION TO APPROVE AND IMPLEMENT A BATCH HOT CUT PROCESS?

A. No. AT&T requested this bulk hot cut process for use in limited circumstances and for relatively small volumes of customer lines. That process would not be adequate for the increased number of loop migrations that would be necessary in a world in which unbundled local switching is not available to CLECs. The FCC has directed state commissions "to approve and implement . . . a seamless, low-cost process for transferring large volumes of mass-market customers . . .." TRO ¶ 423. The process that AT&T proposed to BellSouth on a business-to-business basis would not comply with the FCC's directive.

[9] See Exhibit MDV-7 for June 9, 2003 letter from Denise Berger of AT&T to Phillip Cook of BellSouth.

III. THE FCC'S DIRECTION TO ESTABLISH A BATCH HOT-CUT PROCESS: WHAT ARE THE CHALLENGES?

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

A. The FCC made numerous findings regarding the inadequacy of the ILECs' current hot cut process. These findings confirm the concerns AT&T has raised about hot cuts in the past and demonstrate why AT&T moved away from provisioning mass market customers' analog loops using hot cuts to provide service to its customers.

First, the FCC recognized that deficiencies in the hot cut process are seen and felt by the CLECs' customers. It found that the problems and delays associated with hot cuts "prevent[ ] the competitive LEC from providing service in a way that mass market customers have come to expect." TRO ¶ 466. This is a substantial problem because "competition is meant to benefit consumers, and not create obstacles for them." *Id.* ¶ 467.

Second, the FCC recognized that CLECs are likely to lose customers as a result of these deficiencies. "Service disruptions also will influence customer perceptions of competitive LECs' ability to provide quality service, and thus affect competitive LECs' ability to attract customers." *Id.* ¶ 466. Specifically, the FCC found that the "record shows that customers experiencing service disruptions generally blame their provider, even if the problem is caused by the incumbent." *Id.* ¶ 467 (citations omitted).

Third, the FCC recognized that many of the deficiencies with provisioning analog loops using hot cuts are inherent in the process. The FCC concluded, based on the evidence presented, that "hot cut capacity is limited by several factors, such as the labor intensiveness of the process, including substantial incumbent LEC and competitive resources devoted to coordination of the process, the need for highly trained workers to perform the hot cuts, and

the practical limitations on how many hot cuts the incumbent LECs can perform without interference or disruption." *Id.* ¶ 465 (citations omitted).

Fourth, the FCC focused specifically on the unavoidable limitations on the volume of hot cuts the ILECs could perform. The FCC found that CLECs were impaired because hot cuts could not be performed in the volumes that would occur in the mass market: "[h]aving reviewed the record evidence, we find that it is unlikely that incumbent LECs will be able to provision hot cuts in sufficient volumes absent unbundled local circuit switching in all markets." *Id.* ¶ 468. The FCC specifically rejected ILEC arguments that the FCC's prior findings in section 271 proceedings regarding hot cuts demonstrated lack of operational impairment. The FCC correctly found that the number of hot cuts in the current market environment "is not comparable to the number that incumbent LECs would need to perform if unbundled switching were not available for all customer locations served with voice-grade loops." *Id.* ¶ 469 (citations omitted). Thus, the issue here is that there is "an *inherent limitation* in the number of manual cut overs that can be performed, which poses a barrier to entry that is likely to make entry into a market uneconomic." *Id.* (emphasis added) (citations omitted).

Finally, the FCC concluded that ILEC *promises* regarding their ability to perform any requested volume of hot cuts cannot be relied upon to demonstrate adequate performance. Specifically, the FCC found that "incumbent LECs' promises of future hot cut performance [are] insufficient to support a Commission finding that the hot cut process does not impair" CLECs. *Id.* at n. 1437.

In sum, the FCC found "ample testimony in the record" on CLECs' operational and economic difficulties with hot cuts. *Id.* ¶ 466. It recognized that "hot cuts frequently lead to

provisioning delays and service outages and are often priced at rates that prohibit facilities-based competition for the mass market." *Id.* ¶ 465.

Q. PLEASE SUMMARIZE THE FCC'S ANALYSIS OF THE CONCERNS WITH HOT CUTS.

A. Consistent with AT&T's own experience, the FCC drew the following conclusions with regard to the operational deficiencies involved in the hot cut process, especially as they would apply in a market in which competitors do not have access to UNE-P:

- Hot cuts are labor intensive
- Hot cuts require the expenditure of substantial ILEC and CLEC resources
- There is a practical limitation on how many manual hot cuts an ILEC can perform
- Hot cuts often result in provisioning delays
- Hot cuts can cause significant service outages
- Poor hot cut performance causes customer dissatisfaction with individual competitors and the competitive process in general
- Hot cuts generally impose prohibitively high costs on competitors, both internal and external
- ILEC claims that current hot cut performance can be readily expanded to a "UNE-L only" environment cannot be accepted without proof of performance.

Based in part on these conclusions relating to hot cuts, the FCC made a "national finding that competitive carriers providing service to mass market customers are impaired without unbundled access to local circuit switching." *Id.* ¶ 422. In attempting to set out a plan to help mitigate the inherent deficiencies with the ILECs' current hot cut processes, the FCC asked state commissions to "approve and implement a batch cut migration process – a *seamless, low-cost process for transferring large volumes of mass market customers . . . .*" *Id.* ¶¶ 422-423. (emphasis added). This batch cut process must "render the hot cut process more efficient and reduce per-line hot cut costs." *Id.* ¶ 460. It must also "address the costs and timeliness of the hot cut process." *Id.* ¶ 488.

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

A. The FCC defined a batch cut process as a seamless, low-cost process for transferring large volumes of mass market customers. *Id.* ¶ 487. The FCC found that "the hot cut process could be improved if cut-overs were done on a bulk basis, such that the timing and volume of the cut over is better managed," and the non-recurring costs reduced. *Id.* ¶ 474 (citations omitted). Indeed, the FCC found that "such improvements are likely to be *essential* to overcome the operational impairment that competitors face in serving mass market customers. *Without such improvement*, the record shows that *carriers are likely to be unable to economically serve a market characterized by low margins*." *Id.* (emphasis added).

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

A. No. The FCC found that:

> Project managed cut-overs involve the conversion of a number of lines at one time, pursuant to provisioning requirements and intervals negotiated by the incumbent and the competitive LEC. We find that these approaches are not sufficiently developed or widespread enough to adequately address the impairment created by the loop cut over process. The evidence in the record demonstrates that the carriers that have used project-managed cut overs have used them only for business customers, and only after acquiring the customer through a means that offered the use of incumbent LEC loops and switches in combination.

Id. ¶ 474 (citations omitted). The FCC also noted that "the record evidence indicates that incumbent LECs are not well-equipped to handle hot cut volumes even with the existence of a procedure to manage bulk migrations on a project-managed basis." *Id.* ¶ 487 at n. 1516.

Q. WHAT DIRECTION DID THE FCC PROVIDE TO STATE COMMISSIONS REGARDING BATCH CUT PROCESSES?

A. The FCC found that a "seamless, low-cost batch cut process for moving mass market customers from one carrier to another is necessary, ***at a minimum***, for carriers to compete effectively in the mass market." *Id.* ¶ 487. The FCC's Order directs state commissions to approve, within nine months of the effective date of the Order, a batch hot cut migration process to be implemented by the incumbent LECs that will address the costs and timelines of the hot cut process.[10] *Id.* ¶ 488. More specifically, it requires state commissions to do the following:

- Adopt a batch cutover "increment" for migrating customers served by unbundled loops combined with unbundled local circuit switching to unbundled stand-alone loops. In other words, states should decide the appropriate volume of loops that should be included in the "batch."
- In conjunction with incumbent LECs and competitive LECs, approve specific processes to be employed when performing a batch cut. The FCC "expect[s] these processes to result in efficiencies associated with performing tasks once for multiple lines that would otherwise have been performed on a line-by-line basis."
- Determine whether the ILEC is capable of migrating batch cutovers in a timely manner.
- Adopt TELRIC rates for the batch cut process. These rates should reflect the efficiencies associated with batch migration of loops to a competitive LEC's switch, either through a reduced per-line rate or through volume discounts.

TRO ¶ 489.

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

Q. DOES BELLSOUTH CURRENTLY HAVE A BATCH HOT CUT PROCESS THAT MEETS THESE REQUIREMENTS?

A. No. As discussed above, BellSouth's bulk process is a bulk ordering process, not a process for provisioning analog loops via hot cuts in batches. Moreover, it is not seamless, it is not low cost, and it is not capable of handling large volumes of mass market customers. Thus, BellSouth does not have a process that meets a single one of the FCC's requirements.

First, the FCC said that the "states should decide the appropriate volume of loops that should be included in the 'batch'." TRO ¶ 489. As previously discussed, BellSouth has quantified how many lines a CLEC can order in bulk, but it has not identified the quantity that will be *provisioned* together. Thus, BellSouth has provided no information regarding the size of any batch, how many (if any) simultaneous batches it could provision, or how frequently it would be able to schedule such batches, either in individual offices or in groups of offices at the same time or over any stated period.

Second, the FCC said that, "[i]n conjunction with incumbent LECs and competitive LECs, [states must] approve specific processes to be employed when performing a batch cut." TRO ¶ 489. As I described above, AT&T's attempts to work with BellSouth, both through the Change Control Process and through business-to-business channels, on an effective bulk process have not yielded a satisfactory process.

Third, states must "determine whether the ILEC is capable of migrating batch cutovers in a timely manner." *Id.* BellSouth's target intervals, as described below and stated in its UNE-P to UNE-L Bulk Migration information package, are far from timely.[11]

# of End-user Telephone Numbers	Minimum Number of Days from submission of project notification to due date of requests
Up to 99	24 business days

[11] See Exhibit MDV-6, page 10.

100-200	27 business days
201+	Negotiated

Fourth, states must "adopt TELRIC rates for the batch cut activities they approve." TRO at ¶ 489. As shown above, BellSouth's rates for its bulk ordering process are very high – indeed, they are the same as for individual cuts, indicating that BellSouth does not believe that it will realize any economic efficiencies through its proposed batch process. And certainly, the ***additional*** $134.32 plus overtime BellSouth proposed to AT&T was not based on TELRIC.

Q. HAS AT&T NEGOTIATED WITH VERIZON FOR A BATCH HOT CUT PROCESS IN FLORIDA?

A. No. AT&T has negotiated with Verizon (and participated in regulatory proceedings) in New York for a bulk hot cut process.

Q. IS VERIZON OFFERING A BATCH HOT CUT PROCESS IN FLORIDA?

A. On October 28, 2003, a Verizon representative made a presentation at an informal hot cut workshop offered by the Florida Commission.[12] This presentation included four slides (pages 14-17) regarding TRO issues and Verizon's batch hot cut process. It is unclear whether this process is offered for use today, or whether Verizon will propose this process to this Commission for approval.

Q. DOES THE PROCESS OUTLINED IN VERIZON'S PRESENTATION MEET THE REQUIREMENTS OF THE TRO?

A. No. Although Verizon's presentation provided few details, its batch hot cut process is clearly inadequate. As further information regarding Verizon's batch hot cut process is

[12] See Exhibit MDV-8 for excerpts from Verizon's October 28, 2003 presentation.

made available through this proceeding, AT&T will supplement these comments in its rebuttal testimony.

Q. PLEASE DESCRIBE THE DEFICIENCIES IN VERIZON'S BATCH HOT CUT PROCESS, BASED ON YOUR REVIEW OF ITS PRESENTATION FROM THE FLORIDA BATCH HOT CUT WORKSHOP.

A. First, the FCC said that the "states should decide the appropriate volume of loops that should be included in the 'batch'." TRO ¶ 489. Verizon did not address batch volumes, but did briefly address scalability on slide 15 of its presentation. It appears that Verizon believes that current UNE-P and UNE-L activities should be used to estimate volumes, but it does not address the impact of win-backs by Verizon or other central office activities on the workload of Verizon personnel. Nor does it address the impact of IDLC, line-splitting, CLEC-to-CLEC migrations, collocation issues, and central office space issues, such as how long it takes to provision a hot cut and how many Verizon personnel can work simultaneously at a frame. Without addressing these issues, Verizon cannot demonstrate to this Commission that it is capable of handling overall mass market volumes, including the appropriate size of an individual batch.

Second, the FCC said that, "in conjunction with incumbent LECs and competitive LECs, [states must] approve specific processes to be employed when performing a batch cut." *Id.* ¶ 489. As I described above, AT&T has not yet attempted to work with Verizon on a bulk or batch process in Florida. However, AT&T has not been able to reach agreement with Verizon in New York on an acceptable bulk hot cut process, and is currently participating in a proceeding at the New York Commission on this issue.[13]

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

Third, states must "determine whether the ILEC is capable of migrating batch cutovers in a timely manner." *Id.* Verizon's presentation (page 17) indicates that after the CLEC sends an LSR signifying a batch hot cut, Verizon gives "a future due date" to the order, and that "batch hot cut orders are accumulated on a CO-by-CO basis." Thus it appears that the end-users wishing to migrate to a CLEC are placed in limbo until Verizon creates a batch. This is hardly timely when compared to the migration intervals for UNE-P customers or long distance PIC changes.

Fourth, states must "adopt TELRIC rates for the batch cut activities they approve." Verizon's presentation (page 14) indicated that there were "economic issues," but did not propose rates for its process. Further, Verizon appears to accept that the TRO requires "keeping costs down." Verizon does not, however, address the TRO requirement that the batch process be "low cost." *Id.* ¶ 487. Nor does it provide any information that this Commission requires to "address the costs and timeliness of the hot cut process." *Id.* ¶ 488.

Q. DO YOU BELIEVE THAT A BATCH PROCESS HAS REASONABLE PROSPECTS FOR ALLEVIATING THE OPERATIONAL AND ECONOMIC PROBLEMS THE FCC FOUND IN THE INDIVIDUAL HOT CUT PROCESS?

A. No. While AT&T has sought the implementation of bulk hot cut processes to improve the existing manual process, the improvements that AT&T sought were intended to augment *existing* manual provisioning processes. Project-managed, after hours, bulk transfers of customers on a central office and CLEC specific basis could improve the quality and efficiency of the hot cut process, and allow AT&T and other CLECs to make use of their facilities in the limited cases where such migrations are otherwise feasible. It was never contemplated that such a process, if implemented, would be adequate to support the migration volumes of customer's analog loops sufficient to serve the entire mass market.

However, BellSouth's proposed bulk ordering process, as well as AT&T's proposed hot cut process, are almost entirely manual by design. Indeed, although the process is called "batch" or "bulk", each physical loop cutover is done individually, just as they are for "individual" hot cuts. Even the best manual processes that could be operationalized today, including any batch migration process, cannot sustain competitively unconstrained migrations of hundreds of thousands of mass market customers among all carriers.

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

A. No. First, any efficiency gains realized from a manual batch hot cut process likely will be too small to result in substantial reduction of the overall costs required to extend mass market analog loops to CLEC switches. Critically, a batch provisioning process does not relieve any of the economic impairment that results from the collocation, digitization, concentration and backhaul costs that a CLEC must incur to connect the ILEC loop to its switch. *See* Direct Testimony of AT&T Witness Steven E. Turner.

Q. WHAT OPERATIONAL CONSTRAINTS ON COMPETITION SHOULD THIS COMMISSION REVIEW?

A. First, this Commission should review the capacity constraints of any proposed batch cut process. Capacity limitations are imposed by the physical structure of the network and the manual nature of the process. Second, the Commission should conduct a review to ensure that all types of service configurations are accommodated in any proposed batch provisioning process. For example, current batch provisioning processes do not address the following significant market components: customers served by Integrated Digital Loop Carrier ("IDLC") loops, customers in a line splitting arrangement, and customers migrating

between CLECs. Unless these service configurations are included, CLECs have no choice but to use the current inadequate individual hot cut process for these tens of thousands of customers, and leave them out of the "improved" process that the FCC requires. Third, this Commission should review BellSouth policies that impede CLECs from obtaining unbundled local switching from third parties. Fourth, migrating all mass market customers served by CLECs to UNE-L is likely to create new operational constraints. For example, new traffic patterns from the ILEC's switch-to-switch network to the ILEC's tandem network may increase the blocking of interconnection trunks behind the ILEC's tandem switches and create congestion in the ILEC's tandem switches. In developing a new batch hot cut process, this Commission must investigate and understand those concerns to assure that customers served by CLECs receive quality service.

A. Any Batch Process Must Address Capacity Constraints

Q. WHY IS THE CAPACITY OF THE ILEC'S HOT CUT PROCESS IMPORTANT TO THIS PROCEEDING?

A. An ILEC's ability to provision mass market customers' analog loops easily and quickly between carriers at the volume or "scale" required for competition in the mass market is central to the issue of operational impairment. Clearly, if an ILEC's hot cut process creates a bottleneck or otherwise constrains the number of analog loops that can be provisioned, CLECs are operationally impaired in serving mass market customers. There is no question that current hot cut processes are predominantly manual. As such, they impose limits on the number of customer's analog loops that can be provisioned in any given day and the number of customers a CLEC can actually migrate to its services.

This manual process stands in glaring contrast to an ILEC's ability to transfer new mass market long distance customers to its services at very low cost, in very high volumes, and in a short period of time using the highly automated PIC change process that the industry has developed over the past 20 years. There are no practical limits on an ILEC's ability to provision new long distance customers through the time-tested electronic PIC migration process. If an ILEC cannot develop a hot cut process that meets the needs of the competitive mass market for local services commensurate with the scale achieved in the long distance market, then CLECs are operationally impaired, as they are relegated to manual processes which limit their ability to acquire local customers, while the ILEC enjoys virtually unconstrained ability to provision both its local and long distance service electronically.

The TRO recognizes that, in making operational and impairment decisions, state commissions must look to all factors affecting likely revenues and costs. *See* TRO at n. 1497. ILECs will have limited costs and complete lack of operational constraints when it utilizes the PIC process for acquiring long distance customers for its bundled local and long distance service offering. That same kind of efficient, seamless, high-volume, low cost process for CLECs attempting to acquire local customers for the CLEC's bundled local and long distance service offering is necessary to ensure a level competitive playing field. If local competition for mass market customers is to be maintained and encouraged, the process for switching local carriers must be as seamless and unobtrusive to the end-user as the PIC change process.

Q. DID THE FCC ADDRESS THIS CAPACITY ISSUE?

A. Yes. The FCC's Triennial Review Order expressed a number of significant concerns regarding the capacity limitations of the hot cut process. First, the FCC found that hot cut

capacity "is limited by several factors, such as the labor intensiveness of the process, including substantial incumbent LEC and competitive resources devoted to coordination of the process . . . and the ***practical limitations on how many hot cuts the incumbent LECs can perform without interference or disruption.***" *Id.* ¶ 465 (emphasis added) (citations omitted). Second, the FCC stated that "[i]n deciding whether competitors are impaired by incumbent LEC provisioning processes, we must necessarily make a predictive judgment concerning this systemic capability to handle anticipated future hot cut volumes, which (absent access to unbundled local circuit switching) would be greater than volumes that have been experienced in the past . . . . Having reviewed the record evidence, ***we find that it is unlikely that incumbent LECs will be able to provision hot cuts in sufficient volumes absent unbundled local circuit switching in all markets.***" ¶ 468 (emphasis added). Third, the FCC found that "the issue is not how well the process works currently with limited hot cut volumes, rather the issue identified by the record is ***an inherent limitation in the number of manual cut overs that can be performed***, which poses a barrier to entry that is likely to make entry into a market uneconomic." *Id.* ¶ 469 (emphasis added) (citations omitted).

Q. DOES BELLSOUTH'S CURRENT HOT CUT PROCESS HAVE SUFFICIENT CAPACITY TO SUPPORT MASS MARKET VOLUMES?

A. No. While BellSouth has produced no explicit information demonstrating its capacity to perform hot cuts, stating only that they are "scalable depending on volumes" (*See* BellSouth's response to AT&T Interrogatory No. 8, attached as Exhibit MDV-9), other information provided by BellSouth can be used to draw a reasonable conclusion on this issue. First, this information indicates, as I would expect, that there is a physical limit to the number of hot cuts that can be performed per technician per day. For example, in its state 271

proceedings and the FCC Triennial Review proceedings, BellSouth provided a pictorial depiction of the central office activities required to implement a hot cut including, pre- and post-cut testing, wiring, coordination, and cut-over of the circuit (*see* Exhibit MDV-10). This straight-forward example uses a single sided distribution frame, with the work at a floor level. Much more complex frame configurations are more likely to be encountered, including configurations involving intermediate as well as main distribution frames, frames located on different floors, frames with more tiers, frames that require multiple cross connections, as well as differing technologies such as solder, punch down, and /or wire wrap terminals.

As is clear from BellSouth's own representation, the hot cut process involves numerous steps, is highly manual and takes place in an environment that lends itself to (1) disconnecting the wrong loop, (2) cross connecting the loop to the wrong CFA, (3) inadvertently breaking cross-connection wires on the frame for end-users not involved in the hot cut while running in the new or disconnecting the old jumper pairs, and (4) making poor connections on the terminal block. All these errors will lead to a customer service outage which can be lengthy should the problem go undetected by the person who made the error.

Further, BellSouth's response to AT&T Interrogatory No. 11 attached as Exhibit MDV-11, indicates that it takes central office personnel working directly on the central office frame(s) between 30 to 50 minutes for the initial loop on an order to be cut over and from 21 to 25 minutes for each additional loop. That equates to a maximum of 14 line conversions per shift for a technician working seven hours at an average of 30 minutes per loop conversion. This prediction is consistent with Bell South's response to AT&T Interrogatory No. 44, attached as Exhibit MDV-12, an analysis it conducted for an FCC Ex Parte, in which

it was assuming that in 2 to 3 shifts of technicians working per day, each technician would complete 12 to 13 conversions per shift.

Moreover, there is a limit to how many technicians can work simultaneously at a distribution frame. Again, BellSouth's own data amply demonstrate this point. For example, central office "HLWDFLWH" had 14,506 lines and BellSouth estimated that it would take 6.98 months to convert the lines in that one central office.[14] BellSouth further stated in its response to Interrogatory 44 that in making this estimate, it assumed (because this was a large office) 6 frame technicians dedicated to this task during the day and 12 at night, for an average of 9. It also stated that it assumed each technician would conduct approximately 11.5 cuts per day for approximately 104 conversions per day. Therefore, even in this "large office" with well over 100,000 lines, BellSouth would only convert 104 lines per day, even with working two shifts of up to twelve technicians.[15] Maximum migrations of volumes such as these, which comprise a tiny fraction of the available customers, are a completely inadequate number to support meaningful UNE-based competition.

Finally, it is important to keep in mind that the BellSouth personnel responsible for the hot cut frame work are not dedicated exclusively to this task. Consideration must be made of the personnel and space availability requirements for *other simultaneous* central office activities such as new service installations for both BellSouth and CLECs, migrations back to BellSouth, troubleshooting and repairing frame related troubles on existing lines. For example, when BellSouth technicians install new wires on the Main Distribution Frame

[14] See Exhibit MDV-13 for excerpts from December 24, 2002 Ex Parte of BellSouth filed in FCC WC Docket 01-338.

[15] The largest number of loop conversions conducted to date in this central office was 69 on May 23, 2001. Indeed, in a review of the daily hot cuts over a three-year period for all BellSouth's Florida central offices (28,725 instances) revealed only 106 instances of more than 50 cuts per day. See BellSouth response to AT&T Interrogatory 4.

"MDF" for an existing customer migration, the technicians will also have to perform a separate job (or jobs) to disconnect and remove (or "mine") the existing wires from the MDF.

Q. WHAT CAPACITY TO MANUALLY PROVISION LOOPS FOR THE MASS MARKET SHOULD BE REQUIRED?

A. The appropriate model for an analysis of required capacity is the activity in the long distance market, which is actively competitive, and therefore representative of the level of competition sought by regulators and the CLEC industry. There, the average "churn rate" – the percentage of all customers making a carrier change – is approximately 25% of all lines in a year.[16] In BellSouth Florida territory, that level of churn would mean if customers were moved from one carrier to another using UNE-loops exclusively, the churn would be approximately 123,958 lines per month. (Based on BellSouth's September MSS Customer Trouble Report Rate report that states it has approximately 5,950,000 POTS lines in service in Florida (retail POTS, resale, UNE-P, and analog UNE-L). This equates to 5,635 hot cuts per business day. In such a market, BellSouth would have to perform more hot cuts in a day--every business day--than it currently performs in up to a three-month period of time.

The ***minimum*** standard against which BellSouth's capacity should be assessed is the amount of hot cuts BellSouth would need to perform in a market in which competition currently relies on both UNE-P availability and UNE-L availability but, if unbundled local switching is not available, would rely on only UNE-L availability. In other words, the Commission should compare loop volumes to UNE-P volumes to see if BellSouth is indeed capable of performing the former type of customer transfer at the same level as the latter.

[16]From the Yankee Group's 2003 TAF (Technologically Advanced Family) survey- a national household survey mailed to several thousand US households during the second quarter of the year. The study sample is selected from a Consumer Mail Panel of 600,000 representative households, which is updated annually.

Elimination of UNE-P should never be allowed to materially restrict competitive choices that consumers have today. According to BellSouth's response to AT&T interrogatory 32 (See Exhibit MDV-1), it has issued an average of 28,959 service orders per month to migrate customers to UNE-P in Florida during a recent 14-month period.[17] During that same period, BellSouth issued an average of 207 migrations to UNE-L orders per month. (See Exhibit MDV-2). Thus, BellSouth has processed on average ***140 times more*** UNE-P migration orders each month than it has UNE-L migration orders.[18] In short, converting from using UNE-L for specialty market situations into UNE-L for the mass market requires scaling by a factor of 140 to 1.[19]

Q ARE THERE OTHER PHYSICAL STRUCTURE ISSUES THAT LIMIT THE CAPACITY OF BELLSOUTH'S HOT CUT PROCESS IN FLORIDA?

A. Yes. The rate at which BellSouth can conduct hot cuts is also adversely affected by the extra dispatches of technicians required by: (1) unmanned central offices, and (2) hot cuts involving IDLC loops, which will require a field dispatch.[20] For example, 23% of

[17] While the number of orders issued is not equal to number of orders completed, it is a reasonable surrogate for purpose of this analysis. If BellSouth responds to pending AT&T discovery requests, these numbers can be refined in future testimony.

[18] These numbers do not include migrations back to the ILEC, which also require provisioning work. In assessing BellSouth's capacity to do the work required, those volumes must be added. Indeed, these numbers may be significant. For example, while this data indicates that BellSouth completed approximately 27,000 UNE-P migration orders, data from the July and August 2003 MSS Customer Trouble Report Rate reports indicates that there was only a net increase of 8000 UNE-P lines in August from July. If BellSouth responds to pending AT&T discovery requests, these numbers can be refined in future testimony.

[19] Both these models are conservative in that they do not include the additional work that would be created if any markets are found not be to impaired and thus the embedded base of UNE-P must be migrated.

[20] Field dispatches are not required in these two scenarios when migrating a customer to UNE-P.

BellSouth's overall central offices are unmanned, with over 15,000 UNE-P lines provided to customers served from those unmanned locations. (*See* BellSouth response to AT&T Interrogatory No. 1 attached as Exhibit MDV-14).

Further, 31.8% of BellSouth's lines in Florida are served using Integrated Digital Loop Carrier ("IDLC").[21] As described below, loops on IDLC do not have an appearance on BellSouth's MDF and thus cannot be transferred (if at all), without additional work. At a minimum, a technician would have to be dispatched to transition the service to Universal Digital Loop Carrier ("UDLC") or copper facilities, if they are available.[22] As described earlier in my testimony, only 2% of UNE-P orders required field dispatch. However, approximately 31.3% of the hot cuts require field dispatch as they are on IDLC (See BellSouth response to AT&T's Request for Production of Documents ("POD") No. 14 attached as Exhibit DMV-16). Based on these two available IDLC percentages of 31%, BellSouth would have to dispatch technicians over 200,000 times just to convert the existing embedded base of UNE-P.[23] Dispatches such as these add complexity to the cut and could well lengthen the cut interval.

BellSouth recognizes these issues. In its response to AT&T's POD 14 (See Exhibit MDV-16), BellSouth stated "[a]dditional time to provide loops where existing service is provided over IDLC is necessary due to the fact that the process for handling a hot cut

[21] See Exhibit MDV-15-May 5, 2003 letter from Laurel MacKenzie of BellSouth to Denise Berger of AT&T.

[22] *Id.*

[23] According to BellSouth's September 2003 MSS Customer Trouble Report Rate report, BellSouth had 675,729 UNE-P lines in service. 31 per cent of 675,729 is 209,475.

conversion is *significantly different* than with non-IDLC." Certainly the travel time and extra personnel required add to the cost and reduce the efficiency of the overall process. None of these problems affect customers served by UNE-P.

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

A. BellSouth's data, provided in its response to AT&T Interrogatory No. 23 (attached as Exhibit MDV-17), indicated that of the total of 2,301,238 loops on IDLC in Florida, 1,901,063, or 82% have existing parallel copper or UDLC facilities available for hot cut conversions. Accordingly, for 18% of the market, spare copper facilities are not available.

Q. ARE THERE CENTRAL OFFICES THAT HAVE LESS SPARE CAPACITY AVAILABLE?

A. Absolutely. For example, of the 195 central offices listed in BellSouth's response to AT&T's Interrogatory 23, 69 (42%) of the central offices had between 10,000 to 116,000 IDLC lines per office (with the remainder having less than 10,000). Of these 69 larger offices, 34 have less than half of the spare copper or UDLC facilities sufficient to replace IDLC loops currently serving customers.

Q. CAN YOU GIVE SOME SPECIFIC EXAMPLES OF THIS PROBLEM?

A. Yes. In the chart below are ten examples of central offices where, of all the lines on IDLC, only one quarter to one half of those lines on IDLC have spare capacity facilities available for hot cut conversions.

CLLI Code	Address	IDLC Loops	Total Spares	%
bcrtflsa	Boca Raton	37,159	8973	24.15
pnscflfp	Pensacola	29,080	14,760	50.76
ftldflwn	Ft. Lauderdale	32,415	8,728	26.93%

hlwdflpe	Hollywood	116,900	26,165	22.38%
jcvlflwc	Jacksonville.	21,332	9,122	42.78%
mlbrflma	Melbourne	58,383	19,045	32.62%
orldflph	Orlando	74,315	19,315	25.99%
strtflma	Stuart	31,852	15,917	49.97%
wpbhflga	Palm Beach Gardens	44,186	19,155	43.35%
wwspflsh	Spring Hill	25,845	3,287	12.72%

Q. DOES BELLSOUTH HAVE AN OBLIGATION TO PROVIDE AN UNBUNDLED LOOP WHEN AT&T REQUESTS A LOOP SERVICED BY AN IDLC SYSTEM?

A. Yes. First, BellSouth has an obligation as described in the Florida AT&T/BellSouth Interconnection Agreement to unbundle IDLC delivered loops, using one of several alternative methods, where available. (See Attachment 2, Section 3.11 of the Interconnection Agreement). Further, the TRO requires BellSouth to develop an alternative that permits the customer's choice to be effectuated. TRO ¶ 297 (citations omitted).

Q. IN LIGHT OF BELLSOUTH'S OBLIGATIONS, DOES AT&T HAVE CONCERNS REGARDING ITS ABILITY TO OBTAIN UNBUNDLED LOOPS FROM BELLSOUTH?

A. Yes. If switching is eliminated as a UNE, the demand for unbundled loops may well be unlike anything BellSouth has experienced to date, and the CLECs have no assurance that BellSouth will not experience capacity issues due to IDLC loops, especially in those central offices with high percentages of IDLC loops. AT&T is concerned that because of this prevalence of ILDC lines in many of BellSouth's central offices, CLECs may find themselves having to caveat all of their service offer marketing materials with language such as, "if available in your area." CLECs will also have to overcome negative word of mouth publicity because of their inability, through no fault of their own, to provide service to a customer.

Q. ARE THERE OTHER CONSTRAINTS ON THE CAPACITY TO PERFORM HOT CUTS CAUSED BY THE MANUAL NATURE OF THIS PROCESS?

A. Yes. Electronic order flow-through is an important component of capacity, as each instance of manual (human) intervention decreases efficiency and lengthens the provisioning interval. For example, when a service request flows through the ordering OSS without manual intervention, BellSouth is required to return a rejection in one hour or a FOC in 3 hours. However, if it falls out for manual handling, that interval becomes 10 (business) hours, which in most cases means that BellSouth can delay the order for a full day if it does not flow through. (BellSouth provides no performance data on the frequency and duration of fall-out from its provisioning systems) Further, BellSouth's current rate of manual intervention for loop migration orders is significant. The percent of orders migrating service to UNE-L which were manually handled by BellSouth in Florida were significant: June 2003 - 76.1%, July 2003 - 69.7%, and August 2003 - 76.3%. In contrast, the UNE-P migration orders requiring manual handling for June, July and August, 2003 were as follows: 17.4%, 17.1%, and 15.6%. Thus, while the orders migrating service to UNE-L were handled manually on average 74% of the time, orders migrating service to UNE-P were handled manually on average only 17% of the time. (See Exhibits MDV-1 and MDV-2). With three quarters of the UNE-L migration orders requiring manual intervention, it is obvious that productivity will be impacted if the volumes of orders were increased many-fold.

B. <u>Any Batch Process Must Address the Segments of the Market That Pose Special Challenges</u>

Q. WHAT SEGMENTS OF THE MASS MARKET POSE UNIQUE CHALLENGES FOR ANY MANUAL BATCH PROVISIONING PROCESS?

A. Customers served by IDLC loops, customers in a line splitting arrangement, and customers migrating between CLECs pose a problem for the hot cut process. As a technical

matter they pose some process challenges. In addition, BellSouth's and Verizon's policy choices may well exclude them from a batch provisioning process.

1. IDLC

Q. WHY DO CUSTOMERS SERVED BY IDLC LOOPS POSE SPECIAL CHALLENGES FOR A BATCH PROVISIONING PROCESS?

A. The architecture of the loop/switch combination on IDLC loops is substantially different from other mass market loop architectures. Instead of aggregating copper loops in cables and carrying them all the way to the MDF at the central office, the ILEC brings the loop first to IDLC equipment that is housed in a remote terminal in a neighborhood. The IDLC at the remote terminal converts the analog signals coming from the customer's telephone service to digital signals and multiplexes all the digital signals for all of the customers served by the IDLC onto a digital carrier system for transmission to the central office. At the central office, the digital loops bypass the MDF altogether and access the switch directly through a digital cross-connection frame. No analog signal or physical reappearance on an MDF is ever re-established to identify an individual subscriber's loop. Therefore, when a customer is served by an IDLC loop, there is no separable wire at the MDF that is associated with his/her individual loop that can be disconnected and reconnected to a CLEC's collocated equipment. Therefore, if a CLEC wishes to use its own switch to serve a customer that is currently on an IDLC system, BellSouth must first physically move the customer's line to a pre-existing copper facility or to a UDLC system. Loops that arrive in the central office on a UDLC system have an appearance on the MDF and therefore can be cross-connected to a CLEC's collocated equipment. As a result, loop migrations involving IDLC involve a field dispatch. RBOCs, such as SBC and Verizon-NY which have performed bulk hot cuts, have limited them to migrations that could be performed solely

within the central office where the bulk cut-over was being conducted. When the ILECs in Florida are ordered to provide batch hot cuts, it is essential that IDLC, a significant portion of the market, not be excluded from the process.[24]

2. Line Splitting

Q. WHY WOULD CUSTOMERS IN A LINE SPLITTING ARRANGEMENT POSE SPECIAL CONCERNS IN ANY INSTANCE WHERE SWITCHING IS ELIMINATED AS A UNE, AS WELL AS IN DEVELOPING A BATCH HOT CUT PROCESS?

A. Line splitting is an arrangement that allows a DLEC (Data Local Exchange Carrier) and a CLEC to provide data and voice service over a single loop. The voice and data carriers may be the same or two different carriers. Line Splitting consists of:

(i) a UNE loop, a UNE switch port, and cross connections at a BellSouth central office,

(ii) a BellSouth owned or D/CLEC owned splitter, and

(iii) a D/CLEC owned DSLAM.

With line splitting, the voice service typically uses BellSouth facilities purchased by the CLEC as an unbundled loop and port. Since this service configuration uses both the ILEC loop and the ILEC voice switching, it is referred to here as "UNE-P based" line splitting. Exhibit MDV-18 depicts BellSouth line splitting arrangements with a D/CLEC providing the splitter, and with BellSouth providing the splitter. In both cases, the voice output of the splitter appears on the BellSouth MDF and is cross-connected to the BellSouth switch port. While there is no technical reason that the output of the BellSouth splitter could not be hot cut to the voice CLEC directly from the MDF, as a matter of policy, BellSouth refuses to do it. Moreover, BellSouth does not include line split lines in its current bulk hot cut process.

[24] As stated earlier in my testimony, BellSouth serves 31.8 percent of its customers using IDLC technology in Florida.

Q. HOW WOULD A CLEC PROVIDE DSL SERVICE TO ITS CUSTOMERS IF UNE-P, AND THUS UNE-P BASED LINE SPLITTING, WERE NO LONGER AVAILABLE?

A. In order to be able to provide voice and data services over a single loop, as is available via UNE-P based line splitting today, CLECs instead would have to provide DSL service via a UNE-L based line splitting arrangement, which is sometimes referred to as "loop splitting."

Q. PLEASE DESCRIBE YOUR UNDERSTANDING OF HOW UNE-L BASED LINE SPLITTING WOULD BE IMPLEMENTED IN BELLSOUTH TERRITORY.

A. UNE-L line splitting is the process by which a CLEC and a DLEC may collaborate to provide both voice and DSL service over a single copper loop without the use of ILEC provided switching. The CLEC would use a BellSouth provided loop and a non-BellSouth switch to provide voice service, and either self-provide or partner with a DLEC which would provide the data service using the high frequency portion of the loop and its own data switching network.

The only practical process available in BellSouth territory by which CLECs and DLECs can implement UNE-L line splitting today is through the use of pre-wired (dedicated) cage-to-cage cabling between their respective collocations to enable interconnection of the necessary equipment (splitter, DSLAM, and DLC). [25] A CLEC such as AT&T can only interconnect between its collocation and those of another collocated CLEC if the interconnection agreements between BellSouth and AT&T and BellSouth and the other

[25] CLECs could theoretically install non-dedicated cage-to-cage cabling between their collocations, but this would require a dispatch to each party's collocation cage to implement each new voice/DSL customer's service. The recurring dispatch costs make such an arrangement both operationally and economically infeasible.

CLEC both contain co-carrier cross connect language. See Exhibit MDV-19 for a depiction of a UNE-L Line Splitting arrangement using a single DLEC partner.

Q. WHAT OPERATIONAL CONCERNS ARE ASSOCIATED WITH USING THIS UNE-L LINE SPLITTING OR LOOP SPLITTING ARRANGEMENT COMPARED TO UNE-P LINE SPLITTING?

A. It is far more difficult for a CLEC to offer a DSL/voice bundle under a UNE-L arrangement than under UNE-P. For example, UNE-L line splitting adds operational complexity and risk, costs, and potential customer impact associated with cage-to-cage cross-connects and routing the CLEC's voice path through a DLEC's collocation space.

Q. PLEASE DESCRIBE THE OPERATIONAL COMPLEXITY AND THE ASSOCIATED RISK TO CUSTOMERS IN MORE DETAIL.

A. Assume that a CLEC and a DLEC have partnered to provide voice and DSL service using a UNE-P based serving arrangement (i.e. an ILEC provided loop and ILEC circuit switching) and that the DLEC provides the splitter being used. In this scenario, as with an ordinary hot cut, the customer's loop is delivered to the DLEC's collocation over a cable pair that passes through the BellSouth distribution frame. The cable pair to be used is identified at the BellSouth distribution frame by the Connecting Facility Assignment ("CFA").[26] Once at the DLEC's collocation, the high frequency signal present on the cable pair, (the DSL signal), is separated from the voice signal by the DLEC's splitter and is routed to its DSLAM, and ultimately connected out to its data network. The voice portion of the loop

[26] BellSouth provides CLECs with the circuit facility assignments (that is, cable and pair assignments for the cable between the CLEC's collocation arrangement and BellSouth's equipment such as distributing frames or cross-connect bays). CFAs are assigned to the CLEC at the time the CLEC's collocation arrangement is made available. Each CLEC is required to maintain its own circuit facility assignment records and assign each pair that the CLEC wants BellSouth to use in order to connect BellSouth facilities to the CLEC's facilities.

must be returned from the splitter in the DLEC collocation to the BellSouth frame (and ultimately the BellSouth switch) using a second CFA.

If instead that same CLEC and DLEC were to provide the same voice and DSL service to the same customer using a UNE-L arrangement, dedicated cage-to-cage cabling would be required, as would additional CFA management. In such a case, the customer's loop would still be delivered to the DLEC collocation from the BellSouth distribution frame on a cable pair identified by a CFA. However, the voice portion of the loop however would *not* be returned to BellSouth. Rather, it would be sent to a DLC in the CLEC's collocation area using dedicated cage-to-cage cabling, which would necessitate DLEC-to-CLEC CFAs.

The CLECs' Digital Loop Carrier (DLC) port in its collocation space that is used for voice only UNE-L service could not be used if the customer adds UNE-L based line split DSL, because the DLC port used to provide voice only service is pre-wired to the BellSouth distribution frame using dedicated cabling. Moreover, connections between the DLEC collocation and the CLEC collocation also use dedicated cage-to-cage cabling. The only alternative would be to dispatch a technician to recreate each connection. Thus the number of CFAs and the number of parties managing those CFAs increases when UNE-L line splitting is required. And, as a CLEC desires to have a business arrangement with more than one DLEC the problem becomes even larger. Exhibit MDV-20 illustrates the complexity of loop splitting when a CLEC chooses to have business relationships with multiple data providers.

Q. WHY DOES THE INCREASED NUMBER OF CFAS AND THE INCREASED NUMBER OF PEOPLE MANAGING CFAS CAUSE PROBLEMS?

A. First, maintaining proper CFA inventories has been problematic for the industry in general. Proper management of CFAs is critical to continuity of service for customers. If an incorrect CFA is used by either the ILEC or a CLEC, an end user may lose service or a change in service may be delayed. Accordingly, it is critical that all competitors, ILECs, CLECs, and DLECs maintain accurate CFA inventories and use appropriate CFAs. This becomes especially difficult in a UNE-L line splitting arrangement. The order exchange among the three parties in a UNE-L line splitting scenario must contain the information necessary for each party to determine what it is to provide, where and when. To accomplish this, the voice CLEC and the data DLEC must both send separate LSRs to BellSouth containing the CFA assignments for the BellSouth provided loop and the DLEC provided splitter. In addition, the CLEC and DLEC must select the same dedicated facility CFA between their two cages. Any differences in the CFAs on the two orders to BellSouth will cause them to be rejected and will cause delays. Likewise, if the CLEC and DLEC select different dedicated facilities between their cages, the order cannot be processed.

The greater the number of CFAs, the greater the number of potential breakage points in the service provisioning elements. This creates additional risk to the customer's voice service and greater difficulty in resolving any troubles, because the splitter is located in the DLEC's collocation cage rather than the CLEC's cage or the ILEC's common space. As a result, there must now be three parties involved in troubleshooting problems with a customer's voice service:

(i) the CLEC that owns the DLC and voice switch;

(ii) the DLEC that owns the splitter, through which the voice service passes; and

(iii) the ILEC, which provides the loop over which the voice service runs out to the end user's premises.

Thus, having the DLEC provide the splitter in a UNE-L line splitting configuration is quite different from having the DLEC provide the splitter in a UNE-P based line splitting arrangement. In the latter configuration, only the DLEC and ILEC need to be physically involved in troubleshooting complex voice problems. In a UNE-L line splitting arrangement, the ILEC, DLEC and CLEC must all be involved, and there are many more connections that could be causing the problem.

Q. PLEASE DESCRIBE THE COST IMPACTS TO AT&T OF USING A UNE-L BASED LINE SPLITTING ARRANGEMENT INSTEAD OF A UNE-P BASED ARRANGEMENT.

A. UNE-L line splitting will require rearrangements to add dedicated cage-to-cage cables and the pre-wiring of splitter ports, DSLAM ports and DLC ports to the cage-to-cage cables in advance of actually providing any service to end users. The smallest size increment available in pre-wired bundles for dedicated cage-to-cage cabling is 25 at a time. In order to mitigate the fixed costs of installation, however, CLECs would most likely want to wire most viable locations for 100 new customer installations per phase. The installation would have to include installation of more DLCs because, as described above, the DLCs used for voice only service would generally not be available. In order to avoid any increased maintenance costs, all pre-wired arrangements would be ready for service and thus would require power exactly as if they were in service. This factor automatically creates a surplus inventory that consumes power but generates no revenue. The additional cost of committing such network resources in advance is significant. For example, assume a CLEC with an established collocation providing voice service were to add the necessary equipment to be able to partner

with a DLEC collocated approximately 50 feet away from the CLEC in the ILEC central office. The CLEC would provide DSL service to its customers via UNE-L line splitting arrangements described above. The CLEC would incur the following up front costs for *each* DLEC with whom it chose to partner.

DLC Bay – One Shelf	$30,556.00
Pots Bay –Termination Block	$1,001.00
Cage to Cage Connectivity Costs–Non ILEC	2,445.00
Application Fee to BellSouth	$584.11
Total up front costs	34,586.11

Additionally, BellSouth charges $625.00 per month for electrical power. Importantly, these costs are extremely conservative, as they do not include OSS costs for such items as additional CFA management, extra construction charges such as traversing fire stops (which can add hundreds, even thousands of dollars), and maintenance.

Q. DOES THE PROCESS YOU DESCRIBED MEET THE REQUIREMENTS OF THE TRO?

A. No. The FCC stated "we have also determined that an incumbent LEC's failure to *provide* cross-connections between the facilities of two competitive LECs on a timely basis can result in impairment." TRO ¶ 514 (emphasis added). The expensive and cumbersome process described above merely permits CLECs to cross-connect to each other; BellSouth does not *provide* the cross-connections.

3. CLEC-to-CLEC Migrations

Q. YOU MENTIONED THAT ANY BATCH PROVISIONING PROCESS MUST ADDRESS CLEC-TO-CLEC MIGRATIONS. WHAT ARE THE CONCERNS THAT ARISE WHEN A CUSTOMER SWITCHES FROM ONE CLEC TO ANOTHER?

A. As the mass market matures, migrations between CLECs will occur more frequently. Currently, there are no standard or agreed-upon processes or intervals between CLECs for responding to requests for information such as customer service records and other customer transition information that is needed to create service orders. Similarly, there are no standard processes for order status responses, such as FOCs and rejections. Further, the in-depth procedures needed for migrating the customer are lacking or ill-defined. For example, items as basic as agreed-upon intervals for migrating a customer from one CLEC to another have not been established. In addition, the ILEC will have to be involved in all hot cuts because it performs the necessary loop transfers and manages directory listing changes. However, requests to have the ILEC transfer the loop from one CLEC to another must be submitted to the ILEC manually, adding delay, error, and expense.

Accordingly, efficient processes must be developed for both the "winning" and the "losing" CLECs so they can place orders with the ILEC and interact with each other and the ILEC to have customers efficiently migrated. Without these improvements, the current lack of efficient and equitable ordering and provisioning processes for CLEC to CLEC hot cut migrations will create more delay, customer confusion, expense, and customer outages in the industry. In contrast, a CLEC to CLEC migration using UNE-P requires only an electronic order from the CLEC acquiring the customer. The CLEC losing the customer electronically receives or obtains a line loss report.

Q. DOES BELLSOUTH INCLUDE CLEC TO CLEC MIGRATIONS IN ANY BATCH PROCESS?

A. No. BellSouth's current bulk offering does not address CLEC-to-CLEC migrations.

C. Any Batch Process Must Address Wholesale Switching

Q. ARE CLECS ABLE TO OBTAIN LOCAL SWITCHING FROM THIRD PARTIES?

A. No. BellSouth's policies, practices, and systems effectively prevent a CLEC from being able to order a loop from BellSouth and switching from another CLEC, thus precluding CLECs from purchasing alternative local switching from wholesalers. For example, if AT&T were to submit a service request to purchase a loop from BellSouth and deliver it to another CLEC's collocation, BellSouth's systems could not process the order.

Q. WHAT IS REQUIRED FOR A CLEC TO BE ABLE TO ORDER A LOOP FROM BELLSOUTH AND WHOLESALE SWITCHING FROM ANOTHER CLEC?

A. Under today's processes, a CLEC sends BellSouth a Local Service Request ('LSR") that tells BellSouth, among other things, three critical pieces of information: (1) "who I am," (2) "where I want your service delivered," and (3) "where to send my bill." An LSR contains many fields into which the CLEC will insert the necessary information or codes to convey this information. Various industry groups and standards provide guidance as to the fields and codes used on an LSR, but BellSouth determines how the information will be used by its systems and in its databases after the LSR has been received.

As part of its "who I am" information on its LSR, the CLEC must provide BellSouth with its Access Customer Name Abbreviation ("ACNA"). The ACNA identifies who is to be billed for the services (*i.e.*, the loop) ordered. As part of its "where I want your service delivered" information on its LSR, the CLEC must also provide BellSouth with an Access

Customer Terminal Location ("ACTL").[27] The ACTL identifies the location where BellSouth's loop is to be delivered for connection with a CLEC's equipment. Accordingly, the ACNA tells BellSouth "who I am" and the ACTL tells BellSouth "where I want your service delivered."

Q. HOW DOES A PROBLEM ARISE?

A. BellSouth currently requires that the ACNA or "who I am" of the CLEC ordering service from BellSouth be the *same* as the ACNA associated with the ACTL or "where I want your service delivered" code. This requirement effectively precludes a CLEC from ordering a loop from BellSouth and connecting it to the collocation arrangement of a different CLEC in order to use that CLEC's switch.

Q. IS THERE ANY INDUSTRY REQUIREMENT THAT A CLEC ORDERING SERVICE TO BE DELIVERED TO A SPECIFIC LOCATION BE THE OWNER OF THAT LOCATION?

A. No. However, BellSouth's systems improperly include edits that require that the ACNA ("who I am") associated with the ACTL ("where I want your service delivered") on an order must match the ACNA submitted on the order. If United Parcel Service were to use the same concept or edit, they would be telling you that you can only send packages to your own address.

[27] "Where I want your service delivered" codes are actually address information. The principal "code" used for these purposes is the Common Language Location Identifier ("CLLI"), which is either 8 or 11 characters long and is developed in accord with guidelines provided by Telcordia, which also keeps the master CLLI Database. Each CLLI has an "owner," and that owner is identified in the CLLI Database by the owner's Interexchange Access Customer code, or ACNA. This CLLI code is used to populate the Access Customer Terminal Location ("ACTL") field. Connecting Facility Assignment ("CFA"), Cable Identification ("Cable ID"), and Channel or Pair Identification ("Chan/Pair") are another group of "codes," which, while they are different items, are commonly referred to as CFA. All tell BellSouth the actual physical point where it is to deliver its services to the CLEC. Often the terms ACTL and CFA are used interchangeably to represent this physical point of interconnection.

Q. HOW DOES AT&T KNOW THIS PROBLEM EXISTS AT BELLSOUTH?

A. AT&T has experienced this problem in the limited cases in which it has ordered UNE loops from BellSouth. AT&T, because of its acquisition of TCG, owns collocations that were built pursuant to TCG's agreement with BellSouth as well as collocations that were built under AT&T's direct agreement with BellSouth. The codes used to describe TCG collocations are labeled "TPM" and the codes for the AT&T collocations are labeled "ATX." When an order sent to BellSouth using the "TCG" label seeks to purchase an unbundled loop from BellSouth and wants it directed to an AT&T collocation that is labeled "ATX," BellSouth's systems cannot electronically process the order.

Q. HOW WILL THIS PROBLEM AFFECT THE INDUSTRY AS A WHOLE?

A. BellSouth's systems currently look for a match between the codes for "who I am" and "where I want your service delivered." When these codes do not match, these orders fall out for manual handling. BellSouth has in the past addressed this problem for AT&T with a manual work-around that assigned a secondary code to identify all the collocations as belonging to AT&T. However, BellSouth has recently indicated to AT&T that "BellSouth has no plans to continue to service orders that require manual processing" caused by the use of multiple company codes, and reiterating its previous recommendation that AT&T pay for a mechanization upgrade to "allow multiple ACNA orders to flow-through BellSouth's systems without manual intervention".[28] This work-around (at best) or outright refusal to process orders (at worst) obviously will not be sufficient in a world in which CLECs may choose to purchase unbundled local switching from each other or from wholesale providers.

[28] See Exhibit MDV-21-July 21, 2003 letter from Jim Schenk of BellSouth to Denise Berger of AT&T.

CLECs must be able to order a loop and have that loop delivered to someone else's collocation space.

Q. HAS BELLSOUTH BEEN ABLE TO DEMONSTRATE AT ANY TIME DURING THE AT&T/BELLSOUTH DISCUSSIONS THAT ITS POSITIONS ARE SUPPORTED BY INDUSTRY STANDARDS OR TECHNICAL INFEASIBILITY?

A. No. In fact BellSouth's correspondence clearly states that its positions are based exclusively on its self-generated policy. Exhibit MDV-22 is a June 20, 2002 letter from Mr. James M. Schenk of BellSouth to Mrs. Denise Berger of AT&T. In this letter Mr. Schenk states:

> "It is BellSouth's policy not to accept assignments from CLECs other than the owner of the collocation space and associated cable assignments. Therefore, BellSouth's ordering and provisioning systems contains edits to prevent unauthorized assignment of its customer's collocation assets." (Letter, page 1)

Q. WHAT SHOULD THE COMMISSION DO TO SOLVE THIS BELLSOUTH CAUSED PROBLEM?

A. BellSouth unilaterally placed itself in the role of CLEC "asset policeman" implementing edits that are not required by any industry guidelines and that needlessly restrict CLECs' ability to do business in BellSouth's region. Having established these needless edits, BellSouth then declared all transactions that fail to pass its self-defined edits are "out of process" when in fact it is the edits themselves that are unjustified. BellSouth must have in place policies that do not impede competition. It should be required to delete these unnecessary edits. Moreover, any batch provisioning process must contemplate and provide for CLECs that want to use a third-party's switch.

D. Operational Constraints That Will Be Created If All Migrations Require UNE-L Conversions

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

A. If UNE-P is no longer available to CLECs, there will be significant changes in traffic patterns and the items CLECs order from BellSouth. As a result, BellSouth's network may have insufficient capacity in certain instances and surplus capacity in others. Two specific examples are trunking and collocation space.

Q. WHAT IS TRUNKING?

A. The transport pathways that carry calls from switch to switch are called interconnection trunks. Within the local network, such trunks connect BellSouth's central office switches, CLEC switches to BellSouth switches, and may connect BellSouth's central office switches to tandem switches. Tandem switches often are used by ILECs to serve as a connector between central offices. Tandems are used because it is not always efficient to connect each central office to every other central office or to connect these offices for their full complement of traffic during peak times. In such cases, the ILEC will connect the central offices to a tandem switch. Traffic may flow from any central office switch to the tandem and then from the tandem to any other switch in the network.

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

A. Many trunks will be over utilized while some may be under utilized. To understand these impacts, the Commission must first recognize that, with UNE-P, all traffic travels on BellSouth's transport network. If BellSouth connects Central Office 1 with Central Office 2

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

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

Q. WHAT OTHER OPERATIONAL CONSTRAINTS WILL ARISE?

A. If unbundled local switching is no longer available to competitors, all competitors will have to install their own facilities in collocation space. It is unclear whether BellSouth will be able to accommodate the dramatic increase in the space that will be needed as CLECs

expand existing collocations or when new CLECs that were formerly UNE-P only providers seek to install equipment. At the very least, the interval to obtain and build out collocation space likely will increase. At the worst, sufficient space may not be available, especially in remote central offices that are generally very small in size.[29]

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

A. Yes. The FCC also directed state commissions to consider whether (or the extent to which) temporary or "rolling access" to UNE-P would address all identified impairment. TRO ¶ 524. Rolling access to UNE-P is clearly not adequate to "cure" the many operational and economic issues for the reasons described in this and other AT&T testimony. For example, rolling access would not alleviate service outages caused by hot cuts; it would not resolve the economic impairment that results from the collocation, digitization, concentration and backhaul costs that a CLEC must incur to connect the ILEC loop to its switch; it would not correct the inefficiencies and errors created by the manual hot cut provisioning; and it would not overcome the capacity constraints which are created by the volumes of hot cuts required and exacerbated by scenarios such as IDLC, line splitting and CLEC-to CLEC migrations. Moreover, even if such rolling access were ordered by the Commission, it must allow the CLEC to acquire the customer using UNE-P before moving it to a UNE-L/CLEC

[29] The FCC identified available collocation space as an issue. TRO ¶ 513. "We find that the absence of sufficient collocation space in the incumbent central office or offices might in some markets render competitive entry impossible and thus result in impairment. We therefore direct the state commissions to consider evidence concerning the costs and physical constraints associated with collocation in a particular market. We direct state commissions to consider whether competitive entry is inhibited, or is likely to be inhibited going forward, by the exhaustion of available collocation space in the incumbent LEC's central offices. Evidence relevant to this inquiry would include, for example, the amount of space currently available in those central offices; the expected growth or decline, if any, in the amount of space available; and the expected growth or decline, if any, of requesting carriers' collocation space needs, assuming that access to unbundled switching were curtailed.

switch network configuration as AT&T is not aware of any methodology for transferring "batches" of customers that would not require the customers to first be acquired by the CLEC.[30] Further, as acknowledged by the FCC, "competitive LECs may face difficulties in accumulating enough customers to justify batch line migration processing *in both new central offices* and existing collocations." *Id.* ¶ 522 (emphasis added). Any such process must also include sufficient time for CLECs to accumulate enough customers to justify collocation, and enough time to then establish the collocation in new central offices. That said, even with these minimal requirements, such a process still would not address the operational and economic problems identified.

IV. AT&T'S RECOMMENDATIONS

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

A. Yes. In describing a hot cut process that demonstrated "consistently reliable performance," the FCC recognized that for the migration of customers, UNE-P should be the standard of performance. It stated: "This review is necessary to ensure that customer loops can be transferred from the incumbent LEC main distribution frame to a competitive LEC collocation *as promptly and efficiently as incumbent LECs can transfer customers using unbundled local circuit switching*." TRO at n. 1574 (emphasis added). Thus, the appropriate comparison must be whether the ILEC can move customers served by UNE-L at the same volumes and performance levels as UNE-P. This is perfectly logical, since CLECs would be

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The state commissions shall consider this factor in determining whether to find that requesting carriers are not impaired without access to unbundled local circuit switching.

[30] The FCC stated that "we find that the availability of unbundled local switching -- even on a temporary basis -- may enable competitors to acquire customers, aggregate them, and migrate them to the carriers own switch in

forced to abandon UNE-P and substitute UNE-L if they are denied access to unbundled local switching.

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

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

A. While any batch process will very likely continue to contain too much manual work to significantly reduce the economic and operational impairment, the development of a batch cut process by this Commission would be of some benefit to competition, because it would facilitate CLECs' use of non-ILEC facilities in the limited situations where it is otherwise feasible to do so. The process should, at a minimum, address the following:

OVERALL

- As an initial matter, because it is based primarily on manual work, the batch process should be recognized as an interim solution with limited opportunities for

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a manner *that would not be feasible if the customers each had to be migrated individually* upon signing up with the competitive LEC. TRO ¶ 522 (emphasis added).

improvement over the current individual hot cut process. Therefore, to more effectively reduce CLEC impairment, the Commission should develop a plan with specific time frames to move to an electronic solution that requires fundamental changes to the ILECs' network architecture that currently creates operational and economic barriers to competitive entry to serve mass market customers.

- Any hot cut issue raised by any party that is not solved through the development and implementation of a batch process should be documented for further review by the Commission.

APPLICABILITY/SCOPE

- The batch process must include all mass market (residential and small business) customers, all types of loops used to serve such customers, and all types of transfers between all LECs. Thus, the process should be insensitive to the identity of the previous carrier and the technology that carrier uses to provide service. In addition, the process should not require CLECs to perform any pre-order activity to "qualify" that an unbundled loop can be migrated. In addition to existing UNE-P customers served over copper, UDLC, and NDGLC, at a minimum, the process must apply to:
    - IDLC loops
    - UNE-L based line splitting
    - CLEC to CLEC migrations

VOLUME/CAPACITY

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

- Size of batch
    - The batch should be sized to permit the CLEC and ILEC to achieve cost efficiencies.
    - The batch (as well as the number of batches per day) should be sized to accommodate the overall number of migrations required to achieve the scale needed to handle mass volumes.

PROCESS REQUIREMENTS

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

- To facilitate a workable transition of customers between CLECs, the customer should first be migrated to UNE-P as a bridge between the UNE-L setup of each CLEC.

- The ILEC should provide CLECs the capability to identify which UNE-P customers/lines are eligible for a batch on a mechanized and batch basis (*e.g.*, the CLEC should not be required to do one-by-one prospective queries to determine if the conditions necessary to include a specific line in a batch are or are not met). The ILEC should also establish the electronic ability to provide a specific batch of potential telephone numbers to a CLEC when the conditions for a batch have been met.

- After receiving the notification from the ILEC that the conditions for a batch cut over are met, the CLEC must have sufficient lead-time to advise its customers of the need to reprogram features such as voice mail and speed dialing, and in appropriate cases sufficient lead-time to prepare its collocation equipment, switching equipment and/or technician time so the CLEC can accept the loops to be transferred.

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

- "Batches" should be CLEC specific, *i.e.*, each "batch" should only apply to one CLEC.

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

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

- Real-time electronic notification must be available for order status, testing status, and notification of individual loop cut completion.

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

CUSTOMER CARE

- There must be a self-executing process to immediately switch customers back to UNE-P if an individual cut fails, with follow-up electronic communication from the ILEC to the CLEC indicating the cause of the failure, how the ILEC will remedy the

failure and when the customer can be migrated to an unbundled loop. The rolling interval for affected loops/customers should restart.

ECONOMIC

- The batch process design must result in significant cost reduction for all involved parties.

VALIDATION, TESTING AND QUALITY ASSURANCE

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

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

    - E-911 "unlocks"
    - Number porting
    - Availability of repair testing capabilities
    - Repair databases
    - Billing system migrations, such as from Carrier Access Billing System ("CABS") to Customer Record Information System ("CRIS")
    - Provisioning systems such as Trunks Integrated Records Keeping System ("TIRKS")
    - Directory listing and assistance

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

- The Commission must direct the ILEC to report at a central office level the current number of working IDLC access lines and the spare parallel copper or UDLC facilities available to migrate these lines to, should the customer wish to change their local service provider. It should also provide its plans to provide an unbundled loop when spare parallel copper or UDLC facilities are not available.

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

- Competitors must be guaranteed easy access to collocation sites, including the right to use reasonably qualified contractors (*i.e.*, ILEC should not be allowed to dictate the identity of contractors, provided they meet a reasonable skill set)

PERFORMANCE STANDARDS AND ASSURANCE

- Batch cut and other associated loop performance standards should be equivalent to performance for migrating a customer from retail to UNE-P.

- Key performance measurement factors must be in place:

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

- Self-executing financial consequences must be in place for ILEC failures to meet required performance standards. For all conversion service outages, these consequences should be commensurate with the average net revenue times the average life of the customer

Following are additional requirements should the Commission establish only temporary access to UNE-P:

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

- There must be exceptions to any established time limits that customers may remain in UNE-P "acquisition mode" pending placement into a batch for transition to UNE-L. These include:

    - The time needed to add new CLEC equipment (*e.g.*, DLC in collocation) or to augment CLEC facilities (e.g. transport) when the expansion or augmentation is not complete for reasons beyond its reasonable planning or control
    - The time needed to augment collocation space
    - Cases of ILEC collocation space exhaust

- The ILEC's inability to migrate customers to UNE-L within prescribed time frames
- ILEC failure to meet non-discriminatory service standards

Q. WHAT INFORMATION DOES THIS COMMISSION REQUIRE FROM THE ILEC TO DETERMINE IF ITS HOT CUT PROCESS IS SUFFCIENTLY SCALABLE TO SERVE THE MASS MARKET?

A. AT&T believes it is clear from available information that BellSouth's current hot cut process capability, demonstrated by its own data, is not capable of supporting mass market competition. However, in conducting any assessment of the capacity of BellSouth's hot cut process (quantity) along with adequate quality, it is essential for BellSouth to provide the following information, with appropriate and adequate supporting detail, so that the Commission can ascertain the relative capability BellSouth has to provision service to mass market customers:

1. Proof that a neutral, third-party, valid time and motion study has been conducted to determine the time it takes to perform all of the steps necessary on the frame to perform a hot cut, and that volume testing has also been conducted.
2. Determination of the ILEC's maximum daily hot cut throughput based on the output of the time and motion study and its current staffing levels.
3. The ILEC's estimate of the daily hot cut volumes it will face in a non-UNE-P environment and the supporting details on how it arrived at this estimate.
4. The ILEC's human resources strategy specifically outlining the number of additional people it will need and how it plans to recruit, hire and train these additional people.
5. Outputs from a third party-monitored ILEC testing using its own collocation and migration of significant numbers of its own customers through hot cuts from direct connection to its switch to its collocation equipment installed to operate as a pseudo-CLEC specifically for this test.
6. The ILEC's plans for converting the imbedded base of UNE-P customers while continuing to perform its normal day-to-day frame work.
7. Disclosure of an inventory of its access lines on IDLC facilities and the amount of spare copper/UDLC facilities that these lines can be migrated to.
8. Disclosure of an inventory of the collocation space readily available in each central office in Florida and its plan for how it will support the additional requests it could be expected to receive for new collocation arrangements and augments to

existing arrangements, together with the impacts that this plan will have on existing collocation intervals.

9. The ILEC's plans for how it will expand its tandem switching and associated transport network to accommodate all of the additional traffic it will be receiving from the CLEC switches.

10. The ILEC's plans for deploying new technologies to eliminate the manual efforts associated with a hot cut.

11. The metrics that the ILEC proposes that the Commission use to monitor its performance.

Moreover, the answers to these questions alone do not adequately describe what capacity or scalability means. In a fully competitive market, carrier changes occur in multiple directions: from ILEC to a CLEC, from a CLEC to an ILEC, from a CLEC to another CLEC. Mass-market scalability means that the ILEC can manage all of these types of transactions over its entire geographic footprint each day and every day. That is a substantial task that is being achieved in the long distance market using the PIC process and in the local market today using UNE-P. Further, as the TRO economic impairment test requires CLECs to use a model that includes both local and long distance revenues, failure to have comparable processes for use by ILECs and CLECs for both local and long distance will result in significant impairment to CLECs.

The ILECs should not be allowed to respond to this absolutely critical issue with vague assurances that its processes are scalable or otherwise capable of supporting mass market UNE-L competition.[31] Both central office specific and statewide analysis, documentation and testing is necessary, and the benchmark adopted must demonstrate

[31] *See TRO* n. 1437 ("We find, however, incumbent LECs' promises of future hot cut performance insufficient to support a Commission finding that the hot cut process does not impair the ability of a requesting carrier to provide the service it seeks to offer without at least some sort of unbundled circuit switching. While incumbent LECs state that they have the capacity to meet any reasonable foreseeable increase in demand for stand-alone loops that might result from increased competitive LEC reliance on self-provisioned switching, there is little other evidence in the record to show that the incumbent LECs could efficiently and seamlessly perform hot cuts on a going-forward basis for competitors who submit large volumes of orders to switch residential subscribers.")

BellSouth's ability to perform sufficient volumes to support a fully competitive market at the same performance level as UNE-P, in order to ensure robust mass market competition.

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

A. No. Although a batch process, if properly designed and performing at levels and volumes equivalent to UNE-P would address many specific operational impairment concerns, new operational issues are likely to arise as discussed above. And even if the BellSouth charges for hot cuts were reduced, that would affect only one of many additional costs that only CLECs face in attempting to provide service using non-ILEC switches. *See* Direct Testimony of AT&T Witness Steven E. Turner.

Q. ONE OF THE ISSUES THE FCC ASKED STATE COMMISSIONS TO ADDRESS WAS THE VOLUME OF LOOPS THAT SHOULD BE INCLUDED IN A BATCH. WHAT IS THE NUMBER OF HOT CUTS BELLSOUTH SHOULD BE ABLE TO RELIABLY PERFORM IN A GIVEN TIMEFRAME?

A. As described earlier in my testimony, based on its analysis of available data, AT&T has grave concerns regarding BellSouth's capability to perform at the volumes required to support the mass market. I also described the capacity standards (equal to level of long distance competition) that AT&T believes the Commission should require the ILEC to achieve. For example, if 2.1% of the Florida access lines change long distance carriers each month, then the ILECs' process for migrating local customers should also accommodate the same percentage churn for local loops.

Based on the volumes of hot cut orders the Commission determines that the ILEC be required to perform per day to facilitate mass market competition, it should then establish

batch sizes and numbers of batches per day sufficient to permit the required volume of transactions to occur.

Q. WHAT MUST THIS COMMISSION ORDER IN TERMS OF IMPLEMENTING ITS APPROVED HOT CUT PROCESS?

A. The FCC directed state commissions to "approve *and implement*" a batch cut migration process. TRO ¶¶ 423, 460 (emphasis added). Thus, this Commission must do more than simply order BellSouth to design a process; it must test BellSouth's process until it is proven to work. Otherwise, the Commission will have failed its task of approving "a seamless, low-cost process for transferring large volumes of mass market customers." *Id.* at ¶ 423.

Q. GIVEN THAT THE IMPROVEMENTS THAT CAN BE MADE TO THE CURRENT MANUAL PROCESS ARE ALMOST CERTAINLY INADEQUATE TO OVERCOME THE ECONOMIC AND OPERATIONAL IMPAIRMENTS IDENTIFIED BY THE FCC, WHAT OTHER SOLUTIONS SHOULD THIS COMMISSION CONSIDER?

A. As discussed above, the FCC found, on a national basis, that CLECs are impaired in their ability to provide local exchange service because, among other things, of the expense, delay and service degradation caused by the current, manual hot cut process. This should logically prompt state regulators to question whether, in an age of digital processing, any manual, labor-intensive, and error-prone system for loop migration will ever be efficient enough, both economically and technically, to support robust local exchange competition.

There is a means available that uses currently available technology and allows the provisioning of loops to be operationally and competitively neutral, making it the local service counterpart of "equal access" in the long-distance market. This is a process that AT&T has generically referred to as "electronic loop provisioning" ("ELP"). In this

environment, consumers would be able to change their local carrier seamlessly, and no carrier would have inordinate advantages in competing for a mass market customer's business. This is in sharp contrast to the current, hard-wired, manual connections from customer premises to ILEC central offices described in the accompanying testimony of Jay Bradbury. Implementation of such an electronic provisioning process would create permanent virtual circuits that could use software commands to shift loops from one carrier to another quickly and inexpensively, with no loss or degradation of service. Thus, the Commission should consider whether the use of ELP -- or some other automated process -- is necessary to place all competitors on an equal footing in their ability to provide service using mass market loops and CLEC-provided switching.

V. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The process of migrating customers to a CLEC-owned switch using an ILEC loop, the so-called "hot cut process," is extremely dependent on manual work, rendering the process prohibitively expensive, highly error prone, and not scalable to handle reasonable commercial volumes. As such, CLECs will remain impaired by any manual hot cut or loop migration process. Even the best manual processes that could be operationalized today, including batch migration processes, cannot satisfy the requirements needed to eliminate the CLECs' operational impairment in attempting to compete for mass-market customers. Accordingly, this Commission should develop and approve a comprehensive process but should test and implement that process carefully to evaluate the extent to which CLECs remain impaired. At the same time, this Commission should encourage development of a process that automates the transfer of end-user loops. Any migration process that does not

automate the transfer of end-user loops, eliminating the need for manual "hot cuts," cannot sustain competitively unconstrained migrations of customers among all carriers, both CLECs and ILECs alike. In order to establish and sustain competitively unconstrained migrations of customers among all carriers, an electronic process for loop provisioning must be made available which is as easy, efficient, and reliable as the UNE-P provisioning process for local customers and the PIC change methodology in place for long distance.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Mark David Van de Water. My business address is 7300 East Hampton Avenue, Room 1102, Mesa, AZ, 85208-3373.

Q. ARE YOU THE SAME MARK DAVID VAN DE WATER WHO PREVIOUSLY FILED DIRECT TESTIMONY IN THIS DOCKET ON DECEMBER 4, 2003?

A. Yes, I am.

I. INTRODUCTION

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My testimony refutes the claims of BellSouth's and Verizon's witnesses that their proposed batch processes are capable of providing high quality, seamless migrations in sufficient volumes, and thus demonstrates that they do not remove the impairment that manual hot cuts create for CLECs.

Q. BEFORE ADDRESSING THE DETAILS, COULD YOU PLEASE PROVIDE A HIGH LEVEL SUMMARY OF YOUR REACTION TO BELLSOUTH'S PROPOSAL?

A. In its purported effort to comply with the TRO, BellSouth offers the same manual provisioning process from the 271 case, along with a batch ordering process, both of which were created before, and make no effort to comply with, the TRO mandates that govern this case. BellSouth unabashedly ignores the findings of the FCC that rejected ILEC arguments regarding the relevance of 271 decisions and current performance measurement results to the TRO hot cut requirements. Moreover, it makes no effort to comply with the FCC's directive that the state

commissions establish a batch hot cut process. Instead, despite a national finding of impairment, BellSouth maintains that nothing needs to be done to its existing individual hot cut process. While it dresses up that process by adding the "batch" tag to it, even BellSouth admits that its hot cut process is the same as it was before the FCC issued the TRO.

BellSouth also ignores the FCC's purpose for establishing a batch hot cut process, to reduce the economic and operational barriers posed by the present hot cut process. Instead, it offers the inadequate batch ordering/individual hot cut provisioning process to be used to migrate the embedded base of UNE-P in the event of a finding of no impairment. And, while BellSouth promises it will achieve the anticipated increase in volumes, I have numerous concerns about un-addressed issues and contradictory analyses I describe in more detail later in my testimony. BellSouth's feeble proposal exacerbates the "haves" and "have nots" environment that removal of unbundled switching would create: CLECs will be handicapped by a manual, high-cost process for their customers while BellSouth enjoys an electronic, low-cost process for most of its customers.

BellSouth also ignores that its performance for hot cut migrations is inferior to UNE-P migrations for ordering and provisioning, forcing CLECs and their customers to inferior and inefficient service if unbundled local switching is no longer available as an option. Finally, BellSouth ignores the basic reality that its "batch" ordering process excludes customers who obtain DSL services via a line-splitting arrangement and those who would like to move from one CLEC to another.

In short, BellSouth's batch process falls short in a number of key aspects of the TRO's mandates regarding the hot cut process.

Q. WHAT IS YOUR REACTION TO VERIZON'S BATCH PROPOSAL?

A. The major problems with Verizon's proposed Batch hot cut process include:

- It deprives CLECs of control over our end-user customer's experience in three essential respects --
  - Inability to permit customers to make changes to their account for up to over five weeks;
  - Inability to control the time of day, and day of week, that customer's service will be interrupted – and put at risk for greater interruption – by a hot cut;
  - Inability to monitor the quality of the cut during the critical period between the cutover of the loop and the activation of the number port at NPAC;
- No operational processes, methods and procedures, or system messages have been defined, documented, tested or operationalized;
- There is no experience of "live production" operations in a real world environment;
- There is no control over, and complete uncertainty with respect to the cost of the "UNE-P like" service arrangement required to use the batch process for new customers;
- There is a total lack of CLEC control over the sequence in which the lines of a multi-line order are cut;
- An apparent lack of pre-wiring and dial-tone checks gives Verizon no "margin of error" if something goes wrong on the day of the cut;
- There is no provision at all for handling IDLC loops within the Batch process, and the proposed price under the Basic process for converting IDLC loops is not commercially viable;

- Verizon's batch process does not accommodate line split or line share orders; these plainly are higher revenue customers so obstructing access to them is a particular concern;
- There is no provision for handling CLEC-to-CLEC migrations; and
- Lack of metrics and penalties that would ensure a Verizon commitment to the process it proposes.

In short, AT&T has not asked, nor does it want Verizon to take control over its customers' experience. In proposing this process, Verizon is not offering a better process nor is Verizon offering a process that AT&T would utilize. Moreover, eliminating the ability of CLECs to control the experience of their new customers means that the Verizon's proposed process will not benefit customers.

II. THE 271 CASE AND CURRENT PERFORMANCE RESULTS ARE IRRELEVANT TO THIS PROCEEDING

Q. WHAT IMPACT DOES THE FLORIDA COMMISSION'S DECISION TO RECOMMEND THAT BELLSOUTH BE PROVIDED 271 APPROVAL HAVE ON ITS REVIEW OF THE ADEQUACY OF BELLSOUTH'S HOT CUT PROCESS IN THIS PROCEEDING?

A. Very little. The FCC noted that because of the new competitive environment being considered (without CLEC access to unbundled local switching), decisions made in 271 proceedings were not adequate to support a finding that competitive carriers would not be impaired if they were required to rely on the hot cut process to serve all mass market customers. The FCC specifically found that:

> [T]he Commission's prior findings in section 271 orders do not support a finding here that competitive carriers would not be impaired if they were required to rely on the hot cut process to serve all mass market customers. . . . [T]hese orders examined the adequacy of hot cuts at a time when

> competitive LECs were principally using unbundled local circuit switching to compete for mass market customers. . . . Here, we must consider the adequacy of current hot cut practices for handling the volumes that would be expected if competitive LECs were denied unbundled access to unbundled local circuit switching - something that was by no means "reasonably foreseeable" in the context of the section 271 orders. ***The section 271 orders thus tell us very little about a BOC's ability to provision large batches of cut overs in a timely and reliable manner under these circumstances.***

TRO at n.1435 (emphasis added).

In spite of these very clear, explicit findings by the FCC, BellSouth starts in exactly the place the FCC said this Commission should not start. BellSouth goes to great lengths to repeatedly remind this Commission that it has previously reviewed BellSouth's hot cut process and found it sufficient to recommend 271 relief for BellSouth. (See Direct Testimony of BellSouth witnesses John Ruscilli at page 17, Kenneth Ainsworth at pages 6 and 9, and Ronald Pate at page 13.) BellSouth would have this Commission take its individual hot cut process considered as part of the 271 review and apply it going forward, relying on BellSouth's promises that it can be scaled to handle the anticipated increase in volume. However, as the FCC has said, BellSouth's processes must be examined anew to determine if they constitute impairment when considered in conjunction with the elimination of the local circuit switch as an unbundled network element that must be provided by ILECs.

Q. DOES VERIZON ALSO RELY ON 271 APPROVAL?

A. Yes. See page 24 of Verizon's Direct Panel Testimony.

Q. ON PAGE 14 OF HIS TESTIMONY, MR. PATE DISCUSSES THE VOLUME TESTING CONDUCTED BY THE FLORIDA KPMG THIRD PARTY TEST. DID KPMG CONDUCT VOLUME TESTING OF HOT CUTS?

A. No. The testing to which Mr. Pate refers was for ordering only; provisioning was not subject to volume testing. Further, the types of orders tested do not appear to be, for the most part, the type of orders involved in hot cuts. As page 263 of the KPMG Final Report notes:

> The majority of the orders transmitted during the test were limited to those that flow through BellSouth's order processing systems without human intervention. Transactions submitted during the POP Volume Performance Test (TVV2) did not go through the physical provisioning process.

As I described in my direct testimony, only 24% of BellSouth's loop with LNP orders did not require manual handling, and are therefore not representative of the "majority" of the order types tested by KPMG. In other words, the results of the volume testing do not reflect the ability of BellSouth to handle any volume of hot-cut orders. Moreover, the third-party test did not even attempt to review BellSouth's ability to provision any volume of hot cuts. Accordingly, although the volume testing was a worthwhile part of the overall testing of BellSouth's OSS, and was useful for the 271 proceedings, it has no relevance in this proceeding.

Q. WHAT IMPACT SHOULD BELLSOUTH'S CURRENT LEVEL OF PERFORMANCE IN EXECUTING HOT CUTS AND PROVISIONING LOOPS HAVE ON THIS COMMISSION'S REVIEW OF THE ADEQUACY OF BELLSOUTH'S HOT CUT PROCESS IN THIS PROCEEDING?

A. As currently reported by BellSouth, it is of little value to the Commission for two primary reasons. First, the FCC specifically rejected ILEC arguments that performance data showed that current hot cut performance was satisfactory (the same arguments BellSouth's witnesses make in their direct testimony). The FCC found "the issue is **not** how well the process works currently with limited hot cut volumes . . . ." TRO at ¶ 469 (emphasis added). Second, in explaining why state commission might review commercial performance data, the FCC noted that "This review is necessary to ensure that customer loops can be transferred from the incumbent LEC's main distribution frame to a competitive LEC collocation ***as promptly and efficiently as incumbent LECs can transfer customer using unbundled local switching***." TRO at n. 1574 (emphasis added). The performance data provided by BellSouth in this proceeding provides no such analysis. It does not allow a comparison between the efficiency of transferring a customer using unbundled local switching and the efficiency of transferring a customer using a hot cut. For additional concerns with the performance data provided by BellSouth, see the rebuttal testimony of AT&T witness Cheryl Bursh.

III. THE INADEQUACY OF THE ILEC'S BATCH PROCESSES

A. Neither BellSouth nor Verizon Have Developed Viable Processes

Q. DOES BELLSOUTH'S HOT CUT PROVISIONING PROCESS PROPOSED IN THIS PROCEEDING DIFFER FROM THE PROCESS IT PROPOSED DURING THE FCC'S TRIENNIAL REVIEW DELIBERATIONS?

A. No. In spite of the FCC's findings that "the overall impact of the current hot cut process raises competitors costs, lowers their quality of services, and delays the

provisioning of service" (TRO at ¶ 473), BellSouth has made no effort to improve its current hot cut process through the establishment of a batch hot cut provisioning process. In fact, BellSouth's witness Ainsworth admits "the provisioning process I discuss here is the same process reviewed during the 271 case." (See Ainsworth Direct at page 9) Indeed, BellSouth's definition of a "batch hot cut" does not even include provisioning as part of what must be done in a batch: "[a] batch hot cut is like any other hot cut except for the ordering and pre-ordering processes. For batch hot cuts the process is designed to facilitate ***ordering*** large volumes of loop hot cuts simultaneously." (See Varner Direct at page37) (emphasis added) This definition is quite surprising since the TRO is very clear that provisioning is an essential part of the batch hot cut process. TRO at ¶ 489; *see also* ¶ 488 ("state commissions possess the competence to implement a cost-effective and fast process for **provisioning** unbundled local loops.")(emphasis added).

Q. HAS BELLSOUTH BEEN WILLING TO COLLABORATE WITH THE CLEC COMMUNITY REGARDING THE DEVELOPMENT OF A "BATCH" ORDERING PROCESS?

A. No. In recent informal workshops held by the Alabama Public Service Commission and the Tennessee Regulatory Authority, BellSouth indicated that it felt its process was satisfactory and it saw no need to collaborate with CLECs regarding changes to its process. Similarly, BellSouth has resisted efforts by CLECs to have a batch process addressed in the Change Control Process (CCP) meetings. (See Rebuttal Exhibit MDV-R1)

Q. HAS VERIZON COLLABORATED WITH CLECS REGARDING ITS "BATCH" PROCESS?

A. No. AT&T and other CLECs have worked with Verizon in New York on a "large job" or "project" process. It appears Verizon has proposed the essentially the same batch process in Florida as it did in New York. It is my understanding that the "batch" process appears to have been developed by Verizon for its own purposes, without significant, and perhaps without any, input from CLECs.

Q. HAVE OTHER ILECS MADE CHANGES TO THEIR BATCH HOT CUT PROCESS IN RESPOSE TO CLEC COMMENTS?

A. Yes. While these changes have not resolved all the issues between CLECs and the ILEC regarding how batch hot cut processes should operate, they have resulted in improvements to the process, and narrowed the scope of the issues to be addressed by the state commissions. For example, SBC has proposed a batch hot cut process that includes the following proposed advantages over their existing process:

- Flexible scheduling
- Eliminates negotiation steps and time involved
- Provides defined interval to allow for CLEC resource planning
- Provides CLECs an ability to reserve time
- Wire center based to provide CLEC the ability to convert multiple central offices on the same day
- Includes requests involving IDLC cuts
- Mechanized order flow
- Reservation tool
- Pre-order IDLC tool

Q. ON PAGE 3 OF HIS TESTIMONY, MR. AINSWORTH STATES THAT THE HOT CUT PROCESS IS NOT DIFFICULT OR CUMBERSOME. DO YOU AGREE?

A. No. As I described in detail in my direct testimony, hot cuts are much more complex, manual, and costly than UNE-P migrations, requiring numerous steps which must be coordinated if a cut is to be successful in limiting the time the customer is out of service.

It is also noteworthy that BellSouth is not usually so dismissive of the work activities associated with hot cuts. For example, in 271 testimony filed in North Carolina, BellSouth witness Milner pointed out that coordinated loop cutovers "involve a number of steps," and that "the loop cutover is much more complicated in terms of the work steps involved (on the part of both BellSouth and the CLEC) than the number porting." (See Rebuttal Exhibit MDV-R2)

Q. ON PAGE 12 OF HIS TESTIMONY, MR. AINSWORTH INDICATES THAT DURING 2003 THE END-USER HAS BEEN "WITHOUT CALLING CAPABILITY" DURING A HOT CUT FOR AN AVERAGE OF ONLY 2.39 MINUTES. IS THIS ACCURATE?

A. First, this statement is accurate only for the capability to make outgoing calls. An end-user will not have incoming call capability until BellSouth has notified the CLEC that the cut-over is complete and the CLEC ports the telephone number to its switch. Further, while BellSouth reports performance of under three minutes, it insists in performance measures proceedings on being able to keep the customer out of service for 15 minutes, should it so choose. In a mass market scenario where thousands of residential customers will have their service disrupted through loop migrations, it is likely that E-911 services will be needed, but inaccessible, during this 15-minute period. The Commission should establish performance standards that provide a greater level of consumer protection. For example, a

standard of 5 minutes would be more than adequate to provide BellSouth the time it ostensibly needs, but puts the customer at less risk for an unnecessary service outage.

Further, the performance described above only applies to those cuts that go as expected. Based on BellSouth's own performance data, when service outages occur during a cutover, the consequences for the customer are severe. For example, in October 2003, even under the current minimal hot cut volumes that BellSouth is completing in Florida, customers who experienced a service outage during a coordinated hot cut were out of service an average of ***seventeen*** hours; in November they were out an average of ***eighteen and one-half*** hours[1]. Further, based on BellSouth's most recent SQM report results of customer lines involved with a hot cut that resulted in a trouble report on the line within seven days of the hot cut,[2] BellSouth's s hot cut process could result in the (lengthy) loss of service for well over 1000 customers (1,174 customers) each month during its conversion activity if the availability of unbundled switching is eliminated.[3] These are outages that customers will have to bear simply because they were naïve enough to believe that the industry was capable of transferring their local service to another service provider in a seamless fashion as has been the case for years when they wished to change their long distance carrier.

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[1] (See BellSouth's MSS Reports for Measure P7-B, Coordinated Customer Conversions-Average Recovery Time)

[2] See BellSouth's November SQM results for Measure P7-C, Hot Cut Conversions--% Troubles Received Within 7 Days.

[3] 91,755 monthly conversions as forecasted by BellSouth Witness Heartley in Exhibit AH-1 multiplied by 1.28%.

Q. HAS VERIZON CONDUCTED AN ASSESSMENT OF WHAT THE IMPACT ON CUSTOMER SERVICE WILL BE AS A RESULT OF ALL OF THESE ADDITIONAL PEOPLE PERFORMING MANUAL WORK ON CUSTOMER'S LINES?

A. Apparently not. No such information was provided in its testimony.

Q. IN YOUR DIRECT TESTIMONY, YOU POINTED OUT THAT BELLSOUTH'S BATCH ORDERING PROCESS DID NOT PERMIT TIME SPECIFIC CUTS. HAS BELLSOUTH CHANGED ITS POSITION?

A. No. BellSouth still makes no commitments to provide time specific cuts. BellSouth only says that a CLEC ***may request*** that ***some*** of their coordinated conversions be converted within a specified window of time (See Ainsworth Direct at page 24 (emphasis added).) BellSouth has no obligation to grant the CLEC's request.

Q. ON PAGE 4 OF HIS TESTIMONY, MR. PATE REFERENCES LANGUAGE FROM AT&T'S NOVEMBER 2000 CHANGE REQUEST FOR UNE TO UNE BULK MIGRATIONS. DID MR. PATE INCLUDE ALL OF AT&T'S PROCESS DESCRIPTION?

A. No. Mr. Pate's Exhibit RMP-1 is a copy of AT&T's change request. That request includes the following additional language not mentioned by Mr. Pate. "An option for doing the migrations (done by another ILEC) is that BellSouth and AT&T would schedule the cuts by central office to take place over a weekend. Our experience with this process has been a very low number of customer outages." Unfortunately, BellSouth remains unwilling to implement a process that permits CLECs and BellSouth together to select and manage the timing of the cuts, despite the FCC's finding that "the record evidence strongly suggests that

the hot cut process could be improved if cutovers were done on a bulk basis, ***such that the timing and volume of the cutover is better managed.***" TRO at ¶ 474 (emphasis added).

Q. DO YOU HAVE OTHER CONCERNS WITH BELLSOUTH'S PROPOSED BATCH ORDERING PROCESS?

A. Yes. As addressed in my direct testimony, BellSouth's batch ordering process does not include customers who obtain DSL services via a line-splitting arrangement or those customers who would like to move from one CLEC to another. Batch processes are to be established to reduce impairment, and no customer groups should be left out.

Q. ON PAGES 22-24 OF HIS TESTIMONY, MR RUSCILLI DISCUSSES CO-CARRIER CROSS-CONNECTS, INCLUDING THE FACT THAT BELLSOUTH "ALLOWS" CROSS-CONNECTS TODAY. IS BELLSOUTH CURRENTLY MEETING THE REQUIREMENTS OF THE TRO?

A. No. As I discussed in my direct testimony, the FCC stated "we have also determined that an incumbent LEC's failure to *provide cross-connections* between the facilities of two competitive LECs on a timely basis can result in impairment." TRO at¶ 514 (emphasis added). The expensive and cumbersome process described by BellSouth merely permits CLECs to install dedicated cabling between their collocations; BellSouth does not *provide* cross-connections.[4] Absent efficient means of providing these cross-connections,

[4] A CLEC needing to cross connect to multiple other CLECs must install dedicated cabling to each CLEC's collocation.

CLECs will not be able to offer voice and data services by partnering with another CLEC that provides data services.

Q. BELLSOUTH ALSO STATES THAT BEGINNING IN THE FIRST QUARTER 2004, IT WILL ALSO PROVIDE A CROSS CONNECT FOR BOTH CLECS AT A DEMARCATION POINT. WILL THIS ADDRESS THE FCC's CONCERNS?

A. No. BellSouth's new FCC tariffed "Special Access product" will require that the CLECs wishing to have BellSouth provide a cross connection on BellSouth's frame between a connecting facility assignment ("CFA") from one CLEC's collocation to a CFA in a second CLEC's collocation to engage in "line splitting" of a local loop (not otherwise subject to the FCC's jurisdiction) certify that the traffic carried on that CFA to CFA connection (a frame jumper wire) meet the FCC's de minimus (10%) interstate rule. This unnecessarily subjects a non-complex POTS mass market line to cumbersome procedures such as certification and audits, and irrelevant obligations such as the requirement that the line carry at least 10% interstate traffic.

Further, BellSouth's new "product" cannot be ordered efficiently. UNE local loops are ordered on a Local Service Request ("LSR"). When such a loop is to be "split" between two CLECs, BellSouth will require that the connection necessary to accomplish the "split" be ordered and provisioned out of its FCC Access Tariff using an Access Service Request ("ASR"). There will be no means of electronically ordering such an arrangement and the coordination, through relating the LSR and ASR, that will be required to establish working services (voice and ADSL) for the customer. Thus the voice CLEC must issue an LSR,

the data CLEC must issue an LSR, and one of the CLECs (depending on the routing of the loop between the two) must issue an ASR. Manual processing will be required for all three ordering documents. Such a manual and restrictive process creates operational and economic barriers to providing DSL services to mass market customers. BellSouth's proposed policies and practices for this service are designed to complicate and hinder the provision of line splitting service to CLEC customers and should be rejected by this Commission. TRO at ¶ 514.

Q. ON PAGE 2 OF HIS TESTIMONY, MR. AINSWORTH APPEARS TO INDICATE THAT THE PURPOSE OF THE BATCH PROCESS IS TO CONVERT THE EMBEDDED BASE OF UNE-P TO UNE-L ARRANGEMENTS. DO YOU AGREE?

A. No. As I described in my direct testimony, AT&T has attempted to obtain a suitable bulk process from BellSouth to address customer service and cost issues, even with the availability of unbundled switching. Further, the TRO is replete with instances citing the need for a batch hot cut process. For example, in ¶ 487 the FCC found "that a seamless, low cost batch cut process or switching mass market customers from one carrier to another ***is necessary, at a minimum***, for carriers to compete effectively in the mass market." I am unaware of any portion of the TRO that directs the establishment of a batch hot cut process simply for the use of migrating the embedded base of UNE-P. Indeed, given the FCC's findings that the hot cut process creates operational and economic impairment, and that "***[a]fter*** a batch cut process has been put into place, we expect state commissions in ***subsequent*** reviews to reevaluate the circumstances surrounding self

provisioning [of local switches]," it is clear that the FCC contemplated the continuing use of batch hot cut process.[5] TRO at ¶ 502 (emphasis added).

Q. WHAT ARE YOUR CONCERNS REGARDING VERIZON'S BATCH PROPOSAL?

A. As an initial matter, I strongly disagree that Verizon is not obligated to provide a batch process. (See Verizon Panel Testimony at page 36). Contrary to its assertion, Verizon does not demonstrate in Part III of its testimony (which is comprised only of an explanation of how it developed its exorbitant hot cut costs) that it has satisfied its obligations regarding individual hot cuts. Verizon did not provide the Commission with any evidence that its existing hot cut process does not produce operational and economic impairment.

Secondly, as I described earlier in my testimony, Verizon has offered such a flawed batch process that AT&T would not consider exposing its customers to it.

B. BellSouth and Verizon Have Not Demonstrated that they Could Perform Hot Cuts at the Volumes that Will Be Required if Unbundled Local Switching Is Not Available for Mass Market Customers.

Q. WHAT DID THE FCC FIND REGARDING THE ILEC'S ABILITY TO HANDLE THE INCREASED VOLUME OF HOT CUTS THAT WOULD BE EXPECTED IN THE ABSENCE OF UNBUNDLED SWITCHING?

A. The FCC noted that "While incumbent LECs state that they have the capacity to meet any reasonable foreseeable increase in demand for stand-alone loops that

[5] As I indicated in my direct testimony, AT&T supports the voluntary use of a batch provisioning process for its use to migrate customers from UNE-P to UNE-L when it is otherwise feasible to do so.

might result from increased competitive LEC reliance on self-provisioned switching, **there is little other evidence in the record to show that the incumbent LECs could efficiently and seamlessly perform hot cuts on a going-forward basis** for competitors who submit large volumes of orders to switch residential subscribers." TRO at n. 1437(emphasis added). The FCC also found "incumbent LECs' **promises** of future hot cut performance **insufficient** to support a Commission finding that the hot cut process does not impair the ability of a requesting carrier to provide the service it seeks to offer without at least some sort of unbundled circuit switching." *Id.* (emphasis added).

Q. HAS BELLSOUTH PROVIDED ANYTHING OTHER THAN PROMISES OF PERFORMANCE IN THIS PROCEEDING?

A. No. While BellSouth made some assumptions about volume and used this information in a force model, the net result is that they intend to "throw bodies" at the problem. They provided no plans regarding quality improvement and automation, hallmarks of progressive management throughout industry, indicating instead their intention to attempt to custom design and manually implement mass market services, and pass the unnecessary and prohibitive costs on to CLECs.

Further, BellSouth provided no results of independent analysis and testing of this proposal. As I indicated in my direct testimony, BellSouth should be not be permitted to rely on promises, but should required to prove it has the systemic capability to handle the provisioning of hot cuts at volumes anticipated across all its markets in the absence of unbundled local switching. Therefore, once designed, the batch cut process must be subject to both pre-implementation and

post implementation testing. Pre-implementation testing should include third party "time and motion" study of the hot cut process, and third party-monitored ILEC testing using its own collocation and migration of significant numbers of its own customers through hot cuts from direct connection to its switch to its collocation equipment installed to operate as a pseudo-CLEC specifically for this test. Post-implementation "testing" would include continuing commission review to determine if the batch hot cut process meets the needs of commercial mass markets in a manner that permits effective and efficient competition.[6]

Q. ON PAGE 18 OF HIS TESTIMONY, MR. AINSWORTH ASSERTS THAT BELLSOUTH'S CUTOVER OF OVER 200 LINES IN A SINGLE CENTRAL OFFICE IN ONE DAY DEMONTRATES BELLSOUTH'S ABILITY TO PERFORM HOT CUTS AT FORESEEABLE VOLUMES. DO YOU AGREE?

A. No. First, Mr. Ainsworth's testimony provides no information regarding the quality of the work performed or the experience of the customers who lines were cut over. It does not indicate whether these lines included IDLC, and if so how those approximately 72 dispatches, each taking approximately one hour, were handled. Additionally, this single event, which may have been achieved with days of pre-work, around-the-clock scheduling, and other extraordinary means, is no indication that the same volume work could be performed in that or any central office on a day-in and day-out basis.

[6] According to Mr. Ruscilli, only 82 lines have been converted using the batch process (See Rebuttal Exhibit MDV-R3)

Q. YOU MENTIONED THAT BELLSOUTH MADE A FORECAST OF HOT CUT VOLUMES AND USED THAT INFORMATION IN A FORCE PLANNING MODEL. DO YOU HAVE ANY OTHER CONCERNS REGARDING THIS APPROACH?

A. Yes, I have several concerns about the forecast process used by Messrs. Ainsworth and Heartley and the subsequent modeling outcomes. In BellSouth's response to AT&T's Document Request No. 42, it stated that **BEGIN CONFIDENTIAL** ** ** **END CONFIDENTIAL** daily UNE-P to UNE-L conversions per day were forecast in Florida.[7] This falls well short **BEGIN CONFIDENTIAL** ** ** **END CONFIDENTIAL** of the 5,635 I recommended in my direct testimony. BellSouth's forecast is based on current levels of competition, while AT&T recommended that a truly competitive market, long distance, be used as a model. BellSouth's restrictive view of the volumes to be implemented in Florida will become a self-fulfilling prophecy due to the lack of man-power available if manual hot cuts are required.

Second, BellSouth assumes that in 50% of the hot cuts will be non-coordinated, despite the fact that from September 2002 through August 2003 less than 3% of the total hot cut conversions were non-coordinated.[8] BellSouth provides no explanation for this dramatic change. This is a critical issue as it takes 28% less central office work time to perform a non-coordinated cut than a coordinated one. Therefore, underestimating the number of cutovers that will require coordination will result in significant understaffing.

[7] Despite the heading of "Daily UNE-P to UNE-L Conversions" in the force model, it appears that new loop migrations is included in the model and not just UNE-P to UNE-L conversions. If my assumption is incorrect, then staffing needs are under forecast.

Third, BellSouth's model assumes that there will be uniform distribution of hot cuts to transfer the entire embedded base to UNE-L. For example, for each of the three seven month periods during which BellSouth forecasts that one third of the embedded base of UNE-Ps will be migrated to UNE-L, it assumes that an equal amount will occur each month.[9] BellSouth fails to take into account that in many central offices the CLECs are not going to have the collocated facilities and network equipment in place to support the migration of the embedded base of UNE-P customers over to the CLECs' facilities. In fact, in many instances CLECs will not even have a collocation arrangement in place to support these migrations.[10] Before these CLECs can issue their conversion orders, they will need to establish new collocation facilities and/or augment existing arrangements. The CLECs ability to do this to meet the balanced schedule that BellSouth assumed will be gated by a number of factors outside of the CLECs' control. These factors include: a CLEC's ability to raise the capital it will need for these facilities; BellSouth's ability to manage and keep up with the collocation demand; the ability of BellSouth's approved vendors to establish the required collocation arrangements; and the CLEC's equipment manufacturer's ability to deliver and install the equipment in the CLEC's new or expanded collocated space. The CLECs cannot begin to negotiate a conversion schedule with BellSouth until the CLECs have sufficient facilities to support the imbedded base of their UNE-P

[8] In a non-coordinated cut, CLECs do not receive, for example, pre-due date verification and coordination and pre and post cut coordination on the due date.
[9] See Exhibit KLA-3 of BellSouth Witness Ainsworth.
[10] To compound the problem, many CLECs are currently UNE-P only providers. Unless a finding of non-impairment is intended to drive these CLECs out of business, the schedule must account for the time it will take these CLECs to get the funding they will need to purchase and install their network facilities (circuit switch, SS7 signaling capabilities, database access, collocated facilities, etc.).

customers. Because of the time it will take to establish these collocation arrangements and install the necessary facilities, the conversions in the central offices associated with these collocation augments may well need to be "back-loaded" at the end of the schedule. BellSouth's force model and its estimate on how many additional staff members it will need for all aspects of the hot cut process is based on BellSouth's assumed even distribution of the embedded base conversion. Having more of the conversions back-loaded at the end of the 27 month period specified by the FCC will result in an understatement of BellSouth's actual staffing needs.

Further it is unclear if and how BellSouth accounted in its forecast for the following:

- Whether any analysis demonstrated there was sufficient physical capacity at the central office to perform the forecasted volumes;
- Travel time to unmanned central offices;
- Number of shifts worked per day per central office;
- If all lines after the first one in the batch are considered as additional lines for purposes of staffing and charges, or if only additional lines for the individual end-users were considered;
- Whether the ratio of supervision to employees was applied evenly across BellSouth territory or accounted for the geographic dispersion of the central offices; and

- The impact of the shift in traffic off of its current local switch-to-local switch network and onto the tandem transport network.

All of these issues have a direct bearing on the effectiveness of the model, and its usefulness as a tool in managing the number of loop migrations required in the absence of unbundled local switching as a UNE. Clearly the model's result must be viewed with skepticism given these inadequacies.

Q. DO YOU HAVE OTHER CONCERNS REGARDING BELLSOUTH'S FORCE MODEL?

A. Yes. While BellSouth's model churns out numbers of personnel "required," the Commission can gain no assurance from BellSouth's testimony that the work necessary could indeed be conducted in the central office. In certain instances, insufficient information is offered; in others, inconsistent information is provided. For example, Mr. Heartly's testimony on page 13 offered only general assurances that central office limitations could be managed, and his supporting examples cannot withstand scrutiny. First, he says that from 2 to 10 (or more) technicians can work simultaneously on the same Main Distribution Frame ("MDF") without negative impact on productivity. He provides no analysis of how often two technicians at most can work simultaneously on BellSouth's MDFs throughout the state versus ten technicians. Second, he says that when multiple loop conversions are scheduled in a single day for a single central office, the pre-wiring work can be done over several shifts in the days leading up to the due date. However, this position does not account for the likelihood that multiple loop conversions would need to occur **every** day in an environment that eliminated

switching as a UNE. In fact, Mr. Heartley's own force model calls for multiple conversions in a central office on a **daily** basis (See BellSouth Exhibit AH-1). Thus, pre-wiring work for one set of migrations to UNE-L would have to occur on the same day as the actual cutovers for another set of migrations to UNE-L. Both sets of activities would occur on the same day on the same MDF.

In addition to the lack of specific information in Mr. Heartley's testimony regarding the space limitations existing in central office, other information provided by BellSouth calls into question the non-specific information in Mr. Heartley's testimony. For example, BellSouth responded to AT&T Interrogatory No. 44 (See Rebuttal Exhibit MDV-R4) that it assumed that 12 technicians could work simultaneously on the frames of certain central offices. Many of those same central offices are also included in Mr. Heartley's Exhibit AH-1 and BellSouth's response to Interrogatory No. 45 (See Rebuttal Exhibit MDV-R5), in which a much smaller number of technicians is reported. The discrepancies are reported in the following table.

Central Office BellSouth Exhibit AH-1	Maximum simultaneous technicians Interrogatory-44	Maximum simultaneous technicians Interrogatory-45
hlwdflpe	12	8
miamflhl	12	8
hlwdflwh	12	8
prrnflma	12	10
pmbhflcs	12	8
wpbhflga	12	8
miamflca	12	10
ftldfloa	12	10
pmbhflma	12	8
ndadflbr	12	8

Additionally, in its response to AT&T Interrogatory No. 44, BellSouth reports the conversions for central office HLWDFLPE to be 156 UNE-P to UNE-L conversions per day, assuming the constant use of two shifts, and performing some third-shift work. However, BellSouth reports in its Response to AT&T Request for Production No. 42 it will now inexplicably be capable of performing **BEGIN CONFIDENTIAL **** **** END CONFIDENTIAL** (a 25% increase) UNE-P to UNE-L conversions per day in that central office. This commission is asked to believe that this significant increase in the number of UNE-P to UNE-L conversions that could be performed occurs despite the fact that the number of technicians capable of working simultaneously has been revised downward (from 12 to 8 for a 33% decrease), and the number of conversions per technician per shift remains at approximately 12.[11] In sum, BellSouth does not provide specific analysis that illustrates that its central offices have physical capacity; in fact, the data provided suggests the availability of adequate capacity is anything but clear due to the conflicting or irreconcilable conclusions in the information provided.

Q. DO YOU HAVE CONCERNS REGARDING VERIZON'S FORCE MODEL AND ITS OUTPUTS?

A. Yes. As an initial matter, it suffers from the same deficiency I noted earlier in BellSouth's approach. It assumes a relatively even distribution of embedded base migrations despite the practical realities that because of the time it will take to

[11] For example, a according to BellSouth's force model a non-designed coordinated cut takes 36 minutes. Thus, a technician could perform 11.66 cuts during a seven hour shift. (Seven hours is extremely aggressive, but assumes two 15 minute breaks and a total of 30 minutes for health breaks and other non cutover-activity.) (See also Bellsouth response to Interrogatory No. 44 attached as Rebuttal Exhibit MDV-R4).

establish collocation arrangements and install the necessary facilities, so that the conversions in the central offices associated with these collocation augments may well need to be "back-loaded" at the end of the schedule. This would result in an understatement of Verizon's actual staffing needs.

Further, it is unclear whether the force model appropriately used the forecasted number of hot cuts required in a scenario where UNE-P is unavailable ("the incremental UNE-L adds").

Q. DO YOU HAVE OTHER CONCERNS WITH VERIZON'S CAPABILITY TO PERFORM THE ADDITIONAL MANUAL ACTIVITY IN ITS CENTRAL OFFICES CAUSED BY THE ELIMINATION OF SWITCING AS A UNE?

A. Yes. For example, in response to a question on page 66 of Verizon's Panel Testimony regarding whether the additional work force will lead to crowding that could interfere with normal work at the frame, Verizon responds,"The necessary additional hiring would merely bring the level of frame activity closer to staffing levels prevailing in earlier years, at which crowding was not a problem."

It is not clear what "earlier years" Verizon is talking about it its response to this question. One must keep in mind that the greater than **BEGIN CONFIDENTIAL **** **** END CONFIDENTIAL** monthly hot cuts that Verizon stated it must perform are in addition to current hot cut volumes and all of the "normal" frame work that Verizon's staff must perform each month. This other frame work includes the normal day-to-day activity necessary to run the business such as: new retail and wholesale customer service installations, installation of additional lines to an existing customer, full or partial disconnects

of customer service and troubleshooting of customer service problems. It is inconceivable that the people being added to Verizon's staff do this additional work, ***which is work that was never performed before in the history of the telecommunications industry***, can bring "the frame activity closer to staffing levels prevailing in earlier years" as Verizon claims.

IV. BELLSOUTH AND VERIZON HAVE NOT SHOWN THEY CAN IMPLEMENT A LOW COST BATCH PROVISIONING PROCESS

Q. WHAT DID THE FCC CONCLUDE ABOUT THE COSTS OF HOT CUTS?

A. The FCC stated that the "record evidence indicates that the non-recurring costs associated with cutting over large volumes of loops would likely be prohibitively expensive for a competitive carrier seeking to provide service without the use of unbundled local circuit switching. TRO at ¶ 470. The FCC then found that a seamless, ***low-cost*** batch cut process switching mass market customers from one carrier to another is necessary, at a minimum, for carriers to compete effectively in the market. TRO at ¶ 487 (emphasis added). This batch cut process must "render the hot cut process more efficient and reduce per-line hot cut costs." RO at ¶ 460.

Q. HAS BELLSOUTH PROVIDED THIS COMMISSION A COST STUDY DEMONSTATING THAT ITS BATCH ORDERING PROCESS IS MORE EFFICIENT, THEREBY REDUCING HOT CUT COSTS?

A. No. In fact, BellSouth's rates for its batch process are very high. They are the same as the rates for individual cuts. Mr. Ruscilli, in response to AT&T

Interrogatory No. 130, indicated that the results of the cost study reflected that the efficiencies that may be realized as a result of performing the hot cuts were offset by the cost of the project management. In other words, BellSouth offers nothing to satisfy the FCC's direction that the process be "low-cost."

Q. DIDN'T BELLSOUTH OFFER A 10% DISCOUNT OFF HOT CUT RATES FOR HOT CUTS ORDERED IN BATCHES?

A. Yes. However, I have a number of concerns with BellSouth's proposal. First, it is inadequate to eliminate the high costs of a hot cut. As I indicated in my direct testimony, the most utilized hot cut is $83.11, compared to a UNE-P migration cost of $1.62. A reduction of $8.31 makes very little progress in closing that gap. And, although Mr. Ruscilli alludes on page 18 of his Direct Testimony to a cost study (including the fact that certain rate elements in this study are actually lower than the ordered rate including the 10% discount), BellSouth has not filed a study in this case.

Q. IF ITS OWN UNCONTESTED COST STUDIES SHOWED THAT THE NEW RATES WERE IN SOME CASES BELOW A 10% REDUCTION IN THE CURRENT RATES, WHAT ANALYSIS DID BELLSOUTH USE TO ESTABLISH A REDUCTION RATE OF 10%?

A. It is unclear. In response to AT&T Request for Production of Documents No. 40, which asked for all supporting documentation for the 10% discount, BellSouth responded that it had no responsive documents. (See Rebuttal Exhibit MDV-R6).

Q. GIVEN BELLSOUTH'S OFFERED DISCOUNT, IS THE COST TO THE CLECS FOR USING THE BATCH ORDERING PROCESS SUBSTANTIAL?

A. Yes. Because the hot cut process is manual, large numbers of personnel will be required. The salary and benefits of the additional LCSC and CWINS personnel required will be over $40,000,000 dollars annually, and the salary, benefits, and tools for the additional central office and field personnel will be over $58,000,000 dollars annually. (See Rebuttal Exhibit MDV-R7) This does not include training costs, real estate, etc. for these employees. This significant extra annual cost (likely well over $100,000,000) by BellSouth will of course be passed on to CLECs, who will pay these extra charges ***for no additional value*** to the consumers in Florida.

Importantly, these extra BellSouth personnel costs do not include other costs such as the CLECs' internal costs for its own personnel, as well as the network infrastructure required to be able to provide its own switching.

Q. HAS VERIZON OFFERED A COST STUDY IN THIS PROCEEDING?

A. Yes. The rates proposed by Verizon minimally reflect inadequate processes and likely reflect costing methodologies that are not TELRIC based. In any event, the rates proposed on page four of Exhibit III-A of Verizon's Panel Testimony are not the low cost rates required by the FCC in the TRO and required by CLECs to be able to operate in the mass market.

Q. WHAT DO YOU RECOMMEND THE COMMISSION DO REGARDING THE ESTABLISHMENT OF TELRIC PRICING FOR BATCH PROCESSES FOR VERIZON AND BELLSOUTH?

A. First, the Commission should establish appropriate batch processes based on AT&T's recommendation described in my direct testimony. Once processes are

defined and BellSouth and Verizon implement the Commission's Order, then TELRIC rates should be established. Until those rates are established, rates for UNE-P migrations should be charged for loop migrations when using the Commission approved batch process.

V. BELLSOUTH'S AND VERIZON'S TESTIMONY DOES NOT ADEQUATELY ADDRESS THE NEW OPERATIONAL ISSUES THAT WILL ARISE IF LOCAL SWITCHING IS NO LONGER AVAILABLE TO CLECS AS A UNE.

Q. ON PAGE 24 OF HIS TESTIMONY, MR. RUSCILLI ASSERTS THAT TRANSITIONAL USE OF UNBUNDLING OF LOCAL SWITCHING IS NOT NEEDED BECAUSE CLECS ARE NOT IMPAIRED. DO YOU AGREE?

A. No. The FCC directed state commissions to consider whether (or the extent to which) temporary or "rolling access" to UNE-P would address all identified impairment. TRO ¶ 524. Rolling or transitional access to UNE-P is clearly not adequate to "cure" the many operational and economic issues for the reasons described in this and other AT&T testimony. For example, rolling access would not alleviate service outages caused by hot cuts; it would not resolve the economic impairment that results from the collocation, digitization, concentration and backhaul costs that a CLEC must incur to connect the ILEC loop to its switch; it would not correct the inefficiencies and errors created by the manual hot cut provisioning; and it would not overcome the capacity constraints which are created by the volumes of hot cuts required and exacerbated by scenarios such as IDLC, line splitting and CLEC-to-CLEC migrations. Moreover, we have not yet

seen what additional operational concerns will arise if unbundled local switching is no longer available to CLECs.

Q. PLEASE REMIND THE COMMISSION WHAT ADDITIONAL OPERATIONAL CONCERNS YOU BELIEVE MAY OCCUR IF LOCAL SWITCHING IS NO LONGER AVAILABLE TO CLECS.

A. The two specific issues I addressed in my direct testimony were collocation space and trunk blocking. It is likely we will see impacts in both of those areas if unbundled local switching is no longer available to CLECs at cost-based rates. More collocation space will be needed and traffic patterns within the network will change such that more local traffic will be routed to the ILEC's tandem switch.

Q. ON PAGES 19-21 OF HIS TESTIMONY, MR. RUSCILLI STATES THAT COLLOCATION SPACE IS AVAILABLE AND THAT BELLSOUTH PROVIDES COLLOCATION IN A TIMELY MANNER. PLEASE COMMENT.

A. Conspicuous for its absence is any discussion of the plans that BellSouth has made to handle the surge of applications for new collocation arrangements and augmentations of existing collocations, not to mention the need to plan and construct necessary additions to its central office back-up power plants. BellSouth's testimony also does not account for the additional staffing it will likely need to support the surge in collocation requests it may receive. And, while BellSouth claims it has space available in most locations, it does not say how much, so the Commission has no information to understand how many additional CLECs BellSouth's central offices can accommodate.[12]

[12]The FCC identified available collocation space as an issue for the state TRO proceedings. TRO ¶ 513. "We find that the absence of sufficient collocation space in the incumbent central office or offices might in

Like its performance in other areas, BellSouth's performance results in providing collocation space in today's environment, when there is little to no activity, has little relevance in an environment much more dependent on timely collocation installations. Yet BellSouth has provided no details on how it plans to manage increased demand for collocation or what it estimates that demand to be. Without an ability to efficiently provide increased amounts of collocation in a timely manner, BellSouth's theoretical ability to perform hot cuts to non-existent collocation arrangements, even if true, becomes beside the point.

Q. HOW DID VERIZON ADDRESS THIS ISSUE?

A. Verizon's Panel fails to address at all Verizon's capability to support the additional requirements that would be placed on its collocation application and implementation processes that a non-UNE-P environment would create.

Q. EARLIER YOU EXPRESSED CONCERN ABOUT THE IMPACT OF THE SHIFT IN TRAFFIC OFF OF BELLSOUTH'S CURRENT LOCAL SWITCH-TO-LOCAL SWITCH NETWORK AND ONTO THE TANDEM TRANSPORT NETWORK. PLEASE EXPLAIN WHAT YOU MEAN BY THIS SHIFT IN TRAFFIC.

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

A. When a CLEC is using UNE-P it not only uses BellSouth's unbundled switching but it also uses BellSouth's unbundled common transport.[13] Because of the traffic volumes and the community of interest between local switches that BellSouth has as a result of its former monopoly status, much of the retail and UNE-P inter-switch traffic is routed on direct trunk groups from the originating end office local switch to the terminating end office local switch. However, because the CLECs do not enjoy the same economies of scale as BellSouth does, most of the traffic from the CLEC's local switches will have to be routed through BellSouth's tandem switches for completion to the BellSouth end offices. Additionally, traffic originated by BellSouth customers will need to be routed through its tandem switches for completion to the CLEC's local switches when a BellSouth customer is calling a CLEC customer.

As a result of the conversion of the embedded base of UNE-P customers to the CLEC's switches there is going to be a tremendous shift in traffic volumes off of the existing BellSouth end office–to-end office trunk groups and onto the BellSouth tandem switches and the trunk groups between the tandem switches and the BellSouth end offices. Unless BellSouth has properly engineered for this growth in volumes on its tandem network, CLECs and their customers are going to experience tandem congestion and the resulting call blocking.

Q. BECAUSE BELLSOUTH WILL NEED TO USE ITS TANDEM NETWORK TO COMPLETE ITS CUSTOMER'S CALLS TO THE CLECs, WON'T THIS PROBLEM ALSO BE A CONCERN FOR THEM?

[13] Common transport is also known as shared transport.

A. Not necessarily. It is important to keep in mind that the customer being migrated was already CLEC customer and may have been a CLEC customer for a considerable amount of time. Because of the service outage and feature functionality issues associated with a hot cut over to the CLECs facilities, the CLECs are required to notify all of their UNE-P customers of the conversion to UNE-L. This is typically accomplished via a letter to the customers informing them of a "network upgrade" that will result in a brief (we hope) outage and will potentially impact some of their feature functionality.[14] After this "network upgrade" is accomplished the customer, who never had a problem completing or receiving calls before the "upgrade" and now experience these problems, will assume that the CLEC dropped the ball on its "upgrade." Even in cases where the BellSouth's customer gets blocked it is generally going to be a negative reflection on the CLEC because people trying to call the CLEC's customer did not have a problem with call blocking prior to the "upgrade." Unless BellSouth has planned for and engineered its network for this major shift in traffic patterns, CLEC customer service will be severely impacted and as a result the CLECs will lose customers back to BellSouth.

Q SHOULD BELLSOUTH BEGIN TO ENCOUNTER THIS CONGESTION ON ITS TANDEM NETWORK CAN'T IT EASILY BE REMEDIED BY THE ADDITION OF TRUNKS BETWEEN THE TANDEMS AND THE END OFFICES?

[14] Some switch based features such as speed calling and remote call forwarding will have to be reprogrammed by the customer when the customer is converted from UNE-P to the CLEC's switch.

A. If it is a simple matter of increasing the trunk group size and the spare facilities are available to do so, then it is a relatively easy problem to fix. However, the problem is not all that simple. First, BellSouth must determine whether its tandem switches can handle the increased traffic load that they will be faced with. If not, either the tandem switch will have to be augmented through an addition of equipment and supporting software. In cases where BellSouth's tandems are already performing at or near capacity then additional tandem switches may need to be installed in the network. In either case both scenarios will take a considerable amount of time, during which the CLEC's customers are continuing to experience service problems. Additionally, there may be cases where the tandem has the capacity but there are no spare facilities between the tandem and the end offices to grow the existing trunk groups for the additional traffic load. This scenario will also take time for BellSouth to install the interoffice facilities it will need to support the offered traffic loads, all resulting in the same detrimental impact to the CLEC's customers.

Q. HOW DID VERIZON ADDRESS THIS ISSUE?

A. It did not. Further, the concerns I expressed above about BellSouth also apply to Verizon.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION TITLE.

A. My name is Mark David Van de Water. My business address is 7300 East Hampton Avenue, Room 1102, Mesa, AZ 85208-3373.

Q. ARE YOU THE SAME MARK DAVID VAN DE WATER THAT PREVIOUSLY FILED DIRECT TESTIMONY IN THIS DOCKET ON DECEMBER 4, 2003, AND REBUTTAL ON JANUARY 7, 2004?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My Surrebuttal testimony responds to portions of the rebuttal testimony of BellSouth's witnesses Ken L. Ainsworth, Alfred A. Heartley, Milton McElroy Jr., Ronald M. Pate, John A. Ruscilli, Eric Fogle, and A. Wayne Gray.

I. BELLSOUTH'S REBUTTAL DOES NOT ADDRESS THE IMPAIRMENT CONCERNS RAISED BY AT&T.

A. BellSouth Challenges the Very Concept that Hot Cuts Must be as Seamless as UNE-P Conversions.

Q. ON PAGE 30 OF HIS TESTIMONY, MR. RUSCILLI DISCUSSES THE SEAMLESS NATURE OF UNE-P AND PIC CHANGES. PLEASE COMMENT.

A. Mr. Ruscilli appears to agree with AT&T and MCI that UNE-P migrations and PIC changes are seamless, while hot cuts are not. Mr. Ruscilli's testimony reveals that he does not believe hot cuts are seamless and he does not believe they should be seamless. This position contradicts both the FCC and other BellSouth

witnesses. (See BellSouth Witness McElroy Rebuttal at page 2 and Ainsworth Direct at page 2.) In order to overcome impairment, the hot cut process must be seamless and low-cost.

Q. ON PAGE 31 OF HIS TESTIMONY, MR. RUSCILLI STATES THAT THE FCC "FLATLY REJECTED AT&T'S ELP PROPOSAL" AND STATED THAT THIS COMMISSION SHOULD DO THE SAME? DO YOU AGREE?

A. Absolutely not. Mr. Ruscilli ignores the part of the TRO in which the FCC states that although it declines to order ELP ***at this time***, it may reexamine AT&T's proposal if hot cut processes are not, in fact, sufficient to handle necessary volumes. TRO ¶ 419. Electronic loop provisioning would be both seamless and low cost, and could handle the volumes required by the mass market. AT&T is requesting that the Commission find that the ILECs' hot cuts processes are insufficient, thus impairing CLECs without access to unbundled switching, and to initiate another proceeding to determine whether ELP would eliminate this impairment.

Q. ON PAGES 8 AND 9 OF HIS TESTIMONY, MR. AINSWORTH RESPONDS TO TWO OF AT&T'S CONCERNS REGARDING BELLSOUTH'S BATCH PROCESS: (1) THAT THE PROCESS DOES NOT ALLOW AFTER HOURS CUTS, AND (2) THAT THE PROCESS DOES NOT INSURE THAT ALL END USER'S LINES WOULD BE PROVISIONED ON THE SAME DAY. DOES MR. AINSWORTH'S RESPONSE ALLEVIATE YOUR CONCERNS?

A. No. Instead, it confirms my understanding of the shortfalls in BellSouth's plan. For both issues, BellSouth's response is that the CLEC "may request" after hours cuts and "may request" that all of an end-users lines be cut on the same day. BellSouth makes no commitment that it will provide the requested services. In

any event, BellSouth's promises are not adequate. The FCC clearly stated that "incumbent LECs' promises of future performance [are] insufficient to support a Commission finding that the hot cut process does not impair" CLECs. TRO at n. 1437.

Q. ON PAGE 15 OF HIS TESTIMONY, MR. AINSWORTH ASSERTS THAT BELLSOUTH DOES HAVE A TIMELY PROCESS FOR RESTORAL OF CUSTOMER SERVICES. WHAT IS YOUR RESPONSE?

A. Mr. Ainsworth asserts, "once the order is closed, the UNE-P records are purged and the only way to address a trouble on the unbundled loop is via a trouble ticket". However, Mr. Ainsworth's solution does not account for those times when the problem is due to CLEC issues. In those cases, it can be up to three days to get the service ported back to BellSouth. Other ILECs, such as SBC, are much more responsive to this customer-impacting issue.

Q. ON PAGE ELEVEN OF HIS TESTIMONY, MR. PATE CLAIMS THAT YOU MISCHARACTERIZED DATA BECAUSE THE NUMBERS YOU USED TO COMPARE FLOW-THROUGH FOR UNE-P ORDERS VERSUS UNE-L ORDERS DID NOT IN FACT REPRESENT FLOW-THROUGH? DO YOU AGREE?

A. Absolutely not. BellSouth described the percentage numbers I used from its responses to Interrogatories 28 and 32 as numbers for "fully mechanized" orders. Fully mechanized orders flow-through. Only fully mechanized orders flow-through: manually handled orders do not. Therefore, the terms are used interchangeably throughout the industry.

Q. GIVEN THAT THE TERM FULLY MECHANIZED DOES NOT INCLUDE MANUALLY HANDLED, DID YOU HAVE ANY CONCERNS ABOUT USING BELLSOUTH'S FULLY MECHANIZED PERCENTAGES?

A. When I reviewed the data, I determined that BellSouth had in fact included manual LSRs in its calculation of "percent fully mechanized." Although that could only result in overstating BellSouth's fully mechanized or flow-through performance, I decided to make use of the information, as it is particularly relevant for this proceeding. The information is particularly relevant because it is specific to migrations, while the flow-through performance reports produced monthly by BellSouth also include other categories of information such as feature changes and LNP stand-alone. My intent was to illustrate the vast disparity in the flow-through or full mechanization of UNE-P and UNE-L migration orders. The information provided by BellSouth that I used in my testimony does exactly that.

Q. ON PAGES FIVE THROUGH EIGHT OF HIS TESTIMONY MR PATE DISCUSSES FLOW-THROUGH PERFORMANCE. PLEASE COMMENT.

A. Mr. Pate's analysis of UNE, resale, and talk of improvement plans appear intended to distract attention away from the issue I asked this Commission to consider: most UNE-P migration orders are fully electronic and thus flow-through BellSouth's ordering systems; most UNE-L migration orders are manually created by BellSouth, and thus do not flow-through BellSouth's ordering systems. Mr. Pate's chart on page seven is particularly illuminating in this regard. It indicates that UNE-P LSRs comprise 78.6% of the LSR population, while LNP (which includes BOTH stand-alone LNP, and UNE-L migrations with LNP) comprise only 1.6%. BellSouth is asking this Commission to change the way that 78.6% of customer requests are handled and have them be treated as the <1.6% are treated, with abysmal flow-through performance.

B. BellSouth's Attempt to Suggest that its Bulk Ordering Process is an Acceptable Batch Provisioning Process is Contrary to the Evidence.

Q. ON PAGE 3 OF HIS REBUTTAL TESTIMONY, MR. PATE INDICATED THAT BELLSOUTH'S IMPLEMENTATION OF AT&T'S CHANGE REQUEST FOR A BULK MIGRATION PROCESS DID MEET AT&T'S STATED NEEDS. IS MR. PATE CORRECT?

A. No. As I pointed out in my rebuttal testimony, Mr. Pate selectively summarizes the change request. He only quotes from a portion of the change request, and omits, among other things, AT&T's request for weekend cuts. Nonetheless, Mr. Pate's rebuttal admits that any reasonable reader would have interpreted that AT&T had asked for "project managed provisioning." I agree. However, BellSouth and AT&T apparently differ on their views of project managed provisioning. AT&T does not believe that BellSouth provides project managed provisioning for its bulk ordering process. In response to the change request, BellSouth changed nothing about its provisioning process. Indeed, in Mr. McElroy's testimony, Exhibit MM-2 reveals that in BellSouth's "third party test," the provisioning of 80% of the test orders were not even coordinated with the CLEC, much less project managed.

Moreover, BellSouth's own witness recognized that it does not have a batch provisioning process. In Mr. Ainsworth's direct testimony at page two, he described BellSouth's batch process as "BellSouth has in place a batch hot cut process that provides ***additional ordering capabilities*** and the ***same*** proven seamless quality ***migrations as individual hot cuts***." BellSouth's batch ordering process does not and cannot reduce or eliminate impairment. Finally, any "reading" of the change request document issued in 2000 aside, BellSouth knew

that AT&T was not satisfied with the process it planned to implement when it began implementation.

Q. HOW LONG HAS BELLSOUTH BEEN AWARE THAT THE PROCESS IT DESIGNED IN RESPONSE TO AT&T'S CHANGE REQUEST WAS NOT SATISFACTORY TO AT&T?

A. BellSouth has known since at least mid-2002 that AT&T was dissatisfied. In BellSouth's September 20, 2002 response to Ms. Denise Berger of AT&T, BellSouth stated "During our conversation you indicated that the new process resulting from CR0215 would not meet the needs of the internal AT&T organization. Those needs apparently have prompted the request for a different new process as outlined in your August 30 letter." BellSouth even suggested in the letter that AT&T submit another change request. (See Exhibit MDV-SR1.)

Q. PLEASE SUMMARIZE AT&T'S EXPERIENCE WITH THE IMPLEMENTATION OF "BATCH" OR "BULK" HOT CUTS IN BELLSOUTH

A.

- Well over three years ago, AT&T requested that BellSouth provide a process that would accommodate both bulk ordering and provisioning of its customers from UNE-P to UNE-L.
- Dissatisfied with the process BellSouth planned to implement, on August 30, 2002, AT&T wrote a letter to BellSouth requesting that it develop a bulk conversion process. (See Exhibit MDV-5 of Van De Water Direct Testimony.)
- BellSouth responded that AT&T should submit a second change request or a new business request.

- AT&T submitted a new business request for a bulk conversion process, to use at its option, to migrate its customers from UNE-P to UNE-L.
- BellSouth agreed that AT&T's request was feasible, but required exorbitant fees in addition to the usual high hot cut charges, and refused to commit to a number of conversions to be implemented per day.
- BellSouth's prices and lack of willingness to make volume commitments prevented AT&T from moving forward with its new business request for bulk conversions of its customers from UNE-P to UNE-L.

C. BellSouth Does Not Allow CLEC-to-CLEC Activities

Q. ON PAGES 20 MR. PATE INDICATES THAT THE CLEC-TO-CLEC MIGRATION ISSUES RAISED BY CLECS ARE EXTRANEOUS TO THIS DOCKET. DO YOU AGREE?

A. No. As an initial matter, BellSouth refuses to include CLEC-to-CLEC migrations in its batch process, which this Commission must approve in this docket. Moreover, BellSouth is seeking to have this Commission eliminate switching as a UNE it must provide, therefore any problems a CLEC experiences when attempting to move a customer to its switch from another CLEC are relevant to this proceeding.

Q. DO YOU AGREE THAT A COLLABORATIVE ADDRESSING CLEC TO CLEC MIGRATIONS IS UNDERWAY IN FLORIDA?

A. Yes. BellSouth, however, is responsible for many areas of concern that are not being addressed by the collaborative including:

- CLEC-to-CLEC migrations are not included in the batch process,
- CLEC to CLEC UNE-L orders must be submitted manually,

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*****End Confidential**

Q. ON PAGES 15-18 OF HIS TESTIMONY, MR. GRAY DISCUSSES BELLSOUTH'S POLICY REGARDING THE USE OF MULTIPLE COMPANY CODES AND RECOMMENDS ACTION THAT AT&T TAKE TO ADDRESS THIS ISSUE. PLEASE COMMENT.

A. On page 15, lines 19 and 20 of his testimony, Mr. Gray succinctly describes the root cause of the problem I described on pages 54-57 of my direct testimony: "It is BellSouth's policy not to accept assignments from CLECs other than the owner of the collocation space. . . ." (Mr. Gray does not indicate how he thinks the ordering CLEC could have the assignments to provide them to BellSouth without first having obtained them from the owning CLEC). Mr. Gray goes on to say that the reason for this policy is "to protect a CLEC's assets/property," and that "BellSouth's ordering and provisioning systems contain edits that prevent unauthorized assignment of its customer's collocation assets." Incredibly, BellSouth takes this position when AT&T attempts to use its own assets that have differing codes, although it knows full well that AT&T owns the equipment and is therefore fully "authorized." Instead, it offers extremely costly and burdensome options to remove protection AT&T has not requested.

Q. DOES MR. GRAY ACKNOWLEDGE THAT BELLSOUTH'S POLICIES, PRACTICES, AND SYSTEMS EFFECTIVELY PREVENT A CLEC

FROM BEING ABLE TO ORDER A LOOP FROM BELLSOUTH AND SWITCHING FROM ANOTHER CLEC?

A. Yes, he does, although it follows his initial answer of no. The net of Mr. Gray's response (on pages 16 and 17) is that BellSouth will permit a DS1 loop to be ordered from BellSouth by one CLEC and delivered to the collocation space of another CLEC, but will ***not*** permit a DS0 loop be ordered from BellSouth by one CLEC and delivered to the collocation space of another CLEC. DS0 loops are the loops used to serve mass market customers. DS0 loops are thus the subject of this proceeding. It is unclear why Mr. Gray felt it necessary to include enterprise loops in his response.

Q. PLEASE SUMMARIZE THE RELEVANCE OF THIS PROBLEM TO THIS PROCEEDING.

A. Any CLEC who wanted to order wholesale switching, should it become available, to use with analog UNE loops (DS0) for mass market customers would encounter the problems described in my direct testimony and the testimony of Mr. Gray. These difficulties are caused solely by BellSouth's claimed policy decision to provide unwanted protection to CLECs. If BellSouth's interest is truly to protect CLECs, as well as itself, it could require that a letter of authorization between the two company entities/CLECs be provided before service is provisioned. BellSouth does this today for DS1 or higher level of service. It simply refused to do so for DS0 service.

Q. ON PAGE FOUR OF HIS TESTIMONY, MR. FOGLE ASSERTS THAT YOU MISCHARACTERIZED LINE SPLITTING AS UNE-P BASED. PLEASE RESPOND.

A. Based on his response, Mr. Fogle does not appear to take issue with my detailed description of line splitting, only the "UNE-P based" label. Further, as he did not take issue with the substance of my description, it is unclear why he believes I was operating under a "misconception".

Q. DO BELLSOUTH EMPLOYEES ALSO REFER TO "UNE-P LINE SPLITTING?

A. Yes. For example, in the bracketed section of the second page of BellSouth-generated meeting notes from the December 11, 2003 BST Line sharing/Line Splitting Collaborative, BellSouth reports "Readily identified as high importance were a) migrating ***existing UNE-P with line splitting*** to UNEL and retain DSL..." (emphasis added) (See Exhibit MDV-SR2.)

Q. ON PAGE ELEVEN OF HIS TESTIMONY, MR. FOGLE REFERENCES THE FACT THAT DEDICATED WIRING DOES NOT MAKE SENSE FOR A 10% TAKE RATE OF DSL. PLEASE RESPOND.

A. AT&T never indicated that it "made sense," only that installing dedicated CLEC collocation cage to CLEC collocation cage cabling was the only process available. Further, it appears that Mr. Fogle does not share the same optimism as other BellSouth witnesses about CLECs' ability to attract DSL customers. For example, in her testimony at Exhibit DJA-05, Dr. Aron indicates that in three years a single CLEC would obtain a 15% penetration rate of the DSL market, and 25% of the small business DSL market.

Q. ON PAGE TEN AND AGAIN ON PAGE THIRTEEN OF HIS TESTIMONY, MR FOGLE SUGGESTS THAT AT&T DISPATCH ON EVERY DSL ORDER INSTEAD OF WIRING DEDICATED CABLING. PLEASE RESPOND.

A. As I indicated in footnote 25 of my direct testimony, AT&T is aware of the dispatch option, but views such an arrangement as both economically and operationally infeasible. Therefore, Mr. Fogle simply offers to exchange one inefficient process for another. He does thoughtfully recommend that we approach BellSouth to provide technician dispatches at undefined "market" rates. However, in calculating our "savings" if we do not deploy some of the equipment I described in my direct testimony, he fails to provide the additional costs of the required dispatches.

Q. GIVEN THE OPERATIONAL AND ECONOMIC HURDLES OF LINE SPLITTING USING UNE-L YOU HAVE DESCRIBED IN YOUR TESTIMONY, WHAT DO YOU RECOMMEND?

A. Those hurdles are an additional source of impairment to an already impaired UNE-L process. As such, a finding that CLECs are impaired without access to unbundled switching would certainly address the problems of being forced to use such a process.

Q. FOR ANY CASES WHERE A CLEC CHOOSES TO PROVIDE DSL VIA UNE-L LINE-SPLITTING, HAS BELLSOUTH MET ITS OBLIGATIONS?

A. No. The TRO at ¶514 specifically determined that "an incumbent LEC's failure to provide cross connections between the facilities of two competitive LECs on a timely basis can result in impairment." Not only does BellSouth not provide cross connects between CLECs for UNE-L line splitting on a timely basis, it currently does not provide them at all. BellSouth's existing "Co-carrier Cross Connection Arrangement" is not, in fact, a cross connection offering at all, it is only

BellSouth's authorization for two CLECs to install a dedicated cable between the respective collocations in the same central office.

Q. ON PAGE 17 OF HIS TESTIMONY, MR. FOGLE APPEARS TO INDICATE THAT THE CLEC'S "INTEREST" IN UNE-L LINE SPLITTING HAS BEEN LIMITED AND RECENT. IS THAT YOUR UNDERSTANDING?

A. No. A review of BellSouth's line-splitting collaborative meeting notes indicates that in the February 27, 2003 MCI agreed to provide information to the group about UNE-L or loop-splitting. Further, it is clear from the attached July 2003 e-mails from Denise Berger of AT&T to various BellSouth employees that discussions on this topic occurred in the May and June 2003 collaborative meetings. Finally, the July 30, 2003 e-mail from Denise Berger asked a series of questions attempting to gain information on this topic. (See Exhibit MDV-SR3.) Ms. Berger received no response from Bellsouth to her July request until December 19, 2003 in which her questions were still not answered, but she was referred to an upcoming tariff. (See Exhibit MDV-SR4.)

Q. HAVE YOU OBTAINED ANY INFORMATION FROM BELLSOUTH REGARDING ITS PLANS TO PROVIDE CROSS-CONNECTS TO ENABLE UNE-L LINE SPLITTING?

A. While falling woefully short of the information requested by AT&T, BellSouth has recently provided some additional information in the monthly line-sharing collaborative meetings.

Q. WHAT IS YOUR REACTION TO WHAT YOU HAVE LEARNED?

A. BellSouth's new FCC tariffed "Special Access product" will require that the CLECs wishing to have BellSouth provide a cross connection on BellSouth's

frame between a connecting facility assignment ("CFA") from one CLEC's collocation to a CFA in a second CLEC's collocation to engage in "line splitting" of a local loop (not otherwise subject to the FCC's jurisdiction) certify that the traffic carried on that CFA to CFA connection (a frame jumper wire) meet the FCC's de minimus (10%) interstate rule. This unnecessarily subjects a non-complex POTS mass market line to cumbersome procedures such as certification and audits, and irrelevant obligations such as the requirement that the line carry at least 10% interstate traffic.

Further, BellSouth's new "product" cannot be ordered efficiently. UNE local loops are ordered on a Local Service Request ("LSR"). When such a loop is to be "split" between two CLECs, BellSouth will require that the connection necessary to accomplish the "split" be ordered and provisioned out of its FCC Access Tariff using an Access Service Request ("ASR"). There will be no means of electronically ordering such an arrangement and the coordination, through relating the LSR and ASR, that will be required to establish working services (voice and ADSL) for the customer. Thus the voice CLEC must issue an LSR, the data CLEC must issue an LSR, and one of the CLECs (depending on the routing of the loop between the two) must issue an ASR. Manual processing will be required for all three ordering documents. Such a manual and restrictive process creates operational and economic barriers to providing DSL services to mass market customers. BellSouth's proposed policies and practices for this service are designed to complicate and hinder the provision of line splitting service to CLEC customers and should be rejected by this Commission.

Q. YOU MENTIONED THAT AMONG OTHER OBSTACLES, THE USE OF AN ASR WILL BE REQUIRED IN BELLSOUTH'S OFFERING. DOESN'T THAT DIFFER FROM MR. FOGLE'S TESTIMONY ON PAGE 14?

A. No. Mr. Fogle only says ASRs are not needed for any ***currently*** available components needed for Line Splitting. The process BellSouth is planning to offer to obtain cross-connects for UNE-L line splitting does require ASRs.

Q. ON PAGE 19 OF HIS TESTIMONY, MR. FOGLE INDICATED THAT THE CLECS HAD NOT FORMALLY REQUESTED BELLSOUTH TO BEGIN WORK ON ESTABLISHING PROCEDURES, ETC FOR HOT CUT MIGRATIONS TO UNE-L. PLEASE RESPOND.

A. While I am unsure what sort of "formal" request BellSouth requires, I assume Mr. Fogle is not insinuating that CLECs have not repeatedly communicated with BellSouth on the need for a viable means of loop splitting and attempted to move forward to implementation, as it is absolutely clear that is not the case. For example, as I described earlier in my testimony, AT&T attempted in writing to obtain more information from BellSouth in July 2003 by posing the following questions:

1. How does BellSouth plan to solicit and incorporate CLEC input into the development of this capability and the subsequent offering? In which CLEC forum will this be discussed?
2. What is the timeframe for delivery of this service?
3. How does BellSouth plan to provide procedures and business rules for ordering and provisioning?
4. How does BellSouth plan to provide CLECs with information around cost/price?
5. Does BellSouth plan to provide a mechanized ordering option for CLECs? Will this interface require systems upgrades or systems work by CLECs? When does BellSouth plan to provide such information?
6. Will there be a manual ordering option for CLECs?

7. Will CLECs be able to order this functionality via a single LSR?
8. Will BellSouth require CLECs to install any special or additional collocation equipment?
9. If special equipment is required, will BellSouth offer the access to such equipment as an unbundled network element?

To date, BellSouth has not answered our questions nor referred us to the appropriate forum to place a "formal" request. The Commission should require that BellSouth answer these legitimate questions regarding a local service they are obligated to provide to avoid CLEC impairment, and to put in place an efficient electronic Operations Support System upgrades to allow the ordering and provisioning of this local service using the Local Service Request (LSR) process.

D. BellSouth's Rebuttal Does Not Demonstrate That BellSouth Can Complete Bulk Migrations at a Sustainable Pace for the Mass Market.

Q. ON PAGE SEVEN OF MR. HEARTLEY'S TESTIMONY, HE DISCUSSES THE IMPACT OF ILDC. PLEASE COMMENT.

A. While Mr. Heartley discusses the impact of IDLC on work loads, his information is also useful to the Commission for other reasons. He states that "based on regional estimates of 4,827 daily outside dispatches, well over 2.2 million dispatches could be required to complete the conversions and handle the growth." Using BellSouth's information that each IDLC cut-over (which is only one part of the hot cut process and thus the costs of the hot cut process) takes 1 hour, and multiplying that by a salary rate of approximately ***Begin Confidential End Confidential*** per productive hour," the costs to CLECs and their end-users is ***Begin Confidential End Confidential***.

Importantly, this figure does not include non-salary costs that CLECs would also have to bear.[1] Critically, CLECs would be paying these millions of dollars for an activity that adds no value to the customer's service, and in fact may degrade it.

Q. SEVERAL OF BELLSOUTH'S WITNESSES (AINSWORTH AT PAGE 9, HEARTLEY AT PAGE 5, MCELROY AT 10-11) DISCUSS VOLUMES OF 125 UP TO 263 CUTS ON A SINGLE DAY. HOW DO YOU RESPOND?

A. It appears, that in certain central offices, for a single day, using extraordinary forcing (and likely unsustainable) methods, with their accompanying extraordinary costs, BellSouth can cut 125 lines and even up to 263 lines in a day.[2]

However, unusually executed, occasional events, while interesting, are not dispositive in a proceeding which is designed to determine if CLECs are impaired in providing day-to-day service to mass market customers. No evidence was provided that this same level of volume of work (as well as the central office work that must be done that is not related to hot cuts) could be sustained on a regular basis. In addition to be able to sustain handling large volumes of customers, the batch process must also deliver seamless and low cost service. As I describe in my testimony, PWC observed numerous instances of service impacting deficiencies in BellSouth's performance during the test. And, as I described earlier in this testimony and in my rebuttal testimony, BellSouth is asking this Commission to require CLECs to spend millions upon millions of

[1] For example, BellSouth charges $48.65 for the first half hour and $23.95 for additional half hours of a technician's time for other services, for an initial hourly rate of $72.60.

[2] In light of BellSouth's alleged capabilities, I find it even more unreasonable that they would make no commitment or target regarding the number of lines they would cut per day for AT&T.

dollars only to provide Florida consumers with worse service than they receive today via UNE-P.

II. THE PWC ATTESTATION DOES NOT ESTABLISH THAT BELLSOUTH HAS AN ADEQUATE HOT CUT PROCESS FOR THE MASS MARKET

Q. ON PAGE 2 OF MR. MCELROY'S TESTIMONY, HE STATES THAT THE PURPOSE OF HIS TESTIMONY IS TO "DEMONSTRATE THAT BELLSOUTH'S BULK MIGRATION PROCESS SERVICE IS BOTH SEAMLESS AND EFFECTIVE." DO YOU AGREE THAT HIS TESTIMONY MAKES SUCH A DEMONSTRATION?

A. Absolutely not. Mr. McElroy goes on to say that to corroborate this fact, BellSouth engaged PricewaterhouseCoopers (PWC) to provide an attestation on the effectiveness of the process. However, PWC only attested that the process worked as designed, except for the times it did not. PWC made no representations regarding the seamlessness or effectiveness of the process.

Q. MR. MCELROY'S TESTIMONY DESCRIBES PWC'S OPINION, THAT BELLSOUTH UTLIZED THE BULK MIGRATION PROCESS TO COMPLETE A TEST OF BULK MIGRATION SERVICE REQUESTS, EXCEPT FOR THE DEVIATIONS DESCRIBED IN ITS REPORT. PLEASE COMMENT.

A. I would have surprised with any other outcome. AT&T is very familiar with and even occasionally uses BellSouth's hot cut process. AT&T has never asserted that BellSouth could not perform multiple migrations (especially under conditions of it own choosing), using its bulk ordering process and individual hot cut process. The ability to execute an unacceptable process (conducted under unclear parameters), does nothing to reduce the concerns I have described with BellSouth's manual hot cut process, and the impairment caused by that process

which render them unacceptable for the mass market (whether or not you place a bulk order).

Q. GIVEN THAT YOU KNEW BELLSOUTH COULD PERFORM HOT CUTS AND MAKE CHANGES TO ITS ORDERING OSS, DO YOU HAVE CONCERNS REGARDING HOWTHE TEST WAS CONDUCTED AND THE RESULTS?

A. Yes. First, it is unclear when and over what period of time the pre-wiring (the most time intensive part of the hot cut) was completed. Second, no information is provided regarding how the non-hot cut central office work was handled. While much of such work could be postponed for a day during the time a special test is being conducted, that obviously is not the case when the "test" or greater volumes continue in a business as usual environment. Third, BellSouth implemented 80% of the cuts using its most simple method (non-coordinated) cuts even though such cuts comprise only 3% of migrations today. Fourth, even while being observed by an outside group (PWC), which is likely to result in best behavior or performance, BellSouth had 64 deviations on 724 migrations (9%). These problems included missed due dates, no dial tone, no cut notification so that customer could not receive incoming calls, and failing to test for dial tone prior to cutting customer. The fact that this myriad of problems, which occurred under ideal conditions, is the best case BellSouth could put forward, is chilling when contemplating unleashing this process on thousands of Florida end-users every day.

Q. WHAT WAS PWC'S VIEW OF THE EXCEPTIONS TO BELLSOUTH MANAGEMENT ASSERTIONS?

A. PWC simply reported the exceptions. They explicitly did not comment on their relative significance in their report. (See Attachment A of Exhibit MM-1 of Mr. McElroy's testimony.) In the affidavit of Paul Gaynor of PWC, he stated that all exceptions were reported, based on the nature of the hot cut process and the importance to all parties (See page 21 of Exhibit MM-2 of Mr. McElroy's testimony.).

Q. GIVEN YOUR POSITION THAT THE PWC ATTESTATION DOES NOT ESTABLISH THAT BELLSOUTH HAS AN ADEQUATE HOT CUT PROCESS FOR THE MASS MARKET, WHAT VALUE DO YOU BELIEVE ITS HAS FOR THIS COMMISSON?

A. The myriad of problems described in this report, which occurred under "best case" circumstances, is strong evidence of the dangers of relying on a manual provisioning process to deliver seamless, high quality service. To that end, this report is useful in reinforcing that CLECs are impaired without access to unbundled switching.

Q. DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes, it does.

I. BACKGROUND AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Don J. Wood. I am a principal in the firm of Wood &Wood, an economic and financial consulting firm. My business address is 30000 Mill Creek Avenue, Suite 395, Alpharetta, Georgia 30022. I provide economic and regulatory analysis of the telecommunications, cable, and related convergence industries with an emphasis on economic policy, competitive market development, and cost-of-service issues.

Q. PLEASE DESCRIBE YOUR BACKGROUND AND EXPERIENCE.

A. I received a BBA in Finance with distinction from Emory University and an MBA with concentrations in Finance and Microeconomics from the College of William and Mary. My telecommunications experience includes employment at both a Regional Bell Operating Company ("RBOC") and an Interexchange Carrier ("IXC").

Specifically, I was employed in the local exchange industry by BellSouth Services, Inc. in its Pricing and Economics, Service Cost Division. My responsibilities included performing cost analyses of new and existing services, preparing documentation for filings with state regulatory commissions and the Federal Communications Commission ("FCC"), developing methodology and computer models for use by other analysts, and performing special assembly cost studies.

I was employed in the interexchange industry by MCI Telecommunications Corporation, as Manager of Regulatory Analysis for the Southern Division. In this capacity I was responsible for the development and implementation of regulatory

policy for operations in the southern U. S. I then served as a Manager in MCI's Economic Analysis and Regulatory Affairs Organization, where I participated in the development of regulatory policy for national issues.

Q. HAVE YOU PREVIOUSLY PRESENTED TESTIMONY BEFORE STATE REGULATORS?

A. Yes. I have testified on telecommunications issues before the regulatory commissions of thirty-five states, Puerto Rico, and the District of Columbia. I have also presented testimony regarding telecommunications issues in state, federal, and overseas courts, before alternative dispute resolution tribunals, and at the FCC. A listing of my previous testimony is attached as Exhibit DJW-1.

I have testified before this Commission on issues related to cost of service and competitive market entry on several occasions, most recently in Docket No. 030137-TP.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I have been asked by AT&T Communications of the Southern States, LLC ("AT&T") to describe the framework for the type of economic impairment analysis discussed by the FCC in the Triennial Review Order ("TRO"). Specifically, I am addressing the FCC's guidelines for an analysis of "economic impairment" for local circuit switching used to provide competitive service to mass market customers. My testimony responds to several of the sub-elements of the Commission's Issue 5.

II. USES AND LIMITATIONS OF AN ECONOMIC IMPAIRMENT ANALYSIS

Q. IS THIS COMMISSION REQUIRED TO CONDUCT AN ECONOMIC IMPAIRMENT ANALYSIS?

A. Not necessarily. In the Triennial Review Order, the FCC stated: "[w]e find on a national level that requesting carriers are impaired without access to unbundled local switching when serving mass market customers." TRO ¶ 419; *see also* ¶ ¶ 422, 424, 459, 476, 479 and 493. Impairment exists unless and until specific, concrete evidence to the contrary is identified.

ILECs seeking to set aside that finding of impairment may rely on the "triggers" set forth in the TRO. *See* TRO ¶ 501. If the ILEC cannot establish that CLECs are self-provisioning switches to serve the mass market, the ILEC may attempt other means of demonstrating that there is no impairment. In that instance, the Commission, if it wants to consider a finding of "no impairment," must conduct a granular analysis that includes an assessment of both operational and economic impairment. *See* TRO ¶ ¶ 511-520.

Q. CAN THIS COMMISSION MAKE A FINDING OF "NO IMPAIRMENT" BASED ONLY ON AN ECONOMIC ANALYSIS?

A. No. According to the FCC, a determination of whether lack of access to an unbundled network element will "impair" a CLEC's ability to enter the market requires an analysis of "whether lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic." TRO ¶ 56. This Commission must analyze operational and economic factors "in concert." Clearly, if a CLEC is impaired because of operational barriers in a given market, no economic analysis will change that fact. Conversely, a lack of operational barriers cannot offset the existence of an economic barrier. A finding of impairment must be reached if either

operational *or* economic barriers are found to exist. My testimony addresses only economic impairment.

Q. IS IT LIKELY THAT AN "ECONOMIC IMPAIRMENT" ANALYSIS WILL ESTABLISH THAT ECONOMIC IMPAIRMENT DOES NOT EXIST?

A. No. Since 1996, CLECs have engaged in a wide variety of entry strategies. Many of these strategies have been based on an analysis of the same market-specific costs and potential revenues that the FCC contemplates in its analysis. The investors who funded - or elected not to fund - these entry strategies likewise considered these same factors.

Since 1996, I have worked with CLECs is most aspects of their market entry plans and have assisted investors (and potential investors) with their analyses of CLEC business plans. In my experience, the individuals who undertook these analyses for both carriers and investors were qualified to undertake the effort and to generate meaningful results. Yet the market realities (as revealed in the results of the triggers analysis) make it abundantly clear that CLECs either (1) could not economically justify the deployment of their own local switching equipment to serve mass market customers, and so decided not to make the investment, or (2) decided (in what in hindsight proved to be a bad decision) to make this investment, were unsuccessful, and are no longer attempting to use this entry vehicle as a means of serving mass market customers. This real-world experience of CLECs and investors over the last seven years reveals that CLEC deployment of their own local circuit switching equipment to serve mass market customers is not economically viable. Some previously elusive formula for making it economically viable is not likely to materialize in the midst of a contested state proceeding. It is even more unlikely that

this elusive formula will finally reveal itself in the results of a BellSouth "business case" model.

Q. ARE YOU SUGGESTING THAT THERE IS NO BENEFIT TO CONDUCTING AN "ECONOMIC IMPAIRMENT" ANALYSIS?

A. No. As I will describe in more detail later in my testimony, the FCC found the "economic impairment" analyses that it reviewed are highly sensitive to the underlying inputs and assumptions. A properly developed model, therefore, could be used to gain insight into which factors make the most significant contribution to the existing impairment and how changes in these factors (in terms of changes due to market response over time or changes induced through changes in regulatory requirements) impact the overall equation. The results of such an analysis would indicate whether a specific regulatory action has the potential, on a prospective basis, to reduce impairment for some markets in some circumstances.

III. THE FCC'S ECONOMIC IMPAIRMENT GUIDANCE

Q. WHAT GUIDANCE DID THE FCC PROVIDE TO STATE COMMISSIONS FOR CONDUCTING AN ECONOMIC IMPAIRMENT ANALYSIS?

A. In section VI.D.6.a.(i)(b) of the TRO, the FCC discusses the economic factors that may be relevant to states' determinations. The FCC focused principally on the primary cost disadvantage faced by CLECs, "the cost of backhauling the voice circuit to their switch from the customer's end office." The costs of backhaul "include the costs of collocating in the customer's serving wire center, installing equipment in the wire center in order to digitize, aggregate, and transmit the voice traffic, and paying the incumbent to transport the traffic to the competitor's switch" *Id.* at ¶480.

As shown in the testimony of Mr. Turner, this cost disadvantage is significant. Indeed, in my view, it is sufficient in and of itself to create economic impairment for CLECs.

Q. DID THE FCC REVIEW INFORMATION PROVIDED BY CLECS AND ILECS REGARDING OTHER ECONOMIC FACTORS?

A. Yes. In its review, the FCC considered studies conducted by both ILECs and CLECs. CLEC studies focused on the cost disadvantage created by the need to backhaul the traffic to the CLEC switch, while ILEC studies focused on the "revenue opportunities" available. Compare TRO ¶ 481 and ¶ 482. The FCC ultimately determined that none of the studies was sufficient to "form a basis for making a national finding of no impairment, or a finding of impairment on the basis of non-hot cut factors alone." *Id.* at ¶ 485. The FCC did conclude, however, that it was "persuaded that other economic factors, in addition to the economic and operational barriers associated with the current hot cut process that we have already identified, may make entry uneconomic without access to the incumbent's switch." TRO ¶ 484. Accordingly, the FCC found that the studies before it "strongly support the need for a more granular analysis of impairment ... Such an analysis would require complete information about UNE rates, retail rates, other revenue opportunities, wire center sizes, equipment costs, and other overhead and marketing costs." TRO ¶ 485.

Q. WHAT COSTS OTHER THAN THE BACKHAUL COSTS ARE RELEVANT TO AN ANALYSIS OF "ECONOMIC IMPAIRMENT"?

A. The FCC identified several additional types of costs. They included: the cost of purchasing and installing a switch; the recurring and non-recurring charges paid to the incumbent LEC for loops, collocations, transport, hot cuts, OSS, signaling, and other services and equipment necessary to access the loop; the cost of collocation and

equipment necessary to serve local exchange customers in a wire center, taking into consideration an entrant's likely market share, the scale economies inherent to serving a wire center, and the line density of the wire center; the cost of backhauling the local traffic to the competitor's switch; other costs associated with transferring the customer's service over to the competitor; the impact of churn on the cost of customer acquisitions; the cost of maintenance, operations, and other administrative activities; and the competitors' capital costs. TRO ¶ 520.

The FCC also noted that an economic impairment analysis should take into account the impact of scale economies and line densities on the costs incurred by ILECs and CLECs. TRO ¶ 520. Because many of the costs of providing local telecommunications services are fixed at some level, ILECs begin their efforts to compete with a unit cost advantage that CLECs cannot overcome without capturing sufficient market share. Even if it is theoretically possible for a CLEC to reduce its costs over time by achieving a significant market share, it cannot do so immediately. This time dimension is extremely important. The CLEC must make an investment that represents a significant fixed cost before serving any customers at all, and then must hope that it will achieve a threshold market share that makes the investment economically viable.

Q. CAN A COST DISPARITY ALONE CREATE IMPAIRMENT?

A. Yes, depending on which of the categories of cost creates the cost disadvantage. A disparity in the level of the costs that both the ILEC and CLEC must incur (assuming the CLEC can achieve the same scale economies as the ILEC) may not create impairment because an efficiently operating CLEC could overcome this cost disparity

– over time – if it could achieve the necessary scale of operations. In direct contrast, any costs that a CLEC must incur that the ILEC, as the incumbent monopoly provider, avoids do create impairment. The necessity of recovering backhaul-related costs and the inability of a CLEC to achieve the same scale economies as the ILEC in a given market both fall into this category. As I will explain below, no CLEC can "grow out of" this kind of cost disadvantage, and the resulting impairment cannot be overcome, and the resulting impairment cannot be eliminated merely by a broadening of the analysis to consider revenue opportunities.

Q. WHAT REVENUES ARE RELEVANT TO AN ANALYSIS OF "ECONOMIC IMPAIRMENT"?

A. After reviewing the studies presented by both ILECs and CLECs, the FCC found that revenue assumptions have a "significant impact" on the results. TRO ¶ 485. In its analysis, the FCC noted that "[t]he revenue estimates, which depend on customers' predicted expenditures on local voice service, were particularly controversial, and appear to have had a significant impact on the results." *Id.* The potential revenues include the basic retail price charged to the customer, the sale of vertical features, universal service payments, access charges, subscriber line charges, and, if any, toll revenues" TRO ¶ 519.

The FCC's focus on "predicted" or "potential" revenues is an important consideration. A CLEC that elects to invest in its own local switching facilities to serve mass market customers must recover the cost of those facilities over time from the revenues received from these customers. Prior to making such a substantial investment, a prudent CLEC will consider not only current revenue levels but also likely changes in those levels over time.

Some revenue changes may be predicted from current market trends. For example, it would clearly not be prudent for a CLEC to base its investment decision on an expectation of higher toll revenues in the future. Other revenue changes can be predicted by considering the operation of competitive market forces. Successful entry by a CLEC, particularly a CLEC that manages to increase its market share over time, will certainly inspire a competitive pricing response by the ILEC. As the FCC correctly noted, a market that is currently characterized by high rates and low costs is most likely to support self-provisioning of a switch by a CLEC to serve mass market customers. TRO ¶ 484 and n. 1499. It is important to recognize, however – and a prudent CLEC considering an investment of the scale of a circuit switch would certainly do so – that high prices and low costs do *not* represent a relationship that is likely to be maintained in an effectively competitive market. By definition, effectively competitive markets do not have such relationships. It is essential, therefore, for a CLEC to consider the potential revenues it would receive – and how the level of those potential revenues can be expected to change over time –when deciding whether to use its own local circuit switching equipment to serve mass market customers. Such a consideration is fully consistent with the FCC's conclusion that when "judging whether entry is economic," states must consider how "competitive risks affect the likelihood of entry." TRO ¶ 517.

Q. YOU STATED PREVIOUSLY THAT THE CLECS' COST DISADVANTAGE CREATED BY THE NEED TO BACKHAUL TRAFFIC FROM THE LOOP AGGREGATION POINT TO ITS SWITCH IS SUFFICIENT TO ESTABLISH ECONOMIC IMPAIRMENT. WHY CAN'T OTHER REVENUES OFFSET THIS COST DISADVANTAGE?

A. The potential for "offsetting revenues" is effectively eliminated by an undisputed fact: mass market revenue opportunities are the same for both ILECs and CLECs. If

revenue opportunities are the same and CLECs have higher costs as a result of need to backhaul all of their customers' loops and/or from the inability to fully realize the ILEC's economies of scale, ILECs will always be able to underprice the CLECs if they choose to do so. This is a point that cannot be ignored: an efficient CLEC that experiences a cost disadvantage cannot compete on price over time, and therefore cannot prudently invest in assets whose costs can only be recovered over an extended period of time.

Even if it could be shown a CLEC could use self-deployed local circuit switching to serve mass market customers in a given area at current retail prices, it could not rationally make the investment if it were also aware that it could be priced out of the market before recovering its investment.

In contrast, access to local circuit switching as a UNE, particularly because of its extremely important function of providing the CLEC access to voice grade local loops at the place where they are aggregated, puts ILECs and CLECs on a reasonably equal footing (the ILEC doesn't get an artificial competitive advantage as the first in, former monopoly provider). ILECs and CLECs can then compete based on the costs that they do control.

Q. DOES THE REGULATORY FLEXIBILITY ENJOYED BY THE ILEC IMPACT THIS EQUATION?

A. Yes. The ability of an ILEC to easily make price changes underscores the temporary nature of any market that is currently characterized by high prices and low costs. An ability to decrease the price charged to all mass market customers means that the ILEC can underprice a CLEC that has invested in its own local circuit switching facilities. An ability to target the price reduction only to those mass market

customers that have been or are likely to be lost (through a so-called win-back offering, for example) puts the ILEC in an even better position: it can underprice the CLEC where necessary to recapture and retain customers, and can do so without incurring the cost of offering the price reduction to all customers in the area.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

I. BACKGROUND AND PURPOSE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Don J. Wood. My business address is 30000 Mill Creek Avenue, Suite 395, Alpharetta, Georgia, 30022.

Q. ARE YOU THE SAME DON J. WOOD WHO PREFILED DIRECT TESTIMONY IN THIS PROCEEDING ON BEHALF OF AT&T ON DECEMBER 4, 2003?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of BellSouth witnesses Debra Aron, Randall Billingsley, Keith Milner, and James Stegeman.

The testimony of these witnesses supports BellSouth's analysis of the *potential* for competitive entry by CLECs to provide services to mass market customers in certain BellSouth-defined geographic markets, and to do so by self-provisioning the necessary local switching facilities. I am responding specifically to the claim by Dr. Aron (p. 6) that, based on the results of the BellSouth analysis, the Commission should conclude that CLECs are not impaired without access to the local circuit switching UNE. Dr. Aron makes the claim (p. 6 and Exhibit DJA-2) that this analysis supports a conclusion that CLECs are not impaired in 10 of the BellSouth-defined markets. The FCC has made it clear that an analysis of potential deployment must consider both operational and economic barriers. AT&T witness Mark Van de Water addresses operational impairment issues in his testimony. My testimony focuses on economic barriers to market entry, and addresses the BellSouth model

used to conduct its analysis and the inputs and assumptions that BellSouth chose to use with that model.

A closer review of the BellSouth "economic impairment" analysis reveals that limitations in the computer model used (the BellSouth Analysis of Competitive Entry, or "BACE" model sponsored by Mr. Stegeman) and conflicting and nonsensical inputs to that model (sponsored by Drs. Aron and Billingsley) have created a highly distorted version of reality that offers no basis whatsoever for a conclusion that CLECs' efforts to provide services to mass market customers are not impaired without access to UNE switching.

The structural limitations of the model cannot be corrected, and BellSouth has refused a request to make the source code available in a usable format that may have permitted a correction to some of these problems. Because of the model limitations, it is impossible in many cases to populate the model with meaningful input values. Making all of the corrections required to bring the BACE in line with reality is ultimately unnecessary, however: my analysis of the BellSouth inputs shows that even minor changes to certain key inputs causes the reported Net Present Value of CLEC entry using self-provisioned local switching to be negative. In other words, with even modest input corrections the BACE confirms the actual facts "on the ground": economic barriers exist to CLEC entry via self-provisioned local switching that make such an investment uneconomic. Prudent, rational CLEC management will not seek to make these investments, and prudent, rational investors will not make the capital available to do so.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. Before considering the results of any analysis of "potential deployment," it is important to put this question into the proper context. In the TRO, the FCC creates an opportunity for ILECs to demonstrate, if they can, that no impairment exists in specific, geographic markets. It is important to note that any consideration of "potential entry" is made only after the Commission concludes that "actual entry" has not occurred, even though CLECs have been, and continue to be, motivated to utilize their own network facilities wherever feasible. Any assertion by BellSouth that competition for mass market customers using self-provisioned local switching can *potentially* exist, even though it does not *actually* exist, should be carefully examined before being relied upon.

BellSouth conducts its analysis of "economic" impairment using its new BACE model. This analysis is fundamentally flawed for several reasons. First, the model "locks in" several important assumptions. Important price assumptions are preprocessed and cannot be changed, or even directly examined, by the user. Equally importantly, the model is designed to permit an analysis to be performed *only* over a ten-year time horizon. The user has no ability to consider a shorter investment horizon that a rational investor would consider before making an investment in a large, fixed asset such as a local circuit switch.

BellSouth's inputs to the BACE are likewise flawed, and overstate the likely revenues that a CLEC would receive in two ways. BellSouth has failed to properly consider how its retail prices for services to mass market customers vary across its service territory, causing its initial price assumptions to be flawed and rendering its attempt to segment customers based on spending levels meaningless. More

importantly, BellSouth has failed to consider how prices will change over the time horizon of its analysis. In addition to inflated prices, BellSouth assumes a total market that is too large CLEC markets shares that far exceed those experienced to date, and a rate of customer acquisition for CLECs that exceeds anything previously experienced in the industry. Finally, BellSouth assumes a scope of CLEC service offerings that may not represent the services that the CLEC seeks to offer, and even if offered, do not represent the opportunity for cost recovery assumed by BellSouth.

BellSouth also understates the costs that a CLEC would incur. BellSouth's analysis includes revenues from a broad array of services but includes the sales costs associated with only a subset of those services. The G&A costs assumed by BellSouth are based in part on companies with a much greater customer density in the markets being studied, and understate the costs that an efficient CLEC would incur. Most importantly, BellSouth has grossly underestimated the likely cost of capital to a CLEC seeking to self-deploy local circuit switching. After arguing that a CLEC utilizing UNEs incurs less risk that a CLEC investing in its own network infrastructure, and after noting that CLECs who made investments in large, fixed network assets to serve mass market customers in the past are now largely bankrupt, BellSouth assumes that a CLEC that invests in local circuit switching will incur *less* risk and a *lower* cost of capital in the future. By understating the cost of capital, BellSouth understates the discount rate applied in its Net Present Value calculation. This causes the present value of future revenues to be overstated and results in an artificially positive reported NPV.

With changes to only a few of its unreasonable assumptions, the BACE consistently reports that CLEC deployment of local switching to serve mass market customers is uneconomic.

Q. HAVE YOU BEEN ABLE TO CONDUCT A COMPLETE REVIEW OF THE BACE MODEL?

A. No. As of the filing of this testimony, a complete analysis of the BACE has not been conducted. Our efforts continue to be encumbered by the frequent crashes of the model and the limitations of the model wizard. We continue to encounter instances in which the model produces different results for otherwise identical runs and where different users operating different computers obtain inconsistent results. Our efforts are also limited by a model structure that makes it impossible to change certain key assumptions, such as the time horizon for the analysis (the model effectively locks this assumption at ten years).

While the parties ought to have an opportunity to fully examine the BACE model before its results are relied upon, the issue may ultimately be moot: the limited analysis completed to date indicates that there are ample reasons to reject the model results – and BellSouth's proposed conclusion of no impairment – based on inputs that can be changed.

II. <u>THE REALITIES OF THE MASS MARKET MUST BE PART OF ANY POTENTIAL DEPLOYMENT ANALYSIS</u>

Q. WHAT DID THE FCC CONCLUDE REGARDING WHETHER CLECS ARE IMPAIRED WITHOUT ACCESS TO THE LOCAL CIRCUIT SWITCHING UNE WHEN ATTEMPTING TO SERVE MASS MARKET CUSTOMERS?

A. As I indicated in my direct testimony, the FCC has reached a clear and unambiguous conclusion in the TRO: "we find on a national level that requesting carriers are impaired without access to unbundled local circuit switching when serving mass market customers," and this national finding is driven home by repeated references to this conclusion. TRO ¶ 419, see also ¶¶ 422, 424, 459, 476, 479, and 493. Impairment has been found to exist for CLECs attempting to serve the mass market without access to unbundled local switching, and this Commission may not overturn this finding, unless and until specific, concrete evidence to the contrary is identified and documented for a given market. Even BellSouth's Mr. Ruscilli concedes, at p. 4 of his testimony, that "CLECs serving mass market customers are presumed to be impaired."

Q. IS IT REASONABLE TO EXPECT THAT AN ANLYSIS OF "POTENTIAL" MARKET ENTRY WILL PROVIDE THE COMMISSION WITH A SOUND BASIS TO CONCLUDE THAT NO IMPAIRMENT EXISTS IN A GIVEN MARKET?

A. No. It is important to recognize that the FCC developed the mechanism for a "potential deployment" analysis to be conducted and considered if, but only if, this Commission first determines that the triggers set forth in the TRO are not being met. In other words, the consideration of an analysis of potential deployment occurs only if CLECs are not actually self-provisioning switches to serve mass market customers in the market in question and alternative sources of wholesale local switching are not available. The absence of CLECs using self-provided local switching, therefore, will have been firmly established before any analysis begins to determine the operational and economic barriers to entry that a CLEC would face. The reality is that self provisioned switches do not exist in the mass market, and this fact should eliminate

any question regarding the ability of CLECs to enter a market and successfully compete for mass market customers is impaired without access to UNE local circuit switching.

In summary, the Commission will have ample evidence that CLECs are impaired without access to unbundled local switching to serve the mass market before it begins any detailed review of BellSouth's assumptions regarding expected revenues and costs or the computer model that uses them. For this reason, the results of any "potential deployment" analysis that suggests an opportunity for CLECs to self-provision local switching to provide service to mass market customers should be met with considerable skepticism.

A. The Reality Is That CLECs Are Not Self-Provisioning Switches.

Q. DOES THE FCC PROVIDE A USEFUL REALITY CHECK TO BE APPLIED WHEN CONSIDERING THE RESULTS OF ANY ANALYSIS OF "POTENTIAL" MARKET ENTRY?

A. Yes; the FCC actually provides two useful reality checks against which the results of any such analysis should be compared.

First, the FCC noted that on a national level, actual entry using self-provisioned switching to provide service to mass market customers has been minimal. After collecting a large volume of information in the course of its investigation, the FCC concluded (¶ 422) that "the record indicates that there has been only minimal deployment of competitive LEC-owned switches to serve mass market customers."

Based on data that the FCC notes may be inflated, the FCC calculated (¶438) that CLECs using self-provisioned switches are serving "less than three percent" of

the residential voice grade lines currently served by the incumbent LECs. The FCC went on to note (¶442) that wholesale local switching from a source other than the incumbent LEC is unavailable: "Moreover, because no party offers evidence to show that third parties are currently offering switching on a wholesale basis ... we find that no significant third-party alternatives to unbundled local switching exist."

It is apparent that the FCC did not consider these findings surprising, as it goes on to explain (¶ 422) that "the characteristics of the mass market give rise to significant barriers to competitive LECs' use of self-provisioned switching to serve mass-market customers." As BellSouth's BACE model can be used to demonstrate, these barriers are not easily overcome.

Second, the FCC provides the opportunity for state regulators to consider evidence of self-provisioned local circuit switching to serve mass market customers in specific geographic areas. By definition, if this Commission sees results from a so-called "business case model" that suggests that self-provisioning for mass market customers is economically viable in a given area the Commission is immediately presented with an opportunity for an important reality check: such self-provisioning is not actually taking place.

This reality check is a critical opportunity for the Commission to compare what competitive entry and activity is *actually* taking place with the results of what the BellSouth BACE model suggests *could* be taking place. In my experience, CLECs are highly motivated to utilize their own equipment and facilities whenever and wherever feasible. Reliance on a competitor – BellSouth - to provide wholesale facilities is not an enviable position to be in and means that the CLEC has no control

over important aspects of service quality and provisioning that will be experienced by its customers.

Q. AFTER MAKING ITS FINDING OF IMPAIRMENT REGARDING LOCAL SWITCHING TO SERVE MASS MARKET CUSTOMERS, WHAT PROCESS DID THE FCC PUT INTO PLACE ON A GOING-FORWARD BASIS?

A. After concluding (¶422) that "competitive providers providing service to mass market customers are impaired without unbundled access to local circuit switching," the FCC stated (¶423) "our analysis could end with this conclusion." Rather than end with a conclusion of impairment, however, the FCC asked the states to begin the process of identifying proactive steps to mitigate, if possible, the causes of impairment.

Specifically, the FCC noted operational barriers to entry created by an inadequate manual "hot cut" process unsuitable for migrating large numbers of mass market customers from one carrier to another. It asked (¶ 423) state regulators to "approve and implement a batch cut migration process – a seamless, low cost process for transferring large volumes of mass market customers" and to determine if such a process could mitigate the impairment posed by the existing inadequate manual loop migration process.

The FCC (¶ 476) also recognized that other sources of impairment may exist and recognized that, even if a batch cut migration process is implemented, "requesting carriers may be impaired without access to unbundled incumbent LEC local circuit switching because of operational and economic factors other than those associated with hot cuts." The FCC (¶506) directed the states to consider the theoretical possibility that specific geographic markets exist in which "self-provisioning of switching is economic notwithstanding the fact that no three carriers

have *in fact* provisioned their own switches" (emphasis in original). When attempting to determine whether such a theoretical possibility exists, the FCC directed the Commission to consider three factors in concert:

> First, states must examine whether competitors are using their own switches to serve enterprise or mass market customers in the market at issue. Second, states must consider the role of operational barriers ... Third, states must consider the role of potential economic barriers associated with the use of competitive switching facilities. TRO ¶ 507

Dr. Aron (pp. 6-7, Mr. Ruscilli (p. 11), and Mr. Stegeman (p. 13) each refer the FCC's requirement that the states consider each of these three factors.

Q. DOES THE FCC DEFINE "IMPAIRMENT" AS IT IS USING THE TERM IN THE ORDER?

A. Yes. The FCC states (¶56) that a determination of impairment means understanding "whether lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic." There are two important elements of this definition: (1) a single barrier to entry, either economic or operational, is sufficient to establish impairment, and (2) the barrier need only make it likely that entry into the market will be uneconomic. The FCC further clarified its definition of impairment when it referred (¶60) to the requirement of section 251(d)(2) that "requires the Commission to consider whether the failure to provide access to a particular network element would impair the ability of a requesting telecommunications carrier 'to provide the services that *it* seeks to offer'" (emphasis in FCC's original). The analysis, therefore, cannot focus on what services BellSouth thinks that CLECs ought

to be offering to mass market customers; it must instead focus on what services CLECs seek to offer.

B. The Reality Is That Local Circuit Switches Provide Not Only Switching Functions, But Also Serve As An Important Loop Aggregation Point.

Q. DID THE FCC IDENTIFY THE PRIMARY ECONOMIC BARRIERS TO POTENTIAL DEPLOYMENT?

A. Only in part. The FCC did identify a barrier to entry that is significant and very difficult to mitigate: the cost advantage that the ILEC enjoys by having its local switching facilities located at the primary aggregation point of its local loops. This significant cost advantage is due to the design of the legacy ILEC network that was developed in a monopoly provider environment.

The FCC recognized that an ILEC end office is an extremely important point of network aggregation: it is the place where the ILEC's local loops come together. The ability to locate local switching equipment at this key facilities-aggregation point is an essential part of an efficient network configuration for serving the mass market customers connected to voice grade loops. As a result, "access to local circuit switching" also means "access to an essential network aggregation point." As the FCC explains (¶429):

> We note that an important function of the local circuit switch is as a means of accessing the local loop. Competitive LECs can use their own switches to provide services only by gaining access to customers' loop facilities, which predominately, if not exclusively, are provided by the incumbent LEC. *Although the record indicates that competitors can deploy duplicate switches capable of serving all customer classes, without the ability to combine those switches with customers' loops in an*

> *economic manner, competitors remain impaired in their ability to provide service* (emphasis added).

Given this legacy network design, a CLEC's ability to purchase UNE loops and UNE local switching, particularly as a UNE-P combination, is the only means of putting the CLEC in a position comparable to that enjoyed by the ILEC; a situation from which it can perform a local switching function at the location where its customers' loops are aggregated.

Q. WHY IS IT IMPORTANT TO PERFORM THE LOCAL SWITCHING FUNCTION WHERE THE ILEC'S LOCAL LOOPS ARE AGGREGATED?

A. There is no real debate about the economic necessity of a CLEC's access to ILEC local loop facilities. As the FCC explained (¶439):

> We have made detailed findings that competitors are impaired without access to incumbents' voice-grade local loops. Indeed, no party seriously contends that competitors should be required to self-deploy voice grade loops … entry into the mass market will likely require access to the incumbent's loops, using the UNE-L strategy … this strategy raised operational and economic difficulties associated with accessing the loop. Indeed, as discussed above, *a crucial function of the incumbent's local circuit switch is to provide a means of accessing the local loop* (emphasis added).

The FCC also concluded (¶446) that the presence of cable or CMRS switching facilities do nothing to alleviate this bottleneck: "We are unaware of any evidence that either technology can be used as a means of accessing the incumbents' wireline voice-grade local loops. Accordingly, *neither technology provides probative evidence of an entrant's ability to access the incumbent LEC's wireline voice-grade local loop and thereby self-deploy local circuit switches*" (emphasis added).

Q. DO OTHER ECONOMIC BARRIERS TO ENTRY EXIST FOR A CLEC ATTEMPTING TO SELF-PROVISION LOCAL SWITCHING TO SERVE THE MASS MARKET?

A. Yes. As new entrants, CLECs incur a level of risk when investing in a large fixed asset, such as a local switch, that ILECs do not face. This can be looked at as an entry barrier uniquely faced by CLECs, or as an example of a "first in" advantage enjoyed by the ILEC. Either way, it represents a significant barrier to a CLECs' self-provisioning of local switching equipment to serve mass market customers.

When making their investments in local switching, the ILECs did so (and continue to do so) with the knowledge that a large and stable customer base would be available to contribute to the recovery of the asset's capital and operational costs. As the BellSouth witnesses point out (and the BACE demonstrates), the decision to invest in a local circuit switch represents a decision to incur a large fixed cost that must be recovered from a sufficiently large base of customers. Without access to UNE local switching and UNE-P, a CLEC that seeks to serve the mass market would have to enter this market by incurring this large fixed cost and beginning with no customer base at all.

For purposes of illustration, the following is a simplified example. Assume that Carrier A invests $1,000,000 in an asset whose cost is largely fixed, and does so with a ready base of 50,000 customers through which to recover that fixed cost ($20/customer). Carrier A does in fact incur some risk by making the investment, and this risk must be considered by a prudent decision maker when deciding to make the investment. In contrast, assume that Carrier B makes the same $1,000,000

investment, but has an initial customer base of 0 (or even 500 or 5000) through which to recover that same fixed cost (a cost that could begin at $1,000,000 per customer, and would continue to be higher than the ILEC's cost until 50,000 customers are acquired). Carrier B faces a very different risk profile than carrier A, and this different risk profile must be considered when considering whether the investment is prudent for Carrier B to make.

In order to increase the size of its potential customer base, Carrier B could seek to provide service to a larger geographic area with its switch than Carrier A does with its equipment. Doing so would increase the size of the potential customer base but comes with a trade-off: while Carrier B will have increased the likelihood that its per-customer cost of switching could approach (over time) the level incurred by Carrier A, in doing so, Carrier B will have increased its need to transport traffic over extended distances and increased the magnitude of its "backhaul" cost disadvantage *vis-à-vis* Carrier A. The extended transport facilities add to the costs that Carrier B must find a way to recover in the prices charged to its customers.

Q. PLEASE SUMMARIZE THE RISKS THAT ARE REFLECTED IN YOUR EXAMPLE.

A. As this simple example illustrates, two factors work in tandem to create a significant economic barrier to the self-provisioning of local circuit switching. The ILEC makes its investment with a customer base in place, and is able to locate its switching equipment at the aggregation point of its local loops. In direct contrast, a CLEC must build a customer base while incurring a higher per-customer cost than the ILEC, and must incur additional costs to transport traffic from the loop aggregation points to its switch. As discussed in the Direct testimony of AT&T's witness Steve Turner, these

added costs constitute an absolute cost penalty to the CLEC. In addition, these added costs contribute to the higher risk faced by the CLEC, which in turn increases the CLEC's cost of capital.

Q. ARE THERE ADDITIONAL FACTORS THAT CONTRIBUTE TO THE HIGHER RISKS FACED BY THE CLEC WHO ATTEMPTS TO SERVE THE MASS MARKET USING SELF-PROVIDED LOCAL SWITCHING?

A. Yes. The above risks are multiplied for the CLEC if the ILEC has significant pricing flexibility, as BellSouth does in Florida. BellSouth can take advantage of the CLEC's cost disadvantage by reducing its prices to a level above its own costs but below those of the CLEC (for the reasons described above, even a CLEC that is operating more efficiently than BellSouth will, because it does not have BellSouth's "first in" advantages, be at a cost disadvantage for most of its service offerings). Furthermore, by targeting its pricing response, BellSouth can retain or "win back" mass market customers that may have chosen previously to select the CLEC. This will keep the CLEC's per-customer cost high (limiting its ability to grow its market share) and ultimately prevent the recovery of the large fixed investment in local circuit switching. Knowing that BellSouth has this ability, a prudent CLEC would not make this investment.

C. Any Potential Deployment Analysis Must Take Into Account These Market Realities in Order to be Valid.

Q. CAN AN ANALYSIS OF "POTENTIAL DEPLOYMENT" PROVIDE USEFUL INFORMATION?

A. Yes. If properly conducted, a "potential deployment" analysis can shed some light on the following question: "What operational and economic barriers to entry exist that

cause CLECs to be impaired?" The answers (and there are likely to be several) to this question may be useful, particularly if the Commission seeks to find specific actions that it can take to reduce or eliminate these barriers to entry within the geographic markets that are analyzed. Such information would be useful to anyone undertaking an effort to develop prospective requirements to reduce or eliminate the existing sources of impairment. Of course, the results of such an analysis may also indicate that the factors that create the existing level of impairment are more fundamental in nature and are beyond the reach of regulatory requirements.

Q. PLEASE SUMMARIZE YOUR OBSERVATIONS REGARDING THE PROPER CONTEXT FOR CONSIDERATION OF BELLSOUTH'S "POTENTIAL DEPLOYMENT" ANALYSIS.

A. The FCC concluded (¶506) that in a situation in which no *actual* deployment of mass market switching could be observed in a defined market area, it might nevertheless be *potentially* possible for the CLECs to utilize their own local circuit switching equipment to serve mass market customers. As described above, such a scenario defies both experience and logic: CLECs have invested in a broad range of entry strategies over the past seven years, and in an area where none of those strategies has met with *actual* success, it is extremely unlikely that there is some as-yet hidden formula for *potential* success, and even more unlikely that BellSouth has now managed to find the formula that has eluded CLECs for all these years. Accordingly, a reversal of the FCC's national finding of impairment for mass market local switching based on the results of a *potential* deployment analysis prepared by BellSouth for this proceeding should not be made without a very careful consideration of the methodology and assumptions relied upon.

III. THIS COMMISSION SHOULD CAREFULLY FRAME THE QUESTIONS TO BE ANSWERED IN ANY "POTENTIAL DEPLOYMENT" ANALYSIS TO ENSURE AN ACCURATE AND MEANINGFUL RESULT.

Q. WHAT SPECIFIC QUESTIONS REGARDING "POTENTIAL DEPLOYMENT" ARE BEFORE THE COMISSION IN THIS PROCEEDING?

A. Any process that ultimately produces a meaningful answer must begin with meaningful statement of the question. This proceeding is no exception.

At p. 6, Dr. Aron states that of the 31 BellSouth-defined markets in Florida, BellSouth is claiming that this Commission should reverse the FCC's national finding of impairment in 10 of those markets based on the results of the BACE model. (Dr. Aron also incorrectly claims that the FCC's trigger requirements are met in 13 of the remaining markets. This claim is addressed in the Rebuttal Testimony of Joseph Gillan on behalf of FCCA.)

Dr. Aron goes on to describe the proper "potential deployment" analysis as directly comparable to a business case analysis that a firm would conduct prior to making an investment. Dr. Aron states (pp. 9-11) that "a business case is an analytical approach, with a specific structure, that is used to quantify the expected value of a particular investment opportunity, and thus determine whether the investment opportunity is 'economic' ... *Properly implemented*, the business case approach correctly distinguishes between 'economic' and 'uneconomic' entry, and therefore is particularly (and uniquely) suited to an analysis of CLEC impairment" (emphasis added).

Q. DO YOU AGREE WITH DR. ARON'S ASSESSMENT?

A. While I'm not sure that a business case approach is "uniquely" suited to the task at hand, I do agree that such an analysis, *properly implemented*, can indicate whether a

rational firm would make the investment (and incur the risk) necessary to enter a given market under a specific set of circumstances. This is the "potential deployment"-related question before the Commission in this proceeding.

As always, however, the devil is in the details. In order to be properly implemented, the analyses described by Dr. Aron must be structured correctly and populated with meaningful and accurate assumptions. BellSouth has produced a computer model that is visually stunning (the maps in particular are quite colorful) and impressive in its complexity. This is not a situation in which form trumps substance, however. All the window dressing in the world can't overcome fundamental errors in the structure of the analysis or in the assumptions used to create the results. The BACE results represent such a flawed analysis. After loading the model with unreasonable and internally-inconsistent assumptions, BellSouth has produced the results of a business case analysis that erroneously suggests that market entry by a CLEC would be economic in certain markets. BellSouth has only a tenuous hold on this alternative reality, though. Even slight changes to key assumptions cause BellSouth's business case analysis to indicate that mass market entry via self-provisioned local switching is not economic and would not be undertaken by a rational CLEC.

Q. WHAT IS THE PURPOSE OF A PROPERLY IMPLEMENTED BUSINESS CASE ANALYSIS?

A. At pp. 14-15, Dr. Aron correctly points out that "the purpose of a business case is to assess, within the framework of the business case model, the effect of *all* barriers to entry and barriers to capturing profit opportunities that exist in the market at issue. Entry barriers raise the costs or reduce the revenue opportunities associated with

competitive entry. A well-specified business case model incorporates as costs (or reductions in revenue opportunities) the effect of all such barriers" (emphasis in original). I agree with Dr. Aron that any meaningful business case analysis must fully consider all of the potential barriers to entry. I strenuously disagree with any conclusion that the BACE, populated with BellSouth's chosen inputs, represents such an analysis.

Q. WHAT QUESTIONS WOULD YOU POSE FOR THIS COMMISSION TO ANSWER IN DOING A PROPER BUSINESS CASE OR "POTENTIAL DEPLOYMENT" ANALYSIS?

A. There are really two questions: (1) "Would a CLEC management team, using reasonable judgment, elect to make this investment?" and (2) "Would a rational investor provide the capital needed for the CLEC to make such an investment?"

Q. DOES BELLSOUTH ADEQUATELY ADDRESS THE FIRST QUESTION: WOULD A CLEC MANAGEMENT TEAM, USING REASONABLE JUDGMENT, ELECT TO MAKE THIS INVESTMENT?

A. No. Mr. Stegeman (p. 19) states that "the model allows the user to assume that the CLEC management team will use reasonable judgment." One of the problems with BellSouth's potential deployment analysis, however, is that the assumptions utilized do not represent the assumptions of a CLEC management team exercising reasonable judgment. When inputs and assumptions are used that do reflect such reasonable judgment, the results of the BACE indicate that a rational CLEC would not attempt to provide mass market services via self-provisioned local switching anywhere within BellSouth's operating territory in Florida.

Q. WHY IS IT ALSO IMPORTANT TO ADDRESS THE SECOND QUESTION: "WOULD A RATIONAL INVESTOR PROVIDE THE CAPITAL NEEDED FOR THE CLEC TO MAKE SUCH AN INVESTMENT?"

A. As Dr. Aron states at p. 11, a properly structured business case analysis permits the determination of "whether investors would rationally provide the capital needed to fund entry (and other) costs that would be incurred." This, of course, is true. A CLEC management team cannot actually make a given investment, however prudent they may consider it to be, without the willingness of an investor to provide the necessary capital. Ideally, rational managers and rational investors will reach the same conclusion regarding the key assumptions of the business case analysis. Their decisions are interrelated but somewhat different. The management team can conduct its business case analysis based on an assumption regarding the cost of necessary capital (the return investors will demand in return for a given investment). Assuming the risk of the investment being considered is comparable to the risk of the company as a whole, this cost of capital can serve as the discount rate for the business case NPV analysis. The return actually demanded by investors, however, will reflect other factors that are not directly related to the CLEC or the potential investment. As Dr. Billingsley correctly points out (p. 27), "current [capital] market values are determined by investors' most up-to-date expectations for the future. These expectations are based on a variety of factors, many of which are external to the CLEC."

The total capital available also plays a role, as different risk/return combinations vie for investors' money. Investors may shy away from a particular industry and be reluctant to invest (or require a higher return if they do). This has, and continues to be, the case for many CLECs. Dr, Billingsley (p. 13) cites to an article that acknowledges this "ongoing drought in the capital markets." Accordingly,

in order to conduct Dr. Aron's "properly implemented" business case analysis, it is first necessary to determine that the necessary capital will be made available, and then to ascertain, based on "investor's most up-to-date expectations for the future," what the cost of that capital will be to CLECs, which in turn represents the appropriate discount rate to be utilized for the NPV analysis.

Q. DOES BELLSOUTH ADEQUATELY ADDRESS THE WILLINGNESS OF INVESTORS TO PROVIDE CAPITAL?

A. No. As I will describe in the next section of my testimony, I disagree with some of Dr. Billingsley's assumptions regarding a CLEC's likely cost of capital. These assumptions can be addressed by changing the inputs to the model. Other problems exist in the structure of the BellSouth BACE model and analysis, however, that are not so easily remedied. For example, the analysis as conducted implicitly assumes that a CLEC's investment in a local circuit switch represents the same level of risk as the CLEC's current operations (it is this risk of current operations that is reflected in the data relied upon by Dr. Billingsley). This is clearly not the case. As the BellSouth witnesses point out, a CLEC incurs greater risk when self-provisioning a local circuit switch than when utilizing UNE switching or UNE-P. Dr. Billingsley assumes a market beta for CLECs, but the BACE has no place to enter a project beta to reflect the increased riskiness of the investment being considered. As another example, Dr. Billingsley, after citing to the article noting the lack of available capital, implicitly assumes that the necessary total amount of capital will be made available, and will be available at a cost that represents a level of risk *lower* than that currently being experienced by CLECs. There is no rational basis for this assumption.

Q. WHAT MUST A MODEL SUCH AS BACE DO TO ADDRESS THE QUESTIONS YOU IDENTIFIED?

A. In order for the model results to accurately provide an answer to the questions "Would a rational CLEC make an investment in local circuit switching to provide service to mass market customers?" or "Are rational investors likely to provide the capital necessary for CLECs to make these investments?," the model must (1) accurately perform the required tasks, (2) permit a consideration of all potential barriers to entry, and (3) be populated with inputs and assumptions that are reasonable.

Q. HAVE YOU BEEN ABLE TO DETERMINE IF THE BACE MEETS THESE CRITERIA?

A. I have not yet been able to determine whether the model calculations are accurate because of the preprocessing conducted and the lack of access to any of the underlying code. I have been able to determine that the model does not consider all barriers to entry, and that BellSouth's inputs and assumptions are not reasonable. Of course, a failure in any one of these areas renders the results unreliable.

IV. BELLSOUTH'S MODEL IS BASED ON AN ALTERNATE REALITY.

Q. WHAT CATEGORIES OF BACE CLACULATIONS AND ASSUMPTIONS HAVE YOU EXAMINED?

A. I have examined the calculations and assumptions associated with expected revenue (price, quantity sold, and scope of service offerings) and expected cost (including network/operations cost and the cost to the CLEC of obtaining capital). I will address each category in turn.

A. BellSouth Makes Improper Revenue Assumptions.

Q. WHAT REVENUES MUST BE CONSIDERED IN AN ANALYSIS OF POTENTIAL DEPLOYMENT?

A. The FCC requires that a CLEC's likely revenues be considered. TRO ¶¶517, 519. The FCC explicitly recognizes that the amount of revenue that will be available to a CLEC in the future (but during the time over which the large fixed cost of a local circuit switch must be recovered) is uncertain. This uncertainty must be reflected in a business case analysis, both in terms of revenue (the prices assumed over time) and cost (the impact of risk).

Initial prices, geographic differences in initial prices, and the magnitude of the price discount that a CLEC must offer to entice a customer to leave the ILEC must be considered. Equally (and perhaps more) importantly, it is necessary to consider how prices are likely to change over time. Long-term trends play a role, but a consideration of such trends alone is not sufficient. It is also necessary to examine the prices and corresponding costs in discreet geographic areas in order to determine (1) whether the price currently being charged in a given area is likely to change over time as it moves toward the underlying cost, and (2) the likely magnitude of such a change. It is also necessary to consider the flexibility that BellSouth has to respond to a CLEC's price. The presence of a BellSouth customer "winback" program changes the effective price against which a CLEC must compete if it wants to retain the customer for any significant period of time. Finally, the size of the overall market must be considered. Likely CLEC revenues are a function of both the CLEC's market share and the size of the overall market that can be served by the investment being considered.

1. BellSouth Makes Improper Assumptions about Price Levels Over Time.

Q. WHY IS IT IMPORTANT TO CONSIDER PRICE CHANGES OVER TIME?

A. As the FCC correctly noted (¶484, footnote 1499), a market that is currently characterized by high rates and low costs is most likely to support self-provisioning of a switch by a CLEC to serve mass market customers. It is important to recognize, however – and a prudent CLEC considering an investment of the scale of a local circuit switch would certainly do so – that high prices and low costs do *not* represent a relationship that is likely to be maintained in an effectively competitive market. By definition, effectively competitive markets do not have such relationships. It is essential, therefore, for a CLEC to consider the potential revenues it would receive – and how the level of those potential revenues can be expected to change over time – when deciding whether to invest in its own local circuit switching equipment to serve mass market customers. Such a consideration is fully consistent with the FCC's conclusion (¶517) that when "judging whether entry is economic," states must consider how "competitive risks affect the likelihood of entry."

A CLEC that elects to invest in its own local switching facilities to serve mass market customers must recover the cost of those facilities over time from the revenues received from these customers. Prior to making such a substantial investment, a prudent CLEC will consider not only current prices and projected revenue levels but also likely changes in those prices and levels over time. Some revenue changes can be predicted from current market trends. For example, it would clearly not be prudent for a CLEC to base its investment decision on an expectation of higher toll revenues in the future. Other price and revenue changes can be

predicted by considering the operation of competitive market forces. Successful entry by a CLEC, particularly a CLEC that manages to increase its market share over time, will certainly inspire a competitive pricing response by the ILEC.

Q. WHAT INITIAL PRICE LEVELS MUST BE CONSIDERED?

A. It is necessary to consider prices at BellSouth's current level of disaggregation in order to predict CLEC revenues over time with any degree of accuracy. For mass market customers, BellSouth currently has twelve rate groups in Florida (a given wire center is assigned to one rate group). The rates vary significantly across rate groups. Rate Group 1 customers of BellSouth's residential or small business local exchange services pay only about 58% of the rate that a comparable customer in Rate Group 12 would pay. BellSouth's tariff pages showing the rate groups and applicable rates are attached as Exhibit DJW-2.

A complete consideration of this geographic disaggregation is important for two reasons. First, the price that BellSouth charges to retail customers served by a given wire center is the initial price against which the CLEC must compete for that customer. Even if the market is defined as an area larger than a wire center (BellSouth has defined markets as representing a larger geographic area), it is still necessary to consider the level of retail prices at the wire center level because the CLEC must compete against the price actually offered to these customers, not an average of the prices offered by BellSouth to retail customers served by different wire centers.

Second, it is essential that prices be considered at this level of disaggregation in order to determine the likelihood and potential magnitude of price changes during

the time horizon of the analysis. This problem is particularly acute because BellSouth's retail rate structure for mass market customers is roughly the inverse of its cost structure: the highest prices are charged in the lowest cost areas, and lowest prices in the highest cost areas. Areas currently characterized by high prices and low costs are the areas within which prices are most likely to decline over time and likely to be reduced by the greatest amount. A CLEC management team exercising reasonable judgment would not decide to make a large fixed investment based on a business case analysis that assumes that high prices can be maintained in low cost areas.

Q. DOES BELLSOUTH ADDRESS INITIAL PRICES AT CURRENT LEVELS OF AGGREGATION?

A. No. Mr. Stegeman argues (p. 14) that "the model allows the user to input complete information about UNE rates, retail rates and other revenue opportunities specific to each wire center." This does not appear to be correct: I have been unable to find a way in working with the BACE model to establish initial prices based on wire center-specific prices in place today, or, more importantly, to forecast future price changes on a wire center-specific basis. Without this ability, it is impossible to accurately determine the revenues that a CLEC is likely to receive.

Q. DR. ARON ARGUES (P. 23) THAT IT IS APPROPRIATE TO BASE PROJECTED REVENUES USED IN THE BACE ON "PREVAILING PRICES." DO YOU AGREE?

A. No. Dr. Aron states (p. 23) that BellSouth has developed initial prices for individual service offerings on BellSouth billing data that reflects current prices. Initial prices for bundles of services were developed by Dr. Aron after she reviewed prices for unspecified bundled offerings of unidentified CLECs and engaged in a process that

she does not describe in her testimony. Beyond the problem (described in more detail below) that these assumptions were developed in a "pre-processing" stage and are not actual inputs to the BACE, these assumptions are inconsistent with the extended time horizon (ten years) that BellSouth has locked into the BACE.

Dr. Aron's only justification for the use of these prices is a reference to footnote 1588 of the TRO. In that footnote, the FCC does state that for administrative ease prevailing prices can be considered. Of course, a constant price assumption implies a short time horizon for the analysis. BellSouth has juxtaposed the use of prevailing prices with an extended ten-year time horizon that cannot be altered in the model. This is a nonsensical combination of assumptions, and there is nothing in the TRO that indicates that the FCC intends for a "potential deployment" analysis conducted pursuant to the Order to be based on contradictory assumptions.

Q. DOES EXPERIENCE IN THE INDUSTRY SUPPORT BELLSOUTH'S ASSUMPTION OF PREVAILING PRICES AND AN EXTENDED TIME HORIZON?

A. No, but contrary evidence does exist. Since the ten-year time horizon is fixed in the model, I have looked at the average level of interstate toll prices during the ten-year period following divestiture. As shown in Exhibit DJW-3, prices decreased by an average of 5.1% over this period.

Q. YOU STATED THAT THE ASSUMPTION OF A TEN-YEAR TIME HORIZON CANNOT BE CHANGED IN THE MODEL. WHY IS THIS IMPORTANT?

A. BellSouth's only stated basis for its ten year time horizon is Dr. Aron's statement that "it is common" to conduct a business case analysis over such a time frame. Such a

time horizon may be "common" for an analysis of industries with relatively low rates of structural and technological change, but is not appropriate for an industry in which significant and fundamental changes have occurred over much shorter periods. The time horizon of a business case analysis must be limited to period over which assumptions about revenues and costs can be made with a reasonable degree of confidence that such assumptions will be accurate. As structural changes in the industry or technological changes make these assumptions less certain, it is necessary to reflect this uncertainty. To a point, the discount rate applied in the NPV analysis can be adjusted upward to reflect the risk associated with this increased uncertainty. At some point in time, however, it is necessary to recognize that projections of events sufficiently far in the future are mere guesses.

Over the past ten years, the telecommunications industry has undergone structural changes, prices for many services have changed dramatically, new service offerings have been demanded, the demand for some existing services has dramatically decreased, the cost of providing network functionality has changed significantly, and new means of provisioning existing services have made network investments obsolete earlier than expected. Undaunted, BellSouth has conducted a business case analysis over a comparable ten year time frame, but has assumed that only minor changes will occur over the next ten years (and has done a poor job of reflecting even those minor changes.

A rational CLEC management team considering an investment in a large fixed asset, and a rational investor considering whether or not to provide the capital necessary for such an investment, will not assume that, in this industry, conditions in

the year 2013 will represent only minor variations of the conditions experienced today.

Q. WHAT HAPPENS IF PRICES IN THE BACE ARE ASSUMED TO DECREASE BY ABOUT THE SAME 5.1% PER YEAR?

A. It is possible to run the BACE holding all other inputs constant (even though many of these inputs are clearly unreasonable), and changing only the projected level of prices over time. If prices decrease at the rate previously experienced in the markets for interstate toll are assumed, the BACE indicates that the calculated NPV in each Florida LATA is significantly reduced. In other words, the BACE indicates that, even if all other inputs are assumed to be reasonable, if the experience in the markets for mass market services is similar to that experienced for toll services after divestiture, CLEC entry into these markets using self-provisioned local switching is likely to be uneconomic. No rational CLEC would or should make the investment.

Q. DOES THE BACE PERMIT THE USE OF ACCURATE AND REASONABLE ASSUMPTIONS REGARDING PRICES TO BE USED TO CALCULATE THE LIKELY REVENUE THAT A CLEC WOULD RECEIVE?

A. No. Mr. Stegeman states (p. 8) that based on his experience and understanding of FCC requirements, an "economic model that considers impairment" *should* be "capable of granular analysis," "allow inputs consistent with an efficient CLEC business model," and "incorporate all likely CLEC revenues and costs." The BACE fails to meet these basic requirements.

In spite of Mr. Stegeman's claims (pp. 24-25) that an advantage of the BACE is "the degree of control the user has over inputs," including price-related inputs, important inputs are not only beyond the control of the user but are hidden from sight in a preprocessing stage. Based on the descriptions provided by Mr. Stegeman and

Dr. Aron, it appears that the way prices are treated in this preprocessing stage prevent the "granular analysis" referenced by Mr. Stegeman and required by the FCC.

2. Bellsouth Segments Customers In A Way That Is Meaningless And Which Leads To Misleading Results.

Q. BELLSOUTH HAS SEGMENTED MASS MARKET CUSTOMERS INTO DIFFERENT BANDS. PLEASE EXPLAIN YOUR UNDERSTANDING OF THIS PROCESS.

A. The BACE divides the mass market customer base into seventeen separate segments based on customer type and spending patterns. As Dr. Aron describes the process (p. 22), the seventeen segments are composed of "one residential segment, divided into five 'quintiles' by customer spend, and four business segments (segmented by numbers of lines at each business customer location), each further subdivided into three 'terciles' by spend." Mr. Stegeman describes this process at pp. 25-26 of his testimony.

Dr. Aron argues that this method of segmentation represents "an economically reasonable way to take into account the granular variation of customer spending." I disagree. There are problems with BellSouth's process that invalidate Dr. Aron's conclusion. Most importantly, the process fails to distinguish between (1) customers that are high or low spenders based on a large or small quantity of services (or units of service) being purchased, and (2) customers who appear to be high or low spenders based on the rate group that their serving wire center is assigned to rather than the quantity of services (or units of service) being purchased.

Q. WHY IS IT IMPORTANT TO PROPERLY DISTINGUISH AMONG CUSTOMERS BASED ON THE QUANTITY OR UNITS OF SERVICES PROVIDED?

A. As Mr. Stegeman points out, "the expenditure categories are determined at the state level." Then, as Dr. Aron describes (p. 22), each BellSouth-defined market is "allocated the appropriate number of customers from each segment to reflect the actual economic profile of that market." This process simply will not do what BellSouth intends it to do (or what Dr. Aron claims that it does). By failing to account for the significant geographic disparity in the prices BellSouth charges to mass market customers, the BACE assumes that CLECs are likely to receive what are in reality phantom revenues. A customer that actually purchases very few services, but is served by a wire center assigned to one of BellSouth's high price rate groups, may appear in the BACE customer segment associated with the largest spenders and treated by the model as a particularly desirable customer. Conversely, a customer that actually purchases quite a few services (or units of service), but is served by a wire center assigned to one of BellSouth's low price rate groups, may appear in the BACE customer segment associated with the lowest spenders and treated by the model as a particularly undesirable customer. This is important, because the BACE's assumptions regarding the number of customers in a given geographic area that represent members of a desirable (high spending) market segment is used to determine the opportunities for CLECs to enter and serve such customers.

BellSouth's market segments consist of a mixture of customers that typically spend a given amount of money each month but do so for completely different reasons: some do so because they buy a lot, others do simply because they currently have to pay a lot for what they get. This causes the results of BellSouth's analysis to be incorrect. The geographic price-cost relationships, and the way that BellSouth

uses customer segments in the BACE, also causes the results of BellSouth's analysis to be biased toward a showing of "no impairment." Because the prices in the existing high price/low cost wire centers are least likely to be sustained over time, BellSouth is treating a large number of customers as having the potential to contribute high CLEC revenues in the future, when in fact (based on what the customer actually buys) this is highly unlikely to be the case.

Q. DR. ARON REFERS TO A "CREAMSKIMMING" STRATEGY BY THE CLECS, AND USES IT TO JUSTIFY BELLSOUTH'S MARKET SEGMENTATION METHOD. DO YOU AGREE WITH HER REASONING?

A. Not at all. At pp. 21-22 and 27-29, Dr. Aron argues that CLECs have engaged in a "creamskimming" exercise to serve only highly profitable customers and systematically avoid providing service to customers who purchase fewer services (or units of service). She then uses this argument to justify the BACE's method of customer segmentation, asserting (p. 21) that "without a segmentation of customers based on their level of spending, it would be impossible to take into account this kind of 'creamskimming' that an efficient CLEC could perform." Dr. Aron is wrong is several respects.

First, even if it were rational for a CLEC to engage in a creamskimming strategy such as that described by Dr. Aron, the BACE's market segmentation process would not accurately address the issue. Second, the data she relies on is flawed. It does not establish that "creamskimming" occurs. Third, a CLEC that self-provisions a switch has no incentive to "creamskim."

Q. WHY DOES BELLSOUTH'S MARKET SEGMENTATION PROCESS NOT ADDRESS "CREAMSKIMMING"?

A. Dr. Aron states (p. 21) that "the FCC has sought to ensure that variations in revenues and costs by geography, customer class, and services offered be taken into consideration ... it is clearly inadequate to assume that the CLEC being modeled gains the same revenue per line for every subscriber acquired – obviously some customers spend more than others, and may therefore be more attractive for the CLEC to acquire." I agree that it is appropriate to consider differences in current revenues for different customers, but it is even more important to consider the level of revenues that are likely to be received from different customers over time. As described above, many of the customers assigned by BellSouth to a top spending quintile "spend more" because BellSouth's prices vary significantly but are unlikely to produce higher than average revenues over the ten-year period assumed by BACE for cost recovery. A customer who generates a high level of revenues today but is unlikely to do so in the future does not represent a customer that is "more attractive for the CLEC to acquire" and cannot be counted on to contribute to the recovery of the cost of the CLEC's investment in local circuit switching. The BACE results depend on these "phantom revenues" in later years to make market entry appear to be economic, when in fact it is not.

Q. WHY IS THE DATA THAT DR. ARON RELIES UPON TO SUPPORT HER CLAIM OF "CREAMSKIMMING" FLAWED?

A. When reviewed carefully, it becomes evident that her assumptions are unsupported. At p. 27 she states that "in my opinion, it is clear that CLECs attempt to attract disproportionate numbers of high-spending customers." Her sole stated basis for this opinion is the observation that the customers lost by BellSouth to CLECs tend to have higher than average spending levels: "If there were no customer targeting, one would

expect competitors to win customers about evenly from each customer segment ... Instead BellSouth data indicate that competitive disconnects have been lowest among residential customers with lower-than-average spending on telecommunications services .. Absent creamskimming, one would expect CLECs to win 20 percent of its [sic] customers from each quintile." With regard to the small business market segments, Dr. Aron likewise concludes (p. 28) that "if no creamskimming occurred, one would expect customer location losses to be evenly divided among the three spending categories." Dr. Aron's conclusions are shown graphically in Exhibits DJA-3 and DJA-4.

This is utter nonsense. There is no reason to expect that the spending characteristics of the customers that leave BellSouth and obtain service from a CLEC will be representative of the average BellSouth customer. Experience in the interexchange markets after divestiture indicates that customers self-select based on their spending patterns and the resulting opportunity for savings. During the 1994-1999 period, non-dominant IXCs did not selectively market to only high-spending mass market customers; in fact, these companies had no means of identifying such customers. Yet over time, a disproportionate number of end users with high toll usage became customers of non-dominant IXCs, and AT&T's customer base contained an increasing concentration of customers with little or no toll usage in a given month. The reason why is clear and has nothing to do with IXC marketing plans: those customers with higher usage (and therefore spending) levels had the most to gain from a decision to subscribe to a lower priced carrier. End users who averaged little or no toll usage had no incentive to subscribe to a carrier other than

AT&T. A study of AT&T "disconnects" during the mid 1990's would likely reveal the kind of pattern shown in exhibits DJA-3 and DJA-4, but these patterns do not demonstrate that non-dominant IXCs were "creamskimming."

In addition, experience in the interexchange markets supports an assumption that, consistent with the markets for many other products and services, customers in more urban areas are more likely to be early adopters of a newly available service offering or competitive alternatives, while people living in rural areas are likely to respond more slowly. As previously described in, BellSouth's prices for its mass market services vary geographically, with the highest prices in the most densely populated areas. People in these areas are both more likely to try a CLEC service offering and are paying the highest prices to BellSouth. Not surprisingly, Dr. Aron found a disproportionate number of above average spenders among those who had changed service providers: these people are higher spenders in part because BellSouth is charging them higher prices.

Q. WHY DO CLECS THAT SELF-PROVISION SWITCHES NOT HAVE AN INCENTIVE TO "CREAMSKIM"?

A. Dr. Aron is simply wrong about the incentives that CLECs would face if attempting to serve the mass market with self-provisioned local switching. At p. 27 she states that "it would be rational for an efficient CLEC to "cream skim." I disagree for two reasons. First, because UNE loop costs are averaged at the level of the wire center, a CLEC has an equal incentive to seek to obtain all customers served by that wire center. There is no incentive for a CLEC to avoid what BellSouth considers to be higher cost customers. Second, a CLEC seeking to provide mass-market services via a self-provisioned local switch will have the incentive to serve as many customers as

possible as quickly as possible. The recovery of the large fixed investment in local circuit switching requires customers over which to spread the cost recovery, and even low spending customers provide such an opportunity. As described previously, a CLEC that seeks to enter a market via self-provisioning of local switching will begin with a significant per-customer cost disadvantage when compared to the ILEC. Such a CLEC will hardly be in the position to be selective about its customer base.

Q. DR. ARON GOES ON TO ARGUE (P. 29) THAT THE "CREAMSKIMMING" THAT SHE HAS OBSERVED REPRESENTS A "COUNTERVAILING ADVANTAGE" FOR CLECS. DO YOU AGREE?

A. No. Specifically, Dr. Aron concludes that "the evidence clearly supports the economically rational expectation that CLECs engage in customer targeting," and that such targeting "should be considered as one of the 'countervailing advantages' that the FCC requires state commissions to consider in their impairment analysis. I recommend that customer targeting be modeled in the residential and SOHO (1 to 3 line) customer segments consistent with the evidence of BellSouth's experience."

As described above, there is in fact no evidence that CLECs are engaging in such targeting, though the evidence does suggest that customers who have the greatest opportunity for savings "self-select" themselves and are more likely to take service from a CLEC, and that customers in more urban areas – whose spending levels are distorted by the fact that BellSouth's rates to mass market customers are highest in these areas – are more likely to try something new than customers in rural areas. There is also no "economically rational expectation" that CLECs will target in this manner; a CLEC investing in a local circuit switch will have every incentive to provide service to any and all customers willing to subscribe. While high spending

customers are more desirable to any carrier than low spending customers (assuming the higher spending level is indicative of the customers desire for more service offerings or units of service and not created by BellSouth's geographic rate disparity), low spending customers are clearly more desirable than no customer at all to contribute to the recovery of a large fixed cost.

In the end, the customer targeting that Dr. Aron attempts to support (and that BellSouth in fact uses in the BACE) distorts the results of the analysis because it creates an expectation of future CLEC revenues that are unlikely to exist.

3. BellSouth Does Not Properly Consider Quantities of Services Purchased by Customers.

Q. HOW ARE EXPECTATIONS REGARDING THE QUANTITIES OF SERVICES THAT WILL BE SOLD BY A CLEC TREATED BY THE BACE?

A. The model considers the size of the overall market and likely CLEC penetration levels over time to develop assumptions about service quantities. As with the consideration of prices, BellSouth's treatment of service quantity assumptions suffers from limitations of the BACE and the use of unreasonable assumptions.

As Mr. Stegeman explains (p. 27), the BACE uses the term quantity to "refer to the number of products or services demanded and actually sold, not the number of customers." I am using the term the same way in my testimony. Mr. Stegeman then goes on to describe one of the fundamental problems in the BACE's treatment of customer characteristics: "BASE uses quantities by wire center, for each of the products offered, by customer segment, by customer spend category." Because customers are assigned to spending-based segments at the state level and then

allocated to wire centers, the fact that BellSouth's rates vary across wire centers means that customers who purchase very different quantities of service will be assigned to the same spending segment. This makes the average amount spent by a customer a relatively poor predictor of the quantity of services actually being demanded by the customer. The BACE goes on to assign a different CLEC market share for the different customer spending segments, and ultimately assumes (based on the flawed assumption that high revenue equals high demand) that CLECs are more likely to capture customers with a higher than average demand for service quantities. This assumption distorts the results by overstating future CLEC revenues and causing entry to appear economic when it is not.

4. BellSouth Overestimates Future CLEC Market Shares.

Q. HOW ARE CLEC MARKET SHARES TREATED IN THE BACE?

A. Dr. Aron (pp. 23-24, 29-30) and Mr. Stegeman (pp. 36-39) describe this process in some detail. The process involves estimating the total number of customers in a given market for each year of the ten-year time horizon and estimating the CLEC market share in each year.

BellSouth assumes that the total market for wireline telecommunications services will grow over the time horizon of its analysis, but does not provide the basis for this assumption. It is reasonable to expect that the penetration of wireless services, particularly with the implementation of local number portability, will cause a reduction in the demand for wireline services over the extended (ten year) time horizon used by BellSouth in its analysis. If such a reduction does take place, the

quantity of services sold – and therefore the revenues – projected by the BACE will be overstated. Accordingly, the BACE overestimates the size of the overall pie.

Q. DOES BACE OVERESTIMATE CLEC MARKET SHARE IN ANY OTHER WAY?

A. Yes. In addition to overestimating the size of the overall pie, BellSouth's analysis also overstates the likely size of each CLEC's slice. Dr. Aron supports the market share assumptions used in the BACE at pp. 23-24 and 29-30. She makes three important assumptions: (1) the market share for each CLEC, for each customer segment, will increase to 15% of the total geographic market in question over the ten year period, (2) the rate of customer acquisition will be high: CLECs will gain fully one-half of their ultimate market share for residential customers, and between one fourth and one half of their ultimate market share for business customers, in year one, and (3) the market share (and rate of growth of that market share) is unrelated to the number of competitors in a given market and the current level of prices in that market.

Her stated basis for these assumptions is a review of academic literature, an inspection of CLEC line growth across the BellSouth region, and a review of cable telephony. Such an approach is immediately suspect. The academic literature on firm growth in other industries in unlikely to be relevant to the specific characteristics of mass market telecommunications services in which a market is being transitioned from monopoly control to competitive supply using a combination of UNEs and self-provisioned facilities. CLEC line growth across the region is not likely to be representative of the growth in CLEC market share for specific products in specific geographic markets, and is based on the success of CLECs with access to UNE

switching and UNE-P (that by definition is not available to CLECs in BellSouth's potential deployment analysis). At a minimum, this information is insufficient for the granular analysis required by the FCC and described by Mr. Stegeman and Dr. Aron. Finally, cable telephony is, as the FCC noted in the TRO, a very different market because cable providers do not rely on access to BellSouth local loops. The FCC concluded (¶446) that cable telephony does not "provide probative evidence of an entrant's ability to access the incumbent LEC's wireline voice-grade local loop and thereby self-deploy local circuit switches."

Q. IS THE ASSUMPTION OF 15% MARKET SHARE FOR ALL MARKET SEGMENTS FOR ALL CLECS A RESONABLE ASSUMPTION?

A. No. Such a conclusion ignores all experience to date. At p. 25, Dr. Aron justifies her assumption with the following observation: "in Florida, CLECs, in aggregate, had attained market shares of 15 percent or more in 35 of BellSouth's wire centers." In other words, nearly eight years after the Act, with access to UNE switching and UNE-P, CLECs have, *in the aggregate*, attained a 15% market share in about 18% of BellSouth's Florida wire centers (Dr. Aron does not state whether the 15% share is limited to services provided to mass market customers). It requires quite a leap to go from this observation to a conclusion that without access to UNE switching or UNE-P, *all* CLECs will *individually* attain a 15% market share *for mass market services* in *each* of the BellSouth wire centers included in Dr. Aron's 10 market areas for which "no impairment" is claimed to exist due to potential deployment. Yet this is exactly what BellSouth is asking the Commission to accept as a reasonable assumption.

Q. ARE DR. ARON'S MARKET SHARE ASSUMPTIONS REASONABLE WHEN COMPARED TO MS. TIPTON'S CLAIMS REGARDING THE NUMBER OF TRIGGER COMPANIES IN EACH BELLSOUTH-DEFINED MARKET?

A. No. In Exhibit PAT-5, Ms. Tipton claims that between three and eleven CLECs are currently offering services to mass market customers using self-provisioned local switching facilities in 13 BellSouth-defined markets. If each of these CLECs is able to capture 15% market share within ten years of its entry using its own switch, the BellSouth-defined markets will ultimately be characterized by an aggregate CLEC market share of between 45% and 165% of the total market. Capping aggregate CLEC market share at 100% (an arguably reasonable assumption), the combination of Dr. Aron's and Ms. Tipton's analysis suggests that in 9 of the 13 markets identified in PAT-5, BellSouth will be completely eliminated as a competitor.

Q. IS THE RATE OF CLEC CUSTOMER ACQUISITION ASSUMED BY BELLSOUTH REASONABLE?

A. No. Dr. Aron assumes that a CLEC will capture 7.5% of the total market for services provided to residential mass market customers in the first year of entry and will do so without access to UNE switching or UNE-P. BellSouth has produced no evidence that any CLEC anywhere in its service territory has captured 7.5% of the market for services provided to residential mass market customers over the past seven years with access to UNE switching or UNE-P.

Q. YOU STATED THAT THE BELLSOUTH POTENTIAL DEPLOYMENT ANALYSIS ASSUMES THAT CLEC MARKET SHARE IS UNRELATED TO THE NUMBER OF COMPETITORS AND TO THE CURRENT LEVEL OF RETIAL PRICES IN A MARKET. PLEASE EXPLAIN.

A. Because of the structure of the analysis and the inputs used, the BellSouth analysis implicitly makes both of these assumptions.

The market share assumptions described by Dr. Aron are made without consideration of the presence of other competing providers. Even if, contrary to all empirical evidence, if would be reasonable to assume that the first CLEC to enter a given geographic market can capture a 15% share of mass market services in ten years (and 7.5% in the first year), it is not clear that the second CLEC to enter the market could do so. If the first CLEC is able to grow its customer base at this very high rate, it is reasonable to assume that it will have captured a significant portion of the customers most responsive to price reductions or new service offerings. The second CLEC will have to repeat this high rate of customer acquisition from among a base of customers that is less likely to change carriers. Put another way, even if it is reasonable to assume that one CLEC can enter a given geographic market and capture a 15% share of mass market services in ten years (and 7.5% in the first year), is it reasonable to assume that two CLECs can enter that market simultaneously and capture a 30% share (15% in the first year)? Again, Bellsouth has offered no evidence that CLECs, with access to UNE switching or UNE-P, have managed to capture a 30% (or even 15%) share of mass market customers in a given geographic area in the nearly eight years that they have had to try.

BellSouth also assumes that CLECs will capture a 15% share in all of the markets identified by Dr. Aron (and will do so at the same accelerated rate), without consideration of the level of initial prices, relationship between initial prices and costs, and the demographics of the individual markets (beyond the flawed customer

segmentation by current spending level). Such "across the board" assumptions about market share cannot form the basis for a sufficiently granular analysis as required by the FCC.

Q. IN ADDITION TO GAINING CUSTOMERS, CLECS CAN ALSO LOSE CUSTOMERS OVER TIME. HOW DOES THE BACE ADDRESS THIS ISSUE?

A. The BACE permits the user to make assumptions about the rate of customer "churn" experienced by CLECs. The BACE defines churn as the percentage of the CLEC's customer base in a given market segment that disconnects each month. The problem with BellSouth's analysis is created by assumptions made about churn rates and, more importantly, what churn rates can be reasonably assumed to apply in the future.

Dr. Aron's stated basis for the churn assumptions used (4% per month for residential customers, 2% per month for the two smaller business segments, and 1.5% per month for the two larger business segments) is an observation of historic levels of churn for CLECs and other telecommunications service providers, including wireless providers. The historical data she relies upon are poor predictors of the future for several reasons.

First, the historic levels of CLEC churn fail to reflect BellSouth's new "customer reacquisition" efforts, or "winback" programs. According to the 2002 BellSouth annual report (the relevant page from that report is attached as Exhibit DJW-4), as a result of such programs BellSouth has managed to "slash competitive line loss by 24 percent in small business in 2002, compared to the previous year, and by 23 percent in large business. At the same time, in terms of access lines, we

increased reacquistion in small business by 22 percent. In large business, the reacquisition rate last year was six times higher than in 2001." If BellSouth's CEO Duane Ackerman is right about this, churn rates from previous years (such as those that Dr. Aron relies upon on p. 33) are not likely to be applicable in future years for business customers. BellSouth now has a similar "customer reacquisition" program in place for its residential customer base, and this program will allow it to effectively dictate CLEC churn rates in that market going forward.

Second, Dr. Aron relies (p. 34, for example) on data supporting an "industry-wide churn rate." This industry-wide rate includes the experience of both ILECs and CLECs. This is almost certain to understate the level of CLEC churn, because the ILEC churn rate is biased downward by the presence of a base of customers who are unlikely to change providers in response to competitive alternatives (are therefore served by the ILEC as the former monopoly provder). By including these ILEC customers in the mix, Dr. Aron offers an understated projection of CLEC churn rates.

Third, Dr. Aron's reliance on the experience of the wireless industry is misplaced. To date, this market has been characterized by long-term contracts and the lack of number portability. Once number portability is fully in place and existing contracts have expired, it might be reasonable to use the wireless churn rate as a proxy for a CLEC mass market churn rate. Until that time, the historic restrictions on wireless customers will mean that the wireless churn rate will almost certainly understate the churn rate that should be included in any reasonable potential deployment analysis.

Q. DOES THE BACE PERMIT THE USER TO ADJUST QUANTITY ASSUMPTIONS IN ORDER TO CONDUCT A "GRANULAR ANALYSIS," "ALLOW INPUTS CONSISTENT WITH AN EFFICIENT CLEC BUSINESS MODEL," AND "INCORPORATE ALL LIKELY CLEC REVENUES AND COSTS"?

A. No. As described above (and at p. 23 of Dr. Aron's testimony), some of the quantity assumptions are performed in the preprocessing stage of the model. Assumptions regarding CLEC market share are limited to the characteristics of the curve chosen by Dr. Aron (the user can change the ultimate market share and the assumption regarding how much of that share will be captured in year one, but cannot make other assumptions). The user also cannot adjust market share assumptions in a way that is specific to individual wire centers.

5. BellSouth makes Unreasonable Assumptions About CLEC Service Offerings.

Q. THE BELLSOUTH "POTENTIAL DEPLOYMENT" ANALYSIS INCLUDES SEVERAL ASSUMPTIONS ABOUT THE SCOPE OF A CLEC'S SERVICE OFFERINGS. ARE THESE ASSUMPTIONS REASONABLE AND APPROPRIATE?

A. No. Dr. Aron (p. 9) argues that an efficient CLEC will "sell a broad array of products to a wide range of customers," because "many products and many customers can be serviced using the same asset platform without replicating many of the fixed costs." I disagree. It is certainly possible for an efficient firm to specialize in providing service to a specific market segment; not all efficient firms "sell a broad array of products to a wide range of customers." Her observation that "many products" and "many customers" can be served without changing the magnitude of the fixed cost of the investment of local circuit switching is too superficial and high level to be of use

in this proceeding. The question before the Commission is a specific one: Would a rational CLEC elect to invest in self-provisioned local circuit switching in order to provide service to mass market customers in a given geographic area? The "fixed cost" in Dr. Aron's observation is a specific piece of equipment – a local circuit switch. The impairment test relates specifically to whether the CLEC can reasonably expect to be able to recover the cost of this investment from the customers whose service is provided by the investment.

It is not necessary or appropriate to assume (as BellSouth does in its analysis) that an efficient CLEC will offer non-switched services in order to help pay for the switch, for two reasons. First, if the non-switched service is subject to effective competition, there will be no surplus revenues to contribute to switch cost recovery. Second, the inclusion of the additional services expands the scope of the business case analysis beyond the specific revenues and costs that are properly included.

Other scenarios may help to put BellSouth's and Dr. Aron's "If the CLEC can't pay for a switch with the revenues from switched services, it doesn't mean that entry is uneconomic, it just means the CLEC needs to get out and sell some other services" theory into context. It would be equally reasonable (and fully consistent with Dr. Aron's theory) to argue that a CLEC whose projected revenues from switched services are insufficient to make the investment economic should nevertheless make this large fixed investment and make up the revenue shortfall by having its employees sell Krispy Kreme® doughnuts on the corner every Saturday morning.

Fortunately, §251 contains no doughnut sales quota. As the FCC correctly notes (¶60), when determining impairment §251(d)(2) "requires the Commission to consider whether the failure to provide access to a particular network element would impair the ability of a requesting telecommunications carrier 'to provide the services that it seeks to offer'" (emphasis in FCC's original). BellSouth's "potential deployment" analysis ignores the language of the Act by forcing an expansion of CLEC service offerings and by erroneously concluding that high margins for these other services would be maintained in a competitive market over a long period of time.

B. BACE Includes Faulty Cost Assumptions.

Q. WHAT COSTS MUST BE CONSIDERED IN A "POTENTIAL DEPLOYMENT" ANALYSIS?

A. Dr. Aron argues (p. 19) that an analysis of "potential deployment" should incorporate "realistic assumptions" associated with providing mass market services. I agree, but disagree with her conclusion that BellSouth's inputs to the BACE reflect such "realistic assumptions."

Q. THE FCC STATES (¶517) THAT AN ANALYSIS OF POTENTIAL DEPLOYMENT SHOULD BE BASED ON THE MODEL OF AN "EFFICIENT CLEC BUSINESS MODEL." DOES BELLSOUTH'S ANALYSIS REFLECT THIS REQUIREMENT IN A MEANINGFUL WAY?

A. No. Dr. Aron argues (pp. 8-9) that in order to reflect this requirement, "the operating assumptions [for the CLEC] that are employed must be consistent with the operations of an efficient firm." I agree. Dr. Aron then goes on to conclude that "this would tend to suggest that key operating metrics like customer acquisition cost, customer

churn, and so forth, would tend to be better than the average of actual firms." Her basis for this conclusion is that "a number of CLECs have gone bankrupt, suggesting that, on average CLECs do not have optimally efficient operations." CLEC bankruptcies, however, suggest nothing of the sort. As Dr. Billingsley explains (I will discuss this issue in detail later in my testimony), available evidence suggests the many of the CLECs that have gone bankrupt have done so primarily because they made uneconomic investments in large, fixed, network assets. Even if Dr. Aron's assumption were valid that the CLECs that have declared bankruptcy have done so because of a lack of "optimally efficient operations," it is reasonable to assume that the CLECs with inefficient operations are either no longer in business or have increased their efficiency as they emerged from bankruptcy. The correct conclusion is the opposite of Dr. Aron's: the fact that a significant number of CLECs have gone bankrupt suggests that competitive market constraints have winnowed the field, and those CLECs that currently are operating do have efficient operations. In order to make reasonable assumptions about efficient CLEC costs, it is logical to look at currently operating CLECs. There is no support for Dr. Aron's assumption that current CLEC costs need to be adjusted in order to reflect efficient CLEC operation.

Q. ARE BELLSOUTH'S ASSUMPTIONS REGARDING CLEC COSTS REASONABLE?

A. No. I disagree with a number of BellSouth inputs to the BACE, particularly those related to sales and customer acquisition costs, general and administrative ("G&A") costs, and the cost of capital. The cost of capital is especially important because it is the discount rate used in the model's NPV analysis, and the model results are highly sensitive to changes in this rate.

1. BACE Assumptions Regarding Sales and Customer Acquisition Costs are Unreasonable.

Q. PLEASE EXPLAIN WHY BELLSOUTH'S ASSUMPTIONS REGARDING SALES AND CUSTOMER ACQUISITION COSTS ARE NOT REASONABLE.

A. At pages 35-39, Dr. Aron describes the process that she used to develop an assumed cost for sales/customer acquisition for residence and business mass market customers. Her methodology consists of gathering estimates of these costs made by various analysts for certain carriers. The data mismatch in the BellSouth assumptions is that while revenues from a very broad range of services are assumed to be available to a CLEC, the sales costs relied upon by Dr. Aron relate almost exclusively to carriers selling a much narrower menu of services. BellSouth makes no adjustment for the cost that a CLEC would incur to sell the additional service offerings assumed in its analysis. BellSouth has included in its analysis the revenues from these services (though it has improperly done so, as explained above), but has not included any costs that a CLEC would incur to sell them.

2. BACE Assumptions Regarding G&A Costs are Unreasonable.

Q. PLEASE EXPLAIN WHY BELLSOUTH'S ASSUMPTIONS REGARDING G&A COSTS ARE NOT REASONABLE.

A. Dr. Aron explains (p. 40) that she developed an assumption of CLEC G&A costs based on the historic relationship of G&A costs to revenues for ILECs. She does not explain why historic ILEC cost to revenue relationships would be applicable to the future operation of a CLEC. In addition, Dr. Aron states that she has used in her analysis "data representing a number of ILECs of various sizes." The size a CLEC's

operation in a given state (even a large CLEC with national operations) is unlikely to compare to the size of the ILEC's operation. BellSouth enjoys a much larger number of customers in all markets within its operating territory than even the largest CLECs, and it is reasonable to expect that BellSouth enjoys some G&A cost advantage as a result. This cost disparity is not caused by CLEC inefficiency, but by BellSouth's position as the former monopoly carrier.

3. BellSouth's Cost of Capital Assumptions Ignore Market Reality And Significantly Distort The Results Of The Analysis

Q. PLEASE EXPLAIN THE ROLE PLAYED BY COST OF CAPITAL ASSUMPTIONS IN BELLSOUTH'S ANALYSIS.

A. The assumed CLEC cost of capital serves as the discount rate for the BACE's NPV analysis. In this way, the results of the NPV analysis (assuming that it has been properly conducted) indicate whether investors would provide the necessary capital for CLEC investment, and whether a rational CLEC would make the investment, given the risk characteristics of the project and the availability of capital in the capital markets.

BellSouth's assumption is supported by the testimony of Dr. Billingsley. His assumptions and analysis are important, because even small changes in the assumed cost of capital (and therefore the discount rate) have a significant impact on the calculated NPV for the BellSouth-defined markets. If Dr. Billingsley underestimates the return that investors will require to provide capital to CLECs over the time horizon of BellSouth's analysis, the model results will suggest that entry is economic when in fact it is not.

Dr. Billingsley cites to the language in the TRO (¶680) that states that "a TELRIC-based cost of capital should reflect the risks of a competitive market." Of course, in this and related paragraphs, the FCC discussed the ILEC's cost of capital to be used to calculate TELRIC. While the FCC states that this ILEC cost of capital should reflect the increased risk that the ILEC incurs when operating in a competitive market, it does not state (or even suggest) that the risk incurred by the CLEC (and its resulting cost of capital) will be the same. There is a fundamental difference in the risk incurred by a former monopoly provider, with existing network facilities and an existing base of customers, and the risk incurred by a new entrant to enter the market by making a large fixed investment without the customer base needed to recover the cost of that investment.

Q. PLEASE THE DESCRIBE THE RISKS THAT A CLEC FACES IN THIS SCENARIO.

A. When deciding whether to make a large fixed investment whose cost will be recovered over extended period of time, the uncertainty of future revenues and costs (the cash flows) represent the primary form of risk. As Dr. Aron correctly points out (pp. 12-13), "the future cash flows associated with an investment opportunity (such as competitive entry) cannot be known with certainty. A properly-specified business case must reliably adjust for such uncertainty." Through its inputs to the BACE, BellSouth has assumed a relatively predictable set of future cash flows.

Q. ARE THERE REASONS TO BELEIVE THAT THE BACE'S FORECAST OF FUTURE CLEC CASH FLOWS SHOULD BE CONSIDERED UNCERTAIN, AND THE RISK OF CLEC ENTRY VIA SELF-PROVISIONING HIGH?

A. Yes. Dr. Billingsley provides quite a bit of evidence in his testimony. He cites to a Standard & Poor's conclusion (p. 9) that "added competition in all segments will

result in tighter profit margins for all players." With regard to CLECs specifically, he cites (p. 11) a conclusion by International Data Corporation ("IDC") that "while CLEC access lines will grow at a 12.2% compounded annual growth through 2007, their revenue growth will be in low single digits because of falling prices services for both voice and data services." If IDC is right, a CLEC that relies on the results of BellSouth's "potential deployment" analysis will be in trouble. Not only will the phantom revenues associated with BellSouth's current (but unsustainable) geographic price differences not materialize, but the margins for voice service will likely be lower than predicted by the BACE. The narrowing margins for data services means that the revenues from these services relied on by the BACE to make entry for switched mass market services appear economic will not be available, leaving the Krispy Kreme® strategy as the only alternative.

Dr. Billingsley concludes (p. 10) that "the point that one can draw from all of this is that the entire telecommunications industry is competitive and risky, and is growing more so with the passage of time." I agree. What Dr. Billingsley fails to point out is that while the increase in risk applies to both ILECs and CLECs, a CLEC continues to face, for the reasons described above, much higher risk than an ILEC.

Q. YOU DISCUSSED DR. ARON'S ASSUMPTION THAT CLEC BANKRUPTCIES HAVE BEEN THE RESULT OF CLEC INEFFICIENCY. DOES DR. BILLINGSLEY PRESENT AN ALTERNATIVE EXPLANATION?

A. Yes. Dr. Billingsley refers to a report by the New Paradigm Resources Group, Inc. as the "generally accepted" explanation for the "broad financial distress and bankruptcies experienced by the CLEC industry":

> Just as the fact that a number of CLECs have filed for Chapter 11 has become common knowledge, the reason for their

> bankruptcies is well known. In the 1990s, the CLECs acquired billions of dollars in financing to invest in telecommunications infrastructure with the assumption that the demand for their services would continue to experience accelerating growth. When this demand did not materialize, the CLECs were left with billions of dollars in debt and no way to pay it off.

The New Paradigm Resources Group, Inc. was quite insightful, and describes a scenario that now seems oddly familiar: CLECs invested in network infrastructure (large fixed costs) based on an anticipation of future revenues that would make their market entry economic. Their assumptions regarding whether entry in this manner would be economic, now clearly flawed, are very similar to the assumptions that BellSouth is now inviting CLECs to make through the results of its business case analysis (and is asking the Commission to conclude that the CLEC's should accept the invitation). Like the scenario described in the article Dr. Billingsley cites, CLECs face a decision of whether or not to invest in network infrastructure (in this case a local circuit switch, whose cost characteristics cause it to represent a large fixed cost). BellSouth argues that they could rationally do so, based on assumed future revenues that are based on demonstrably erroneous assumptions about both prices and quantities.

The New Paradigm Resources Group, Inc. article also spells out, at a high level, the formula for CLEC success and longevity: "the CLEC industry continued to shrink in 2002 as several competitive providers with weak business plans" – e.g. those that made large fixed capital investments – "have gone bust." The article goes on to state that "the CLECs that continue to do business in late 2002 have reduced their capital spending" and have "scaled back expansion plans." The message is clear: CLEC entry via self-provisioned network facilities has proven, in many cases,

to be uneconomic. In these previous cases, it is reasonable to assume that not all of the CLEC business case analyses contained the number of obvious flaws that the BellSouth analysis contains, yet BellSouth now argues that its analysis makes a clear case for economic investment by CLECs. If the Commission accepts BellSouth's analysis and UNE switching is no longer made available, CLECs will have two choices: they can discontinue any attempts to serve mass market customers, or they can accept BellSouth's invitation to disaster. A rational CLEC management team (and a rational investor considering whether to make funds available) can only choose the first alternative.

Q. DR. BILLINGSLEY ARGUES THAT THE RISK ASSOCIATED WITH EXISTING CLEC OPERATIONS IS NOT A GOOD PROXY FOR THE RISK THAT WILL BE INCURRED BY CLECS IN THE FUTURE. DO YOU AGREE?

A. Yes, but my conclusion is the opposite of Dr. Billingsley's. Dr. Billingsley argues that future CLEC operations, when those CLECs will be incurring the risk to make large fixed investments in network infrastructure, will be less risky that the current operation of CLECs who rely on UNE switching and UNE-P. This conclusion is nonsensical and directly contradicts both the articles cited by Dr. Billingsley in his testimony and the ILEC mantra that CLECs currently rely on ILEC provided UNEs in order to avoid the risk of self-provisioning. If Dr. Billingsley were right that self-provisioning local circuit switching is likely to be less risky for a CLEC than utilizing UNE switching, it would compel the question "Why any CLECs are purchasing UNE switching or UNE-P today when doing so simply causes them to incur more risk?"

Q. HOW DOES DR. BILLINGSLEY REFLECT HIS ASSUMPTION THAT THE SELF-PROVISIONING OF LOCAL CIRCUIT SWITCHING WILL REDUCE THE RISK FACED BY CLECS?

A. In his discounted cash flow analysis (pp. 19-22), Dr. Billingsley considers the average risk of S&P 500 companies and calculates a cost of equity of 14.31%. He then performs a CAPM analysis based on an estimate of risk that he believes is appropriate for a "representative CLEC." This risk, which primarily reflects the operation of CLECs utilizing UNE switching and UNE-P, yields a cost of capital for this representative CLEC of 20.78%.

Instead of attempting to adjust the "representative CLEC" cost of equity to reflect the higher risk of self-provisioning, Dr. Billingsley (with little explanation) then averages the results for the "representative CLEC" and the S&P 500 companies. In other words, Dr. Billingsley assumes that the level of risk associated with future CLEC operations (and self-provisioning of large fixed assets) will move downward to a point half way between the current "representative CLEC" cost of equity and the average cost of equity of S&P 500 companies.

Dr. Billingsley makes a comparable adjustment to his cost of debt calculations (p. 25). He considers the yield on bonds reflecting current "representative CLEC" levels of risk, and then averages this yield with the yield of bonds that reflect the average level of risk of the S&P 500 companies. As with the cost of equity, Dr. Billingsley assumes that the cost of debt to CLEC will decrease over time as the operations of these CLECs become more risky.

Q. HOW DOES DR. BILLINGSLEY DEVELOP HIS ASSUMPTION OF AN APPROPRIATE CAPITAL STRUCTURE FOR CLECS ON A GOING-FORWARD BASIS?

A. At p. 26 Dr. Billingsley notes that the market-based capital structure of his current "representative CLEC" sample is 87.43% debt and 12.57% equity. This structure is

clearly not the target capital structure of these companies, but has arisen in large part because of the precipitous drop in the companies' stock prices. He then calculates the market-based capital structure of the S&P 500 companies as 29.50% debt and 70.50% equity. With no explanation, he again averages the results and computes a forward-looking "representative CLEC" capital structure of 58.45% debt and 41.54% equity.

Dr. Billingsley does not explain why he believes that CLECs, as they begin to finance their increasingly risky operations, will find investors who are not only comfortable with this high debt load but who consider the risk associated with this debt to be lower than current levels. The conclusions of the New Paradigm Resources Group, Inc. in the article he cites have apparently not left a significant impression on Dr. Billingsley; he is now suggesting that it would be rational for CLECs to invest in fixed investments by incurring "billions of dollars in debt" and incurring the very real risk of having "no way to pay it off." All the while, he assumes that such a scenario would represent a lower level of risk for both CLECs and investors than existing UNE-based CLEC operations.

Q. WHAT ARE THE IMPLICATIONS OF DR. BILLINGSLEY'S ASSUMPTIONS?

A. By underestimating the future cost of debt and equity to CLECs, and by assuming a debt-laden capital structure, Dr. Billingsley has significantly underestimated the discount factor to be applied in BellSouth's business case analysis. As a result, future cash flows are treated with a sense of certainty that they do not have, and the NPV of market entry calculated by the BACE is significantly overstated.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Don J. Wood. My business address is 30000 Mill Creek Avenue, Suite 395. Alpharetta, Georgia, 30022.

Q. ARE YOU THE SAME DON J. WOOD WHO PREFILED DIRECT AND REBUTTAL TESTIMONY ON BEHALF OF AT&T IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. The purpose of my surrebuttal testimony is to respond to the rebuttal testimony of BellSouth witness Debra Aron.

In her rebuttal testimony, Dr. Aron engages primarily in a strategy of mischaracterizing my testimony and that of Dr. Bryant, Mr. Turner, and Mr. Gillan, grossly oversimplifying the issues before the Commission, and responding with "facts" that are based on flawed research and that are simply incorrect.[1]

Q. AT PAGES 32-33 OF HER REBUTTAL TESTIMONY, DR. ARON STATES THAT HER "INTERPRETATION" OF YOUR TESTIMONY IS THAT YOU ARE URGING THE COMMISSION TO DISREGARD PORTIONS OF THE TRO. IS HER "INTERPRETATION" ACCURATE?

A. Not at all. Specifically, Dr. Aron asserts that "Mr. Wood urges the FPSC to simply disregard the potential deployment component of the FCC's impairment methodology as part of its determination [of impairment] ... on the grounds that he already knows what the answer should be." Even a cursory examination of my direct testimony will reveal that I am in no way suggesting that the Commission ignore any part of the TRO. To the contrary, I am suggesting a more comprehensive consideration than proposed by Dr. Aron. While she urges the Commission to consider a "potential

[1] As I will explain in more detail below, a demonstration of the significance of these assumptions can be made using BellSouth-provided information and the BACE model.

deployment" analysis in a vacuum, I am recommending that the Commission consider such an analysis as one of an interrelated series of tests. For example, in my direct testimony I asked the Commission to consider the following:

1. Based on an extensive record, the FCC found "on a national level that requesting carriers are impaired without access to unbundled local circuit switching when serving mass market customers." (¶419) Impairment is assumed to exist unless and until specific, concrete evidence to the contrary is presented.

2. Any analysis of *potential* entry via self-provisioned local switching is considered only after the Commission has concluded, pursuant to a sufficiently granular analysis, that *actual* entry has not occurred to any significant degree in the identified markets. This absence of *actual* deployment reveals, at a level of significance that could never be attained by any attempted "potential entry" analysis, the market realities that exist today. Experience indicates that CLECs have either been unable to economically justify the deployment of the own local circuit switching equipment to serve mass market customers, confirming the observed absence of actual entry in this manner.

3. Any potential entry analysis must consider both operational and economic factors in concert. The existence of operational impairment cannot be overcome by the absence of economic impairment, or *vice versa*.

Dr. Aron argues (p. 33) that I am urging the Commission to disregard any "potential entry" demonstration because I already know what the answer should be. To the contrary, I am urging the Commission – based on its knowledge of Florida markets for mass market services and experience with competitive entry into those

markets – to consider any "potential entry" claims within the context of what *it* knows the answer will likely be.

Q. DR. ARON (PP. 34-35) STATES THAT THE FCC'S TRIGGER TESTS ARE ASYMMENTRIC. IS SHE RIGHT?

A. No. Dr. Aron argues that "the FCC's triggers test are asymmetric tests of impairment: satisfying the triggers demonstrates lack of impairment, but failing them does not demonstrate impairment." Her conclusion appears to be based at least in part on her flawed conclusion that "passing a triggers test clearly indicates that there is no impairment." This, of course, is not what the FCC concluded.

In reality, the FCC explicitly recognized the possibility for exceptions to the results of a triggers analysis, and did so symmetrically. First, as Dr. Aron explains, if the results of a triggers analysis indicate a finding of impairment, the Commission will then proceed to a "potential deployment" analysis in order to determine if some set of factors exists for that market that – in spite of the lack of *actual* deployment – nevertheless indicate that the potential exists for such deployment. Second, as Dr. Aron fails to mention, if the results of a triggers analysis indicate a finding of non-impairment, the Commission may then proceed to an "exceptional barrier" analysis in order to determine if some set of factors exists for that market that would prevent further deployment: "we recognize that there may be some markets where three or more carriers are serving mass market customers with self-provisioned switches, but where some significant barrier to entry exists such that additional carriers with self-provisioned switches are foreclosed from serving mass market customers ... Where the self-provisioning trigger has been satisfied and the state commission identifies an exceptional barrier to entry that prevents further entry, the state commission may

petition the [FCC] for a waiver of the application of the trigger, to last until the impairment to deployment identified by the state no longer exists." (¶462).

Q. DR. ARON ALSO REFERS TO AN "ASYMMETRY" IN THE "OBSERVABILITY OF OUTCOMES." DO YOU AGREE WITH HER CONCLUSIONS?

A. Specifically, Dr. Aron argues (pp. 2-3) that "if the Commission errs in finding impairment where none exists the social costs are extremely difficult to measure," but such difficulty does not make these costs "any less real or any less significant." In other words, reaching an erroneous conclusion of impairment will, according to Dr. Aron, result in social costs that are significant though not readily apparent.

In contrast, she argues, "if the Commission errs in finding no impairment where impairment exists," the social cost is low ("merely" the forgone entry of carriers who would rely on the network of the incumbent) but visible. In other words, reaching an erroneous conclusion of non-impairment will, according to Dr. Aron, result in social costs that are apparent but not significant.

Based on her conclusions about social costs, Dr. Aron argues that the Commission should err on the side of a finding of non-impairment (colloquially, she recommends a rule of "when in doubt, throw them out"). Her conclusions, however, rely on the accuracy of her fundamental assumption that if local circuit switching is not available as a UNE,[2] CLECs will invest in their own local circuit switching equipment to serve mass market customers. As I explain below, this assumption has no empirical foundation and is based on confusion regarding cause and effect. The

[2] And, by extension, if UNE-P is not available.

point here is that Dr. Aron goes on to reach some dangerous conclusions based on this very shaky foundation.

At p. 3 she suggests that with "true competition" (i.e. competitive entry only in the form of self-deployed equipment and facilities, including local circuit switches), the need for administrative oversight and regulation of BellSouth are reduced. Her flawed logical sequence can be summarized as follows: (1) Elimination of UNE local switching and UNE-P provides missing "incentives" for CLECs to invest in their own equipment, (2) in response to these incentives, CLECs make these investments and are able to compete with BellSouth on this basis, and (3) the resulting competitive market forces can act as a substitute for regulation in order to protect consumers. If Dr. Aron's fundamental premise – that it is economically rational for CLECs to invest in their own local circuit switching equipment to serve mass market customers - is wrong, a more logical sequence is the following: (1) Elimination of UNE local switching and UNE-P eliminates the ability of CLECs to economically serve mass market customers, (2) in response, CLECs must discontinue their offerings to mass market customers in most or all geographic markets, and (3) with no regulation and no competitive market forces to act as a constraint, BellSouth operates as an unregulated monopoly. Dr. Aron completely ignores the social costs of an unregulated monopoly in her analysis, though such an outcome is clearly not good for consumers.

Q. YOU STATED THAT DR. ARON'S FUNDAMENTAL PREMISE THAT IT IS ECONOMICALLY RATIONAL FOR CLECS TO INVEST IN THEIR OWN LOCAL CIRCUIT SWITCHING EQUIPMENT TO SERVE MASS MARKET CUSTOMERS IS WRONG. PLEASE EXPLAIN.

A. Dr. Aron refers (p. 5) to a situation in which "a CLEC would rather exit the market than pursue the UNE-L strategy," suggesting that whenever a CLEC does not use its own local circuit switching equipment to serve mass market customers, it has simply chosen not to do so. Such as statement is not only flawed and unsupported, it is naive.

Dr. Aron's reasoning is flawed in several areas. Any meaningful analysis of why CLECs in most instances rely upon ILEC-provided local circuit switching to serve the mass market must consider the following three points:

1. CLECs have a number of incentives to pursue a UNE-L strategy, and these incentives have been present since 1996. As Chairman Powell observed in language cited by Dr. Aron (p. 4), CLECs have an incentive to invest in their own facilities in order to offer differentiated services, control their costs, become less dependent on the incumbent (a competitor), and offer redundancy of networks. These incentives exist today; they are not simply created if UNE local switching is unavailable. The relevant question, ignored by Dr. Aron, is "In response to these incentives, what have CLECs done in order to offer services to mass market customers, particularly when UNE local switching or UNE-P has not been available?"

2. In the absence of access to UNE-P, CLECs have not deployed their own local circuit switching equipment to serve mass market customers. Dr. Aron takes issue (p. 35) with my recommendation that the Commission consider important historic evidence regarding impairment, or what she refers to as "a retrospective view of CLEC successes and failures *in a world of ubiquitous UNE-P availability*" (emphasis added). I don't know where Dr. Aron has been for the past eight years, but

her fantasy "world of ubiquitous UNE-P availability" certainly didn't exist in the BellSouth region. In reality, BellSouth refused to make UNE-P operationally available until at least the conclusion of AT&T's arbitration with BellSouth in 2000.

As a result, there are two factually distinct time periods that can be examined. The first, from 1996 until 2000, consists of a period of time in which CLECs had the *incentive* to invest in their own facilities in order to offer differentiated services, control their costs, become less dependent on the incumbent, and offer redundancy of networks; and did not have access to UNE-P. The second, from 2000 until the present, consists of a period of time in which CLECs had the same incentives, but during which UNE-P was available. Comparing the actions of CLECs during these two time periods can in fact represent a meaningful indicator of impairment.

In reality, during a time in which CLECs had incentives to deploy their own switching facilities – but during which the "corrupting influence" of UNE-P did not exist – CLECs did not invest in local circuit switching equipment in order to offer mass market services. The presence of these two distinct time periods allows us to control for the key variable identified by Dr. Aron (UNE-P availability) and determine if the observable results change in the two scenarios. They don't. Whatever factor is preventing CLECs from making this investment, it isn't the availability of UNE-P: something else (the absence of an economically rational basis for doing so, perhaps) must have prevented CLEC investments in local circuit switching to serve mass market customers during the time in which UNE-P was not available.

3. CLECs have the necessary expertise to deploy the necessary network facilities. Dr. Aron speculates (p. 5) that perhaps the reason that CLECs are not (and have not) deployed local circuit switching facilities to serve mass market customers is because these carriers lack the necessary "expertise with the deployment of actual network facilities." Not only is Dr. Aron's statement completely unfounded, it ignores a wealth of available evidence to the contrary. Dr. Aron cannot seriously be arguing that AT&T has no experience or expertise with the deployment of actual network facilities. Other CLECs attempting to provide services to mass market customers in Florida have similar experience and expertise. Dr. Aron also ignores the fact that in many cases CLECs are now relying on the expertise of individuals who were previously employed – and whose expertise was relied upon – by BellSouth. There is absolutely no factual foundation for a conclusion that CLECs have not self-deployed these facilities because they lack the necessary expertise.

Q. AFTER A CONSIDERATION OF ALL OF THESE FACTORS, WHAT IS THE MOST LIKELY REASON THAT CLECS HAVE NOT SELF-DEPLOYED LOCAL CIRCUIT SWITCHING TO SERVE MASS MARKET CUSTOMERS?

A. A review of the factors described by Dr. Aron suggests that CLECs have not made these investments because it is not economically rational for them to do so. Results obtained from BellSouth's BACE model, described in detail later in my testimony, also support such a conclusion.

Q. DR. ARON ARGUES THAT THE EXISTENCE OF UNE-P IMPACTS THE VIABILITY OF UNE-L. DO YOU AGREE?

A. Not at all. Dr. Aron states (p. 33) that there is "no doubt" that the existence of UNE-P affects the "*viability* of pursuing the UNE-L strategy." This is a frankly bizarre

notion for which Dr. Aron offers no support. The *viability* of UNE-L depends on the characteristics of the market in question, the revenue opportunities that can reasonably be expected to exist in that market, and the cost (including investment in local circuit switching) required to provide the necessary services. As I describe in my rebuttal testimony, a meaningful business case analysis can be performed if (but only if) all variables are properly established and considered, but "availability of UNE-P" is not one of those variables. It is perhaps telling that the "availability of UNE-P" is not a variable considered by the BACE, which Dr. Aron endorses as an appropriate analysis.

In reality, CLECs have considered the viability of UNE-L as a means of serving mass market customers, and will probably continue to do so. While the availability of UNE-P may make it possible to serve mass market customers in geographic markets where UNE-L is not viable. UNE-P availability has no impact whatsoever on whether a business case can be made for UNE-L.

Q. DR. ARON ARGUES THAT CLECS GAIN FROM THEIR RELIANCE ON THE INCUMBENT. DO YOU AGREE?

A. No. Such a conclusion is nonsensical for two reasons. First, it is directly at odds with the language attributed by Dr. Aron to Chairman Powell, in which he explains that CLECs have a number of incentives to invest in their own facilities in order to minimize reliance on the ILEC, including "to offer differentiated services, control their costs, become less dependent on the incumbent [a competitor], and offer redundancy of networks."

Second, Dr. Aron (p. 6) explains that a CLEC can utilize UNE-P in order to avoid making the investment necessary for self-deployment. While she makes every

effort to tread carefully, she gets dangerously close to the right answer: CLECs rely on UNE-P because a business case that considers all relevant variables cannot be made for the higher risk entry strategy of self-deployment of local circuit switching and UNE-L to serve the mass market. As I explained in my rebuttal testimony, much of the financial risk in self-deployment is created by the fact that the CLEC begins with higher unit costs than BellSouth due to both a lower market share and backhaul requirements. In this respect, BellSouth's "first in" advantage in significant and potentially insurmountable. The FCC's TELRIC methodology puts ILECs and CLECs on a more equal footing by neutralizing – to some degree – this "first in" advantage in the pricing of UNEs by equalizing the component of each carrier's cost associated with this investment risk.

As I described in my rebuttal testimony, a fundamental problem with BellSouth's "potential deployment" analysis is that while Dr. Aron is arguing that CLEC's utilize UNE-P in order to reduce their risk to serve mass market customers, Dr. Billingsley is simultaneously arguing that CLECs investing in their own local circuit switches will experience significantly *less* risk than these same carriers have experienced when using UNE-P.[3] This inconsistency must be resolved in favor of Dr. Aron. Dr. Billingsley's assumption that CLECs will incur less risk and a lower cost of capital when making the substantial investments necessary to self-deploy local circuit switching (and his assumption that the necessary capital will be available at any price) is absurd on its face. While she subsequently reaches the wrong conclusions, Dr. Aron gets closer to the truth: because of the inherently higher risk, a

[3] This assumption causes Dr. Billingsley to significantly understate the relevant cost of capital for CLECs, and subsequently causes BellSouth to utilize a discount rate in the BACE that is much too low to reflect the risks associated with the investments that it analyzes.

business case analysis cannot support self-deployment of local circuit switching by CLECs to serve mass market customers. A business case can be made, for some geographic markets, to provide such services by utilizing UNE-P.

Q. DR. ARON CITES TO A CORRELATION BETWEEN THE AVAILABILITY OF UNE-P AND THE FAILURE OF CLECS TO SELF-DEPLOY LOCAL CIRCUIT SWITCHING TO SERVE MASS MARKET CUSTOMERS AS A RATIONALE FOR ELIMINATING UNE-P. DO YOU AGREE?

A. Not at all. Dr. Aron (p. 34) falls victim to a basic logical fallacy. Dr. Aron may be correct that when she notes that there is a correlation between the availability of UNE-P and the failure of competitors to utilize their own switching capacity. But as Dr. Aron certainly ought to be aware,[4] the existence of even a high degree of correlation does not imply causation (and certainly does not suggest that causation applies equally in both directions). It is equally correct to note that there is a correlation between people who fall down a lot and people who don't tie their shoes. The existence of this correlation in no way demonstrates that people *decide* not to tie their shoes *because* they fall down a lot. In the same way, a correlation between UNE-P and CLECs that do not self-deploy local circuit switching in no way demonstrates – or even suggests – that CLECs decide not to self-deploy *because* UNE-P is available. To the contrary, such a correlation could – and almost certainly does – underscore the importance of UNE-P by noting that CLECs use UNE-P where self-deployment of local circuit switching to serve mass market customers is not economically rational.

[4] Anyone who can use phrases like "accommodate heterogeneity in costs" – even if they are wrong when they use it – can be expected to have a rudimentary understanding of statistics.

Q. DR. ARON SUGGESTS (P. 5) THAT THE ELIMINATION OF UNE-P IS OF LITTLE CONSEQUENCE, BECAUSE LOCAL CIRCUIT SWITCHING MAY CONTINUE TO BE AVAILABLE AT "MARKET" PRICES. DO YOU AGREE?

A. No. As an initial matter, "may be available" is not the same as "will be available." The Commission should consider this key distinction before eliminating the mechanism that makes competitive alternatives available to many mass market customers in Florida. It is equally important to consider the characteristics of the "market" for local circuit switching and UNE-P. If the triggers analysis indicates that wholesale alternatives are not available (a neither BellSouth nor Verizon make a claim that such wholesale alternatives exist), BellSouth represents the sole provider of this functionality. Competitive market forces cannot constrain prices if only one provider exists. Finally, Dr. Aron does not suggest that local circuit switching, combined with access to voice grade local loops as a UNE-P offering, "may" be made available (if history is any guide, it won't be).

Q. YOU STATED THAT IT IS IMPORTANT FOR THE COMMISSION TO CONSIDER THE FACT THAT BELLSOUTH WOULD BE THE SOLE PROVIDER OF THIS FUNCTIONALITY IN DR. ARON'S "MARKET." DO YOU HAVE ANY EXPERIENCE THAT SUGGESTS A LIKELY PRICE LEVEL?

A. Yes. In a recent arbitration with ITC^DeltaCom, BellSouth proposed rates for local switching elements that would apply if the Commission reaches a finding of non-impairment. These rates were similar to the "market" rates identified by FCCA witness Gillan in his surrebuttal testimony. As Mr. Gillan explains, BellSouth's idea of a "market rate" is several hundred percent above the existing UNE rate. BellSouth also publishes its idea of "market based rates" on its interconnection website. The section of the *BellSouth/CLEC Agreement* containing *Market Based Rates* current

posted shows a proposed rate for a switch line port of $14 per month. The current UNE rate is $1.40, one-tenth of the proposed "market" level.

Q. DR. ARON ALSO PRESENTS REBUTTAL TESTIMONY IN SUPPORT OF THE INPUTS TO BELLSOUTH'S BACE MODEL. DO YOU AGREE WITH HER REASONING?

A. No. I disagree with Dr. Aron's assumptions that existing retail prices will remain unchanged for ten years, that BellSouth has considered revenues at a sufficient level of granularity, and that it is reasonable to expect that all CLECs offering mass market services will capture 15% of the relevant geographic market (particularly if BellSouth's win-back efforts are considered).

Q. PLEASE EXPLAIN WHY YOU DISGREE WITH DR. ARON'S ASSUMPTION THAT EXISTING RETAIL PRICES WILL REMAIN UNCHANGED FOR TEN YEARS.

A. At pp. 12-13, Dr. Aron argues that "the critical deficiency of an assumption of future price reductions, however, is that it violates the requirements of the FCC's potential deployment analysis. The FCC requires that states evaluate potential deployment business cases using the existing level of prices and revenues." As she is wont to do, Dr. Aron is taking one sentence from the TRO and failing to consider its interrelationship with other FCC requirements.

When conducting a business case analysis, it is important to consider the likely level of revenues and costs over the time horizon of the analysis. In a short run analysis, it may be appropriate to consider the current level of prices to be fixed. If the analysis encompasses a longer period of time (such as the BACE's immutable ten year assumption), it is necessary to consider the potential for changes in the level of revenues and costs over time. This uncertainty increases as more distant time periods

are considered, thereby increasing the risk associated with these more distant expected cash flows. The consideration of projected revenues and costs – and the uncertainty associated with those expectations – is fully consistent with the FCC's conclusion (¶517) that when "judging whether entry is economic," states must consider how "competitive risks affect the likelihood of entry."

BellSouth has juxtaposed assumptions of fixed price levels, a ten year time horizon, and a discount rate based on a *lower* level of risk than CLEC's currently face. If Dr. Aron were correct that it is reasonable to consider fixed prices (and therefore to assume no uncertainty and no risk associated with that uncertainty), it would not be necessary to conduct an NPV analysis at all; the expected value would simply be the sum of future net cash flows (with no discount rate applied).

Q. DR. ARON AGRUES (P. 14) IN FAVOR OF GRANULAR ASSUMPTIONS REGARDING COSTS AND REVENUES. DOES THE BACE OPERATE IN THIS MANNER?

A. No. Dr. Aron refers to "a requirement that the analysis be sufficiently granular to take into account the state of impairment in a particular market," and specifically cites to the FCC's conclusion (¶ 485) that an appropriate analysis must consider "the significant variation in the costs and revenues an efficient entrant is likely to face."

As I described in detail in my rebuttal testimony, the BACE does not (and based on its construction, cannot) do this. BellSouth's existing retail prices for mass market customers are characterized by areas of high rates and low costs, exactly the kind of relationship that the FCC found to be unsustainable. BellSouth's prices and reported costs vary at the wire center level. The price assumptions in the BACE, however, cannot be changed at this level of granularity. Dr. Aron's assertion (p. 14)

that it is necessary "to reflect the unique characteristics of the Florida customer base" is an accurate description of what a business case model *should* do, but an inaccurate description of what the BACE *can* do.

Q. DR. ARON MAKES SEVERAL CLAIMS ABOUT HOW THE BACE MODEL TREATS CLEC MARKET SHARE OVER TIME. DO YOU AGREE WITH HER TESTIMONY?

A. No. I disagree with Dr. Aron's market share assumptions in three areas. First, her claims regarding how the BACE treats CLEC market shares is simply factually incorrect. Second, the assumptions and model inputs that she supports fail to reflect important information.

In both her direct and rebuttal testimony, Dr. Aron states that an ultimate market share of 15% is assumed for each CLEC. A review of BellSouth's base run assumptions, however, indicates that the actual assumptions range from 7.53% to 20.12% for residence customers and 3.6% to 32.85% for 1-3 line business customers. If 15% is Dr. Aron's magic number, it is unclear why BellSouth has not actually used it in the BACE.

Second, Dr. Aron's testimony, particularly when compared to Ms. Tipton's,[5] suggests that her assumptions are unlikely to prove true. At p. 26, Dr. Aron argues that "while a penetration rate of 5 percent may be reasonable for a growing CLEC early in its life, it is not appropriate as an ultimate penetration rate." BellSouth's BACE assumptions (sponsored by Dr. Aron) are inconsistent with this statement: based on her "p value" of .5 and an ultimate CLEC market share of 15%, the BACE

[5] Ms. Tipton shows between three and eleven CLECs in each market using self-provisioned local switching (assuming that some carriers are utilizing UNE-P instead, the actual number of CLECs in therefore likely to be higher). In ten years, Dr. Aron's assumptions yield a total CLEC share of the market of between 45% and 165% of the total market.

assumes that every CLEC will have a Year One market share of 7.5% - a market share that is 50% higher than the 5% Dr. Aron refers to as "reasonable" for "a growing CLEC."

Third, Dr. Aron fails to incorporate additional relevant information. At p. 27 she refers to a "willingness on the part of customers to leave BellSouth." What she does not discuss (and makes no indication that she has considered) is the willingness of those same customers to be enticed by BellSouth's "win-back" offerings. In its Fourth Quarter 2003 *Investor Relations Competitor Earnings Update*, BellSouth CFO Ron Dykes is quoted as saying that "BellSouth is on the 'bleeding edge' in terms of aggressiveness in win-backs for UNE-P competitors," and that BellSouth has "won back "40% of its consumer losses, and more than 60% of its business losses." If BellSouth is "on the bleeding edge of aggressiveness" in its efforts to win back customers from UNE-P providers (customers for whom it receives wholesale revenue to recover network costs), it is reasonable to expect that BellSouth would be somewhere beyond the "bleeding edge of aggressiveness" in its attempts to win back customers from a CLEC utilizing self-deployed local circuit switching (customers for whom it receives no revenue). BellSouth's window of opportunity to "win back" a customer before it is actually lost is also greater in a UNE-L scenario. With UNE-P, BellSouth has approximately twenty-four hours before the cutover of the customer is completed. With UNE-L, BellSouth's "win-back before actually lost" window expands to five days.

Based on BellSouth's existing on-but-not-yet-beyond the bleeding edge of aggressiveness win-back offerings, it has been able to entice about half of the

customers won by CLECs to return. In other words, a CLEC must win two customers from BellSouth in order to keep one. Assuming that Dr. Aron's assumptions about a CLEC's ability to attract customers are accurate (as described above, a generous assumption), the BACE has overstated both the rate of customer acquisition and ultimate CLEC market share by failing to consider the impact of BellSouth's bleeding edge aggressiveness.[6]

Q. YOU STATED THAT THE BACE CAN BE USED TO DEMONSTRATE THE IMPORTANCE OF USING REASONABLE ASSUMPTIONS. PLEASE EXPLAIN HOW YOU HAVE REACHED THIS CONCLUSION.

A. While the structure of the BACE makes it impossible to reflect all relevant revenue and cost information with sufficient granularity to perform a meaningful business case analysis, it is possible to consider the impact that certain BellSouth assumptions (sponsored by Dr. Aron) have on the results. A table containing these results is attached as Exhibit _____, DJW-5.

These results can be summarized as follows:

If prices are assumed to decrease by 7% per year, and no other changes are made to BellSouth's assumptions, the reported NPV declines by 97%.

If Dr. Billingsley's CLEC-specific cost of capital is used, and no other changes are made to BellSouth's assumptions, the reported NPV declines by 35%.

[6] A win-back offering effectively reduces that rates against which a CLEC must compete. The ability of BellSouth to make win-back offers underscores the fallacy of Dr. Aron's assumption of constant prices.

If the CLEC market penetration assumptions are adjusted to reflect the impact of BellSouth's win-back pricing, and no other changes are made to BellSouth's assumptions, the reported NPV declines by 69%.

Q. DR. ARON ARGUES THAT A COST DISADVANTAGE IS INSUFFICIENT TO DEMONSTRATE IMPAIRMENT. DO YOU AGREE?

A. No. She argues (p. 29) that whether "CLECs incur costs that are not incurred by ILECs is not determinative of impairment," but instead that "costs are relevant only within the context of a well-defined business case analysis that evaluates whether entry by an efficient CLEC is economic." As a practical matter in this case, the questions (and the answers) are the same.

Dr. Aron argues (p. 36) that "the claim that a cost disadvantage renders a firm incapable of competing effectively and viably in a market is simply inconsistent with much of modern economic theory, which provides a number of models in which firms with different cost structures providing identical products viably coexist." Dr. Aron goes on to explain that CLECs can "compete by differentiating their products from their rivals and earn a premium" from certain customers. Dr. Aron does not explain why if it is necessary to differentiate a product in order to command a higher price from some customers, firms with higher unit costs but *providing identical products* could successfully compete.

Dr. Aron goes on to describe "the richness of economic models of competition." While the 'richness" of these models may provide for interesting academic debate at a 30,000 foot level, this case is about what is actually happening at ground level. Dr. Aron offers no examples, theoretical or otherwise, of how

telecommunications services to mass market customers could be differentiated in a way that would support any significant difference in price, nor does she explain how – even in the absence of BellSouth's ability to effectively reduce the rate against which the CLEC must compete through a win-back offering – a CLEC with a higher per-unit cost can compete on price *for mass market customers within the identified geographic markets in Florida.* A description of the "richness" of economic theory cannot serve as a substitute for the granular analysis of actual market conditions required by the TRO.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

(Transcript continues in sequence with Volume 22.)

STATE OF FLORIDA)

: CERTIFICATE OF REPORTER

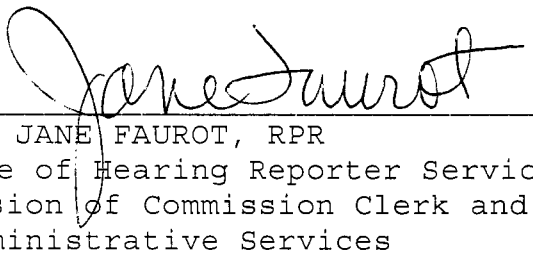
COUNTY OF LEON)

I, JANE FAUROT, RPR, Chief, Office of Hearing Reporter Services, FPSC Division of Commission Clerk and Administrative Services, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 1st day of March, 2004.



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