## AFFIDAVIT

## STATE OF GEORGIA

## COUNTY OF FULTON

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared W. Keith Milner, who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Kentucky Public Service Commission in Case No. 2003-00379, Review of Federal Communications Commission's Triennial Review Order Regarding Unbundling Requirements for Individual Network Elements, and if present before the Commission and duly sworn, his surrebuttal testimony would be set forth in the annexed testimony consisting of $\qquad$ pages and $\qquad$ exhibits.

W. Keith Miner

SWORN TO AND SUBSCRIBED BEFORE ME
THIS 9 DAY OF APRIL, 2004


## Notary Public, Gwinnett County, Georgia

My Commission Expires Feb. 19, 2008

# BELLSOUTH TELECOMMUNICATIONS, INC. sURREBUTTAL TESTIMONY OF W. KEITH MILNER BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION <br> DOCKET NO. 2003-00379 <br> APRIL 13, 2004 

Q. PLEASE STATE YOUR NAME, YOUR BUSINESS ADDRESS, AND YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. ("BELLSOUTH").
A. My name is W. Keith Milner. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375. I am Assistant Vice President Interconnection Operations for BellSouth.
Q. ARE YOU THE SAME W. KEITH MILNER THAT FILED DIRECT AND REBUTTAL TESTIMONY IN THIS PROCEEDING?
A. Yes.
Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY FILED TODAY?
A. The first part of my surrebuttal testimony responds to criticisms of BellSouth's Analysis of Competitive Entry ("BACE") model. For example, on pages 6-7 of Mr. James Webber's rebuttal testimony on behalf of

MCIMetro Access Transmission Services, LLC and MCI WORLDCOM Communications, Inc., he discusses the assumption within the BACE model that Competitive Local Exchange Carriers ("CLECs") can serve some or all of their end users with so-called Enhanced Extended Links ("EELs"). To respond to such criticisms, I discuss several areas in which the default inputs to the BACE model cause the model to yield financially conservative results. The second part of my testimony provides surrebuttal to the rebuttal testimony of Mr. Jay Bradbury and Mr. Mark David Van de Water on behalf of AT\&T Communications of the Southern States, LLC ("AT\&T").

## BACE Model Assumptions

Q. PLEASE EXPLAIN YOUR BELIEF THAT BELLSOUTH'S BACE MODEL USES CONSERVATIVE INPUTS AND THUS YIELDS CONSERVATIVE OUTPUTS.
A. In my opinion, BellSouth's BACE model yields conservative results based on inputs made for the following elements:

1. The quantity of switches a CLEC will operate in a Local Access and Transport Area ("LATA")
2. The quantity of trunk groups between a CLEC's switch and the E911 tandems in a LATA
3. The use of Special Access transport instead of CLEC-provided transport between the CLEC's central office and the BellSouth access tandem
4. The use of Special Access transport instead of CLEC-provided transport between the CLEC's switch and the CLEC's choice of Directory Assistance and Operator Services platforms
5. The deployment of a voicemail platform per LATA
6. The portion of unbundled loops provisioned as Service Level 2 ("SL2") loops rather than lower priced Service Level 1 ("SL1") loops
7. The use of current "full price" Non-Recurring Charge ("NRC") levels rather than discounted levels for all cutover of unbundled loops

I discuss each of these issues in greater detail below.

## Q. PLEASE EXPLAIN HOW BELLSOUTH'S ASSUMPTION REGARDING THE QUANTITY OF SWITCHES A CLEC WILL OPERATE IN A LATA WILL YIELD A CONSERVATIVE RESULT.

A. The default BACE inputs assume a CLEC will deploy at least one (1) switch per LATA. As was discussed in my direct and rebuttal testimony in this proceeding, CLECs can deploy a single switch and provide service to end users over a very large geographic area, perhaps even over an entire state or more. Thus, the default assumption that a CLEC will place at least one (1) switch per LATA results in a higher quantity of switches deployed.

## Q. PLEASE EXPLAIN HOW BELLSOUTH'S ASSUMPTION REGARDING THE QUANTITY OF TRUNK GROUPS BETWEEN A CLEC's SWITCH

AND THE E911 TANDEMS IN A LATA WILL YIELD A CONSERVATIVE RESULT.
A. In developing the default input for the quantity of E911 trunks a CLEC would deploy, I found that the maximum quantity of E911 tandems in a single LATA in BellSouth's region is six (6). Thus, the BACE default assumption is that a CLEC will equip its switch for six (6) DS-1 transport facilities (one each to the E911 tandem switches) which, if fully equipped, would provide for 144 simultaneous calls to E911 operators from the CLEC's switch. Since most end office switches have only one or two trunk groups to E911 tandem switches, this assumption results in a higher quantity of E911 trunk groups being equipped.

## Q. PLEASE EXPLAIN HOW BELLSOUTH'S ASSUMPTION REGARDING THE USE OF SPECIAL ACCESS TRANSPORT INSTEAD OF CLECPROVIDED TRANSPORT BETWEEN THE CLEC's CENTRAL OFFICE AND THE BELLSOUTH ACCESS TANDEM WILL YIELD A CONSERVATIVE RESULT.

A. The default assumption in the BACE model is that a CLEC will use Special Access facilities rather than CLEC-provided facilities to connect the CLEC's switch to BellSouth's access tandem. In cases where the CLEC self-provides this transport and where the resulting costs are less, BACE derives a higher cost than would actually be incurred. Further, BACE determines the quantity of DS-1 or DS-3 equivalents required based on
traffic loads. Since BACE does not assume the use of higher transport facilities than DS-3, BACE will, depending on traffic demand, deploy multiple DS-3 circuits rather than OCn circuits, which in some situations would be more efficient and thus less costly.

## Q. PLEASE EXPLAIN HOW BELLSOUTH'S ASSUMPTION REGARDING THE USE OF SPECIAL ACCESS TRANSPORT INSTEAD OF CLECPROVIDED TRANSPORT BETWEEN THE CLEC's SWITCH AND THE CLEC's CHOICE OF DIRECTORY ASSISTANCE AND OPERATOR SERVICES PLATFORMS WILL YIELD A CONSERVATIVE RESULT.

A. The default assumption is that a CLEC will elect the use of Special Access facilities rather than self-provided facilities between the CLEC's switch and the CLEC's choice of director assistance platform. Likewise, BACE assumes the use of Special Access rather than CLEC-provided facilities to transport traffic between the CLEC's switch and the CLEC's choice of operator services platform. In any case where the CLEC self-provides this transport and the resulting cost is less than Special Access charges, BACE will have assumed a higher cost to the CLEC than would actually be incurred.

## Q. PLEASE EXPLAIN HOW BELLSOUTH'S ASSUMPTION REGARDING THE DEPLOYMENT OF A VOICEMAIL PLATFORM PER LATA WILL YIELD A CONSERVATIVE RESULT.

A. As with switches, voicemail platforms can be equipped to handle demand over a very large geographic area, often over an entire state or even larger. Thus, the default assumption within the BACE model yields a conservative result because the quantity of voicemail platforms assumed to be deployed would be larger than a CLEC would actually probably deploy.

## Q. PLEASE EXPLAIN HOW BELLSOUTH'S ASSUMPTION REGARDING THE PORTION OF UNBUNDLED LOOPS PROVISIONED AS SL2 LOOPS RATHER THAN LOWER PRICED SL1 LOOPS WILL YIELD A CONSERVATIVE RESULT.

A. The model assumes a high proportion (45\% of non-DSL customers) of mass market unbundled loops will be purchased as SL2 loops. This level was chosen assuming that CLECs would continue to order the higherpriced SL2 loops as they have in the recent past. SL2 loops are designed loops that are provisioned with test points that allow automated testing. The CLEC also receives a Detailed Layout Record ("DLR") depicting the loop makeup. Providing the test points and DLRs adds cost over those incurred in the provisioning of SL1 loops that are not equipped with test points and do not come with a DLR. In my opinion, CLECs will not choose SL2 loops for residential end users. For small business customers, the CLECs may sometimes choose SL2 loops rather than SL1 loops. Since the existing UNE-P base is predominantly residential customers, the default assumption in the BACE model that $45 \%$ of all unbundled loops
will be provided as SL2 loops is probably overstated and thus results in the model deriving higher CLEC costs.

## Q. PLEASE EXPLAIN HOW BELLSOUTH'S ASSUMPTION REGARDING ALL CUTOVER OF UNBUNDLED LOOPS BEING PRICED AT THE CURRENT NON-RECURRING CHARGE ("NRC") LEVELS RATHER THAN DISCOUNTED LEVELS WILL YIELD A CONSERVATIVE RESULT.

A. The BACE model assumes that all NRCs for unbundled loop provisioning are the current NRCs. BellSouth has announced discounts off the NRC for CLECs using the Batch Hot Cut method. For CLECs using the Mass Migration method described in the surrebuttal testimony of BellSouth witness Milton McElroy, the discounts are even steeper. Thus, the BACE model calculates NRCs higher than will be experienced by CLECs using the Batch Hot Cut method or the Mass Migration method.

## Surrebuttal to Mr. Jay Bradbury

Q. ON PAGES 12-13 OF HIS TESTIMONY, MR. BRADBURY CONTENDS THAT, IN REGARD TO CLEC NETWORK ARCHITECTURAL CONSIDERATIONS, THE STATEMENT MR. MILNER MADE IN HIS DIRECT TESTIMONY "AT\&T HAS THE ABILITY TO CONNECT..." MISSES THE MARK AND "DOES NOT PROVIDE ANY INFORMATION ABOUT HOW AT\&T, OR ANY OTHER CLEC, DETERMINES WHETHER IT IS ECONOMIC TO MAKE SUCH CONNECTIONS." PLEASE

COMMENT.
A. I was not making an economic determination of CLEC profitability as Mr. Bradbury implies. Instead, I was making a statement regarding the technical capabilities of CLECs' switches. As Mr. Bradbury says in his testimony on page 13, "As I indicated in my direct testimony, a crucial issue in this proceeding is not whether a CLEC simply 'can' connect its switch with the local loops of the end user, but whether a CLEC can 'efficiently use' its own switch to connect to the local loops of end users. In contrast, the issue being discussed in the testimony Mr. Milner has selected was geographic comparability not the actual deployment of network facilities to serve customers." Importantly, Mr. Bradbury does not dispute that CLECs' switches have the potential to serve large geographic areas (for example, at least as large as the geographic area served by a BellSouth tandem switch), which corroborates my statement in direct testimony regarding same. I did not perform an independent analysis of the economics of using fewer switches and consequently longer loops simply because BellSouth's BACE model provides such an analytic tool.

## Rebuttal to Mr. Van de Water

Q. ON PAGE 28 OF HIS TESTIMONY, MR. VAN DE WATER CONTENDS THAT THE SPECIFIC ISSUES HE IS CONCERNED ABOUT ARE COLLOCATION SPACE AND TRUNK BLOCKING. MR. VAN DE WATER CONTENDS THAT IF UNBUNDLED LOCAL SWITCHING IS NO LONGER AVAILABLE AT COST-BASED RATES TO CLECs,

# CUSTOMER SERVICE WILL BE NEGATIVELY IMPACTED. DO YOU AGREE? 

A. No. I will address Mr. Van de Water's concerns regarding the adequacy of BellSouth's trunking facilities and BellSouth's witness Mr. Wayne Gray will address Mr. Van de Water's concerns regarding collocation space.

## Q. PLEASE BRIEFLY DESCRIBE THE CONSIDERATIONS TAKEN INTO ACCOUNT WHEN DESIGNING AND DEPLOYING TRUNKING FACILITIES.

A. Traffic volumes (that is, levels of simultaneous customer calling) reach peaks during certain hours of the day or week. Trunks connecting the various switches in a local calling area are usually engineered to care for average-time consistent busy-hour loads in the busy season of the year, typically the three highest months in a year for traffic volumes. Switching systems in a LATA are interconnected by a network of trunks. The interconnections provide for both intraLATA and interLATA services. For interLATA services, trunks connect most LEC networks to the networks of the Interexchange Carriers ("IXCs"). For intraLATA services, trunks connect the various end office switches (both incumbents' switches and CLECs' switches) and, if used, the tandem switches. Trunks between switching systems are most commonly carried on channels of digital carrier systems (Digital Signal level 1 or "DS-1"and higher-order systems). The successful completion of traffic dialed by customers and operators
depends upon a trunking network in which no-circuit conditions are rarely encountered under expected conditions.

## Q. PLEASE BRIEFLY DESCRIBE MR. VAN DE WATER'S CONCERN REGARDING TRUNKING FACILTIES.

A. Mr. Van de Water suggests that once CLECs serve their customers from the CLECs' switches rather than from the incumbent's switches, traffic congestion and call blockage will occur due to traffic displacement. Let me give an example of how traffic displacement might occur. Let us assume that in a given local calling area there are at present only three switches (Switches A, B, and C) handling all the customers. Assume that each switch handles 10,000 customers and that all customers have similar calling habits. A CLEC has won $25 \%$ of the customers and serves those customers via UNE-P arrangements acquired from the switch owner. Further assume that within a given switch the 10,000 customers each make three calls and that $50 \%$ of those calls are to customers to other customers served by that same switch and that the remaining 50\% of the calls area split evenly to the customers served by the other two switches. Lastly, assume the use of one-way rather than two-way trunking.

Thus, in my hypothetical example, Switch A handles 30,000 calls in the busy hour. Half (50\%) of those calls are intra-switch calls so no external trunking is needed for those calls to be completed. Trunking facilities to the other two switches (Switches B and C) must be sized to handle 15,000
simultaneous calls in the busy hour. In this simple example, each of the three (3) switches would each have two (2) outgoing trunk groups (one trunk to each of the other two switches) and two (2) incoming trunk groups (one trunk from each of the other two switches).

If a fourth switch (let us assume that the new switch is the CLEC's switch referred to as Switch D ) is introduced into the local calling area and if the CLEC moves all of its 7,500 customers to that switch $(30,000$ * 0.25$)$ then traffic is displaced from the existing trunk groups connecting Switches A , $B$, and $C$ onto new trunk groups connecting Switches $A$ and $D$, Switches $B$ and D, and Switches C and D. Even though the total traffic load is precisely the same before and after the CLEC moved its own customers to its own switches, the "old trunk groups" are over-sized in that they were sized for larger loads than they will now be required to carry. The traffic volume that was displaced from these trunk groups is displaced to new trunk groups from Switches A, B, and C respectively to new Switch D.

## Q. HOW DO TRUNKING ENGINEERS HANDLE TRAFFIC DISPLACEMENT ISSUES?

A. In my simple example above, the situation calls for building new trunk groups between Switches $A, B$, and $C$ respectively to the new Switch D. Once those trunk groups are operational and the traffic displacement has occurred (that is, the CLEC has moved its customers to its own switches), the "old trunk groups" may be re-sized (decremented) in response to the
smaller loads on them or they can be left alone if the excess capacity is expected to be consumed (due to overall customer growth) in a reasonable period.

## Q. IS TRAFFIC DISPLACEMENT AN ARTIFACT OF CLECs DEPLOYING THEIR OWN SWITCHES?

A. Certainly not. For many years, telecommunications engineers have confronted and successfully handled traffic displacement. Just a few examples include the following:

- The introduction of new wire centers (central offices) and thus additional switching systems
- The replacement of older switching system technology with newer switching system technology
- The introduction or expansion of so-called Extended Area Service ("EAS") toll-free calling areas


## Q. DO YOU BELIEVE IT IS A REASONABLE EXPECTATION THAT CALL BLOCKING WILL OCCUR ONCE CUSTOMERS ARE MOVED FROM INCUMBENTS' SWITCHES TO CLECs' SWITCHES?

A. No. Just as trunking engineers have successfully planned for large-scale traffic displacement in the past, they will do so in the situation where CLECs begin using their own switches. I expect the trunking engineers will create new trunk groups in response to CLEC requests and that those
trunk groups will be of sufficient size so as to not cause traffic congestion or call blockage. Once the customers are moved, trunking engineers will use the extensive traffic reporting capabilities already available to them to ensure that trunking facilities are adequately sized.

## Q. MR. VAN DE WATER, ON PAGE 30 OF HIS TESTIMONY, EXPRESSES CONCERN ABOUT THE MOVEMENT OF TRAFFIC FROM BELLSOUTH'S EXISTING LOCAL SWITCH NETWORK ONTO ITS TANDEM TRANSPORT NETWORK NECESSITATED BY THE CONVERSION OF THE EMBEDDED BASE OF UNE-P CUSTOMERS TO CLECs' SWITCHES. DO YOU CONCUR?

A. No. This is essentially the same concern as Mr. Van de Water expresses for individual trunk groups. Here he opines that the tandem switches and the trunk groups connecting end office switches and tandem switches are insufficiently sized and that call blockage will occur. I disagree with his conclusions regarding tandem switching capacities for the same reasons as I set out in response to his concerns regarding trunk group adequacy. Essentially, the same call volumes will be present whether the calls are handled over the incumbents' switches (that is, their own customers' calling plus the CLECs' customers' calling) or in the case where CLECs move their customers to their own switches. While I agree that traffic displacement will occur, that situation has occurred countless times in the past and trunking engineers have successfully handled those transitions. I fully expect that this situation will be no different in that respect.
Q. BEGINNING ON PAGE 31 OF HIS TESTIMONY, MR. VAN DE WATER EXPRESSES CONCERN OVER WHETHER BELLSOUTH'S TANDEM SWITCHES CAN HANDLE THE INCREASED TRAFFIC LOAD RESULTING FROM UNE-P TO UNE-L CONVERSION. PLEASE COMMENT.
A. There is no increased call volume as a result of CLECs moving their customers to their own switches. Instead, the same amount of calling must be handled in a different way. Just as has happened in the past, certain trunk groups will be added (or augmented) to handle traffic that was handled differently before the traffic displacement, while after the transition certain trunk groups can be decremented. While there may be a need to augment tandem switching capacity should CLECs initially route their traffic exclusively through the tandem switches to reach all other local switches, over time I expect that CLECs will elect direct trunking between their switches and certain other switches in a given local calling area thus diminishing the total traffic load handled by the tandem switches.

## Q. DOES THAT CONCLUDE YOUR SURREBUTTAL TESTIMONY?

A. Yes.

