BELLSOUTH

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December 6, 2000

VIA HAND DELIVERY

David Waddell, Executive Secretary
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37238

Re: *Petition of MCImetro Access Transmission Services, LLC and Brooks Fiber Communications of Tennessee, Inc. for Arbitration of Certain Terms and Conditions of Proposed Agreement with BellSouth Telecommunications, Inc. Concerning Interconnection and Resale Under the Telecommunications Act of 1996*
Docket No. 00-00309

Dear Mr. Waddell:

Enclosed are the original and thirteen copies of BellSouth's Direct Testimony by the following witnesses:

David A. Coon
David P. Scollard
Ronald M. Pate
Cynthia Cox
W. Keith Milner

Copies of the enclosed are being provided to counsel of record for all parties.

Very truly yours,

Guy Hicks (ch) w/permission

Guy M. Hicks

GMH:ch
Enclosure

238680

CERTIFICATE OF SERVICE

I hereby certify that on December 6, 2000, a copy of the foregoing document was served on the parties of record, via the method indicated:

[ ] Hand [✓] Mail [ ] Facsimile [ ] Overnight	Jon E. Hastings, Esquire Boult, Cummings, et al. P. O. Box 198062 Nashville, TN 37219-8062
[ ] Hand [✓] Mail [ ] Facsimile [ ] Overnight	Susan Berlin Dulaney L. O'Roark, III MCI WorldCom, Inc. Six Concourse Pkwy, #3200 Atlanta, GA 30328

Guy Hicks by ch
w/ permission

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BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF W. KEITH MILNER

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 00-00309

DECEMBER 6, 2000

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 Senior Director - Interconnection Services for BellSouth. I have served in my present role since February 1996, and have been involved with the management of certain issues related to local interconnection, resale, and unbundling.

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.

A. My business career spans over 30 years and includes responsibilities in the areas of network planning, engineering, training, administration, and operations. I have held positions of responsibility with a local exchange telephone company, a long distance company, and a research and development company. I have extensive experience in all phases of telecommunications network planning, deployment, and operations in both the domestic and international arenas.

I graduated from Fayetteville Technical Institute in Fayetteville, North Carolina, in 1970, with an Associate of Applied Science in Business Administration degree. I later graduated from Georgia State University in 1992 with a Master of Business Administration degree.

Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE PUBLIC SERVICE COMMISSION, AND IF SO, BRIEFLY DESCRIBE THE SUBJECT OF YOUR TESTIMONY?

A. I have previously testified before the state Public Service Commissions in Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, and South Carolina, the Tennessee Regulatory Authority, and the Utilities Commission in North Carolina on the issues of technical capabilities of the switching and facilities network regarding the introduction of new service offerings, expanded calling areas, unbundling, and network interconnection.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY BEING FILED TODAY?

A. In my testimony, I will address the technical aspects of certain unresolved network related issues that have been raised by MCI WorldCom ("MCI") in its Petition for Arbitration filed with the Tennessee and directory assistance service platforms. Customized routing can be provided when a CLEC acquires unbundled local switching from BellSouth or resells BellSouth's local exchange services.

Q. DOES BELLSOUTH PROVIDE CUSTOMIZED ROUTING TO REQUESTING CLECS?

A. Yes. BellSouth has a Line Class Code (LCC) solution for customized routing as well as an Advanced Intelligent Network (AIN) solution. Thus, BellSouth has met the FCC's requirements and is not obligated to provide operator services and directory assistance services (OS/DA) on an unbundled basis.

Q. BRIEFLY DESCRIBE THE METHODS AVAILABLE FOR CUSTOMIZED ROUTING.

A. The first method of providing customized routing that BellSouth has made available is the LCC method. The LCC method makes use of translations and routing capabilities in the end office switch. Availability of customized routing capability using LCCs is offered on a first-come, first-served basis. To date, BellSouth has not denied any request for selective routing based on lack of LCC capacity.

A second method for providing customized routing is through the use of BellSouth's Advanced Intelligent Network (AIN) platform. A technical trial of customized routing using BellSouth's AIN platform commenced in Louisiana, in August 1998, and was successfully completed in September 1998. BellSouth conducted a second trial of its AIN method for customized routing which commenced in May 1999 and successfully completed in August 1999. The AIN method of customized routing allows the use of the AIN "hub" concept, which yields several advantages. The AIN hubbing arrangement:

- Allows the use of appropriate AIN "triggers" for all call types rather than only a limited set of call types.
- Allows even those end office switches that are not AIN-capable to use the AIN customized routing solution.
- Optimizes the use of trunk groups by allowing the carriage of customized routing traffic over common trunk groups between the end office and the AIN hub.

The AIN method for customized routing is available to CLECs in addition to the LCC method. BellSouth has completed work on enhancement to its AIN Service Management System (SMS) which will facilitate CLEC's creating and updating routing information for the CLEC's end user customers. BellSouth completed end-to-end call through testing (ETET) of this enhancement on June 14, 2000. The availability of this method was posted on BellSouth's web site (http://www.interconnection.bellsouth.com/products/UNE/ainscr.pdf) on October 23, 2000.

Q. IS THERE A LIMITATION ON THE AVAILABILITY OF CUSTOMIZED ROUTING FOR CLECs?

A. CLEC demand for customized routing to date suggests there is no imminent risk of exhaustion of LCCs even though BellSouth had previously thought this risk existed based on CLEC representations as to the quantity of LCCs they would require. Under the AIN solution, however, only a very limited number of LCCs would be necessary. The AIN method therefore eliminates any potential exhaust concerns about the LCC method of customized routing.

Q. HOW IS THE AIN METHOD DIFFERENT THAN THE LCC METHOD?

A. The AIN method also allows use of the common trunk groups between the end office switch and the AIN hub switch to accomplish customized routing for customers served by different end offices subtending a particular AIN hub. In contrast, the LCC solution requires a separate trunk group for each end office. This trunk group may be shared, however, by those CLECs' requesting the same branding or unbranding of their respective end users' OS/DA traffic. Because the AIN method is in essence a database lookup (a function that is not performed with the LCC method), a small amount of post dialing delay is introduced. The additional post-dialing delay in the AIN solution as compared to the LCC method, which results from querying the database, may be a concern for some CLECs. While testing indicates that the amount of post dialing delay for customized routing via the AIN method is negligible (between a half-second and one-second), some CLECs may prefer the LCC method on these grounds. By providing CLECs a choice of methods, BellSouth better enables CLECs to compete based upon their own business plans and priorities.

BellSouth stands ready to develop contract language to incorporate these methods in MCI's interconnection agreement that will facilitate MCI's use of customized routing functionality. However, whether or not MCI is interested in its doing so, BellSouth provides MCI and other CLECs with customized routing consistent with the FCC's rules.

Issue 8: Should UNE specifications include non-industry standard, BellSouth proprietary specifications?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Although industry standards provide useful guidance for the provision and maintenance of UNEs, there are no industry standards at present for every UNE. BellSouth has developed standards in cases where no industry standard exists which should be incorporated into the parties' interconnection agreement.

Q. WHAT IS YOUR UNDERSTANDING AS TO WHAT INDUSTRY STANDARDS MCI BELIEVES BELLSOUTH SHOULD ADOPT?

A. My understanding is that MCI wants BellSouth to commit to an as-yet defined set of standards for unbundled loops. In the absence of industry standards for unbundled loops, BellSouth has developed definitions of unbundled loops and has given CLECs, including MCI, access to its technical document via BellSouth's Internet website. Specifically, BellSouth has developed Technical Reference 73600 (TR 73600) which provides details as to what BellSouth offers and how BellSouth's unbundled loops are related to any existing industry standards where industry standards exist. I have attached a copy of TR 73600 to this testimony as Exhibit WKM-1.

Q. HAS MCI PROPOSED STANDARDS FOR BELLSOUTH'S UNBUNDLED LOOP OFFERINGS?

A. Not to my knowledge. Instead, MCI merely criticizes the standards that BellSouth has developed without specifying the nature of those criticisms beyond the fact that BellSouth's TR 73600 is not a "national standard." However, the industry standards bodies have not yet provided standards for unbundled loops. Despite the absence of such industry standards, BellSouth still is required to make certain unbundled loops available to all CLECs, and there should be guidelines so that CLECs will know what to expect from BellSouth in the way of unbundled loops, which is the reason BellSouth believes TR 73600 should be incorporated into the interconnection agreement with

MCI.

Issue 15: When a WorldCom customer served via the UNE-platform makes a directory assistance or operator call, must the ANI-II digits be transmitted to WorldCom via Feature Group D signaling from the point of origination?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth will provide Feature Group D signaling (including ANI-II digits) with customized routing to MCI when MCI acquires the so-called "unbundled network element platform" (UNE-P).

Q HOW WILL BELLSOUTH PROVIDE CUSTOMIZED ROUTING TO MCI WITH FEATURE GROUP D SIGNALING?

A. BellSouth identified a number of different ways to accomplish the signaling MCI has stated it desires. These methods are:

- For BellSouth end office switches subtending a Nortel DMS Access Tandem, the end office switch will prefix a pseudo code in front of the dialed digits to instruct the DMS Access Tandem switch which trunk group to select. The DMS Access Tandem will then convert the signaling to Equal Access Signaling and route to the appropriate MCI Feature Group D trunk group.

- For all other BellSouth end office switches (that is, those subtending an Access Tandem other than a Nortel Access Tandem), BellSouth will designate one or more Nortel DMS switches in the LATA as the Operator Services office(s) for MCI, and the end office switch will prefix the pseudo code as described previously.

- As an alternative to the second method described immediately above, the end office switch will add the pseudo code, send the call to its normal Access Tandem (if that tandem is a Nortel tandem), then the Access Tandem will forward the call to a designated Nortel DMS switch for the conversion to Equal Access Signaling and routing to the appropriate MCI FGD trunk group.

BellSouth is willing to incorporate these methods in MCI's interconnection agreement that will allow MCI to use customized routing functionality with Feature Group D signaling.

Issue 19: How should BellSouth be required to route OS/DA traffic to WorldCom's operator services and directory assistance platforms?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth will route MCI's operator services and directory assistance traffic (when MCI acquires unbundled switching or the UNE platform (UNE-P)) in the same manner as BellSouth routes operator services and directory assistance traffic for its own end user customers. If MCI elects to use customized routing, calls from MCI's customers will be handled according to MCI's preferences.

Q. HOW DOES BELLSOUTH ROUTE OPERATOR SERVICES AND DIRECTORY ASSISTANCE TRAFFIC FOR ITS OWN END USER CUSTOMERS?

A. BellSouth routes its operator services or directory assistance traffic directly to a BellSouth Traffic Operator Position System (TOPS) platform rather than via a tandem switch. Thus, there is no requirement that BellSouth alter its network to route MCI's operator services or directory assistance traffic via a tandem switch as MCI has suggested. The operator services or directory assistance end office functions offered by BellSouth require dedicated trunk groups from BellSouth end offices to the TOPS platform. Again, BellSouth is not required to alter its network to route MCI's operator services and directory assistance traffic via common or shared trunk groups as requested by MCI. However, if MCI elects customized routing and also elects unbundled tandem switching, BellSouth is willing to handle MCI's OS/DA traffic accordingly.

Finally, BellSouth does not overflow its operator services or directory assistance traffic. Thus, there is no requirement that BellSouth do so for MCI's operator services or directory assistance traffic. Here again, however, if MCI elects customized routing and also elects unbundled tandem switching, BellSouth is willing to handle MCI's OS/DA traffic accordingly.

Issue 29: Should calls from WorldCom customers to BellSouth customers served via Uniserve, Zipconnect, or any other similar service, be terminated by BellSouth from the point of interconnection in the same manner as other local traffic, without a requirement for special trunking?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. MCI should interconnect with BellSouth to provide access to BellSouth's Uniserv® service and ZipCONNECT® service in the same manner as other telecommunications carriers do today.

Q. EXPLAIN THE SERVICES AT ISSUE.

A. BellSouth's UniServ® service and ZipCONNECT® service permit callers to dial a local call to reach a variety of locations. UniServ® service utilizes operator services switching functionality to allow a business to have its customers dial a single telephone number from anywhere in the LATA to call to a single service location. This is accomplished through the use of the 930 NXX Code. ZipCONNECT® service is a similar service to UniServ® service; however, it uses the AIN platform to perform specialized routing for calls to the 203 NXX Code.

Because BellSouth UniServ® service utilizes operator services switching functionality, MCI must bring its own facilities, or lease facilities from BellSouth, to BellSouth's TOPS platform in order for MCI customers to reach BellSouth's UniServ® service customers. This is consistent with what BellSouth and other telecommunications carriers are required to do. Because ZipCONNECT® service uses BellSouth's AIN platform to perform specialized routing of calls to the 203 NXX code, these calls are delivered via the BellSouth Access Tandem. As such, MCI does not have to bring its own facilities, or lease facilities from BellSouth, to the TOPS platform in order for MCI customers to reach subscribers to BellSouth's ZipCONNECT® service.

Q. IF MCI HAS ACCESS TO BELLSOUTH'S UNISERV® SERVICE AND ZIPCONNECT® SERVICE IN THE SAME MANNER AS OTHER TELECOMMUNICATIONS CARRIERS, WHY IS THIS AN ISSUE?

A. I do not know. In fact, that MCI is arbitrating this issue is particularly curious, since ZipCONNECT® service is a grandfathered service and there are no customers presently subscribing to UniServ® service in

Tennessee.

Q. IS MCI's PROPOSED LANGUAGE LIMITED TO BELLSOUTH's UNISERV® SERVICE OR ZIPCONNECT® SERVICE?

A. No, although those are the only two services specifically mentioned in the language proposed by MCI in Section 1.1.1 of Attachment 4. It appears that what MCI really wants is to be treated differently than the way BellSouth treats itself and other carriers. For example, by purporting to relieve MCI of establishing trunks to points other than the Point of Interconnection, MCI apparently seeks to avoid having to trunk to the TOPS platform for the routing of its operator services or directory assistance traffic. Routing operator services and directory assistance traffic directly to the TOPS platform is precisely the manner in which BellSouth routes such traffic for its customers, and MCI should do likewise.

Issue 37: Should BellSouth be permitted to require WorldCom to fragment its traffic by traffic type so it can interconnect with BellSouth's network?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. My understanding is that part of the dispute between BellSouth and MCI relates to the provisioning of two-way trunking. BellSouth is not opposed to two-way trunking per se. Under MCI's proposal in Attachment 4, Section 2.2.6, however, BellSouth would be prohibited from having separate trunks that carry local and toll traffic, even though BellSouth maintains such separate trunk groups for itself. For example, when enough local traffic exists between two end office switches to justify a direct end office to end office trunk group (approximately one DS1 or 24 circuits), BellSouth installs a direct end office local trunk group to unload the tandem switch of such local traffic. This is not only sound network engineering but common industry practice. It unloads the tandem switch of local traffic that can and should be carried by a direct end office trunk group. There are no valid engineering reasons to force BellSouth to transport all of MCI's local traffic via the BellSouth access tandem switches. To provide local traffic direct end office trunk groups requires traffic fragmentation, that is, separating the local traffic from toll traffic. Although BellSouth prefers that MCI place its local traffic on direct end office trunk groups when enough traffic justifies it for network efficiency reasons, BellSouth is willing to continue to switch MCI's originated local traffic via the BellSouth tandems if MCI continues to compensate BellSouth accordingly. However, BellSouth should be allowed to provision its trunks for its originating traffic to be terminated to MCI in any technically feasible and nondiscriminatory manner without regard to the arbitrary conditions that MCI seeks to impose.

MCI proposes language in Attachment 4, Section 2.2.7, whereby

BellSouth should provision trunks without any user restrictions, such as no trunk group fragmentation by traffic types. BellSouth does not agree with MCI's proposal because of both technical reasons and traffic congestion concerns. First, different types of traffic require different signaling protocols. However, it is not technically, possible to have more than one signaling protocol on a single trunk group. Further congestion could also occur that would adversely impact 911 calls if the traffic group was overloaded temporarily. Finally, for technical reasons, there are certain two-way trunk groups that will automatically fail when used with specific switches in certain instances, as I will discuss further below.

Q. WHEN SHOULD TWO-WAY TRUNKING BE USED?

A. BellSouth believes that the use of one-way trunking or two-way trunking is best determined by the parties on a case-by-case basis. Solely from a traffic engineering perspective, two-way trunks should be used when the traffic patterns of the traffic in both directions will result in a significant reduction of trunk ports over separate one-way trunks.

Q. HOW IS THIS ACCOMPLISHED?

A. The traffic in one direction would have to have different traffic busy hours than the traffic in the reverse direction. Otherwise, the two-way trunk group would have about as many trunks as the combined one-way trunk groups and no traffic efficiencies would be realized. However, the use of two-way trunk groups also creates other issues when provided between competing companies. For example, the use of two-way trunk groups, by default, requires a common Interconnection Point between the two competing companies' networks. BellSouth witness Cox will address this in Issue 34.

Q. WHAT WOULD BE THE EFFECT OF MCI's PROPOSAL ON BELLSOUTH?

A. MCI's position is that BellSouth should be required to interconnect via two-way trunks whenever MCI so requests. The net effect is that MCI would be in sole control of when and if BellSouth is able to use one-way trunking or two-way trunking to interconnect BellSouth's network with MCI's network. By default, as BellSouth witness Cox discusses, this would also allow MCI to unilaterally choose the Interconnection Point for BellSouth's originating local traffic, thereby granting MCI complete control over both 1) BellSouth's transport reciprocal compensation payments to MCI and 2) BellSouth's internal network costs required to deliver BellSouth originated traffic to the Interconnection Point. Doubtless, MCI would always choose the method and Interconnection Point to its own economic benefit regardless of the effect on BellSouth.

It should be noted by this Authority that BellSouth has and still does offer a two-way transit traffic trunk group for the exchange of traffic between MCI and third parties (other CLECs or Independent Companies for example). Since transit traffic trunk groups do not carry BellSouth originated local traffic, and the CLEC is financially responsible for the transit traffic trunk groups, the Interconnection Point is not an issue for these type two-way trunks. The CLEC can and should have complete control over its two-way transit traffic trunk groups. However, this also requires that a trunk group be established to handle traffic to those third parties.

Q. PLEASE DISCUSS THE TRUNKING PRINCIPLES THAT BELLSOUTH CURRENTLY ADHERES TO REGARDING TWO-WAY TRUNKING AND EXPLAIN WHY THEY ARE NECESSARY.

A. Two-way trunking carrying BellSouth originated local traffic is appropriate under the following principles or terms. These principles assume that traffic patterns justify two-way trunks:

1. The parties will agree upon a mutually acceptable Interconnection Point.
2. If the parties agree to a mutually acceptable Interconnection Point, the CLEC will initiate a request for two-way trunking. BellSouth will acknowledge the request and negotiate a due date with the CLEC. On the due date, two-way trunking will be jointly provisioned.
3. BellSouth and the CLEC will jointly review the trunk forecast on a

periodic basis, as needed, but at least every six (6) months.

4. The CLEC will order trunks using the Access Service Request (ASR) process in place for local interconnection.
5. BellSouth and the CLEC must agree on standard traffic engineering parameters, such as Bell Communications Research or "Bellcore" (now Telecordia) and industry standards that will be used in the proper engineering of the trunk groups.
6. Either the CLEC or BellSouth can request one-way trunk groups, even after two-way trunk groups are in place. The parties will negotiate the most efficient trunking arrangements, using one-way and/or two-way trunk groups.

BellSouth's original contract language incorporated these principles.

Issue 55: Should BellSouth be required to provide a response, including a firm cost quote, within fifteen days of receiving a collocation application?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth does not oppose the establishment of a firm interval within which BellSouth must advise a CLEC requesting collocation whether there is available space. BellSouth proposes that this space availability response interval be 10 business days from BellSouth's receipt of the collocation application. BellSouth also will provide information as to whether the application is complete or accurate within 10 business days of receipt of the application. However, BellSouth will provide a complete response to a collocation application, including a cost quote and the date the collocation arrangement will be available to the requesting CLEC (the "space ready date"), within 30 business days of receipt of the completed application. This interval is appropriate given the scope and nature of the work involved.

Q. WHAT FACTORS MUST BE CONSIDERED IN DEVELOPING A REPLY TO A COLLOCATION REQUEST?

A. There are numerous factors to be considered which fall into four (4) broad categories:

First, the existing building configuration must be considered. This entails consideration of the existing building configuration, location of doors, hallways, stairs, lounges, air handling equipment, the building outline and the physical capacity of the structure.

Second, space usage and forecasted demand must be considered. There are several steps in this review of the facility. These steps identify the amount of building space available for collocation. Space is categorized, and then used space, occupied space, or reserved space is removed from consideration. Space available for collocation is then determined.

Third, building code and regulatory requirements must be considered. There are building codes at national, state, and local levels that affect space allocations. For example, the National Fire Protection Act provides minimum requirements, with due regard to function, for the design, operation, and maintenance of buildings and structures for safety to life from fire and similar emergencies. The Standard Building Code defines types and methods of construction for various functions to protect the occupants of the structure. Counties and municipalities often adopt the National Fire Protection Act and Standard Building Code, and may add new regulations, restrictions, and interpretations to these national codes.

Fourth, BellSouth must consider other design practices, which act as another set of codes specifying space allocations that meet the safety needs for employees and vendors, as well as customer service needs provided by the building and its occupants. These practices detail maximum equipment line-up length, travel distances to exits, front and rear equipment aisle widths, and the size of various support components (such as air conditioning, house service panels, ductwork, conduit, ceiling rack heights, size and number of toilet facilities, lounges, storerooms, etc.). These practices also dictate the separation distances necessary to prevent service outages caused by grounding violations that are usually caused by people being able to work on one type of equipment and inadvertently touching another type. The solution to this problem is to separate the equipment by the type of grounding path required. This is referred to as integrated and isolated ground plane separation.

Finally, when a collocation request has been determined to be feasible after all the above factors have been considered, the specific request must be further reviewed by BellSouth so that a price for providing the desired space may be quoted to the CLEC.

Q. IS IT REASONABLE TO THINK BELLSOUTH CAN ACCOMPLISH ALL OF THIS WORK IN FIFTEEN DAYS?

A. No. BellSouth cannot reasonably complete the work necessary to reply to a collocation request within fifteen days as proposed by MCI. The timeframe proposed by MCI is not only unreasonable, but also appears not to be based on any historical experience that would justify its use. BellSouth proposes to respond to a CLEC's inquiry within 30 business days based on BellSouth's experience in handling hundreds of such requests.

Issue 56: For purposes of the interconnection agreement between WorldCom and BellSouth, should BellSouth be required to provide DC power to adjacent collocation space?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. The FCC rules do not require BellSouth to provide DC power to an adjacent collocation arrangement. MCI's proposal that BellSouth run DC power to an adjacent collocation arrangement runs afoul of the National Electrical Safety Code, since the cabling used to house DC power is not rated for outside use. The requirement that the cabling used must be rated for that purpose can be seen throughout the National Electrical Safety Code. BellSouth is willing to provide AC power to an adjacent arrangement, which is consistent with the manner in which BellSouth provides power to all of its own sites housing telecommunications equipment outside its central office buildings.

At all of BellSouth's remote sites (that is, structures away from the central office building), AC power runs to the site and BellSouth then "converts" the AC power to DC power inside the remote site location. BellSouth has thousands of such arrangements in place across its nine-state region. Given that this is a normal business practice, BellSouth sees no safety concerns caused by providing AC power to adjacent collocation arrangements. However, approval must be obtained from the appropriate local authority given that Article 225 of the National Electrical Code does not specifically allow power circuits to be run between buildings with different owners. Further, whatever cable is used to provide power to an adjacent collocation arrangement must be rated for the environment in which it is being used. The cable historically used in the telecommunications industry for DC power inside a central office conforms to Kearny Specification (KS) 5482-01. This cable is not rated for use outdoors and thus is not appropriate for use in adjacent collocation arrangements.

Issue 59: Should collocation space be considered complete before BellSouth has provided WorldCom with cable facility assignments ("CFAs")?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Collocation space is complete once all work done by BellSouth or BellSouth's certified vendors is complete, at which point BellSouth will render a final bill to the CLEC. This can occur before BellSouth has provided MCI with connecting facility assignments.

Q. WHAT ARE CFAs?

A. In the case of collocation, Connecting Facility Assignments (CFAs) identify the collocator's chosen cable termination and type of cable from the collocation arrangement terminated on a BellSouth distributing frame. For BellSouth to connect an unbundled network element (for example, an unbundled loop) to the collocator's space, the assignments must be provided on the CLEC's order.

Q. WHEN DOES BELLSOUTH PROVIDE CFAs TO MCI?

A. After acceptance of the collocation space, MCI proceeds with the installation of its equipment, a matter under MCI's control rather than under BellSouth's control. Part of MCI's responsibilities is the installation of its cables terminating on BellSouth frames (that is, the connecting facilities). BellSouth cannot provide CFAs until after MCI informs BellSouth of the frame locations and designations of MCI's cables and BellSouth verifies the accuracy of such.

Q. WHAT IS THE PRACTICAL EFFECT OF MCI's PROPOSAL?

A. MCI's proposal confuses any measure of BellSouth's performance in provisioning collocation arrangements and delays BellSouth's ability to bill MCI, since it would preclude designating a collocation arrangement "complete" until MCI had finished its own work, activities over which BellSouth has no control.

Issue 60: Should BellSouth provide WorldCom with specified collocation information at the joint planning meeting?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. To the extent it is available, BellSouth is willing to provide MCI with the exact cable location termination requirements (i.e., relay rack, bay/panel, jack location), which is the key information MCI reasonably requires to begin its design plans for collocation space. If this information is not available at the joint planning meeting, BellSouth will provide such information within thirty (30) calendar days thereafter. However, much of the information MCI seeks is either not readily available or is not required for MCI to begin its work.

Issue 61: For purposes of the interconnection agreement between WorldCom and BellSouth, should the per ampere rate for the provision of DC power to WorldCom collocation space apply to amps used or to fused capacity?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. The rate for DC power should be calculated on a per amp basis at the rates established by this Authority. In addition, however, the issue raised by MCI related to DC power addresses more than simply the rate. Rather, MCI and BellSouth disagree on whether the per amp charge should be applied to the fused capacity which BellSouth is required to provide to MCI or if it should be applied only to the capacity used by MCI. BellSouth maintains that the per amp charge should apply to the fused capacity (rated power consumption) for the equipment it installs in its collocated spaces, as is the case with every other CLEC collocated with BellSouth.

BellSouth's Collocation Handbook (Issue 8) states "Charges for -48V DC power are assessed per ampere per month based upon the certified vendor engineered and installed power feed fused ampere capacity". Equipment manufacturers state the rated power consumption for its equipment and the power plant is built accordingly. Rather than measuring power consumption, BellSouth simply applies a factor to the rated power consumption provided by the equipment manufacturer in order to determine power costs. Unlike one's house, where appliances and lights are regularly turned on and off, central office equipment is normally turned on all the time, and BellSouth must build its power plant to assure that will be the case.

Issue 62: Should BellSouth be required to provision caged or cageless physical collocation space (including provision of the cage itself) within 90 days and cageless and virtual collocation within 45 days?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth proposes the following intervals for physical collocation in accordance with the FCC's Order. These intervals would be in conjunction with the intervals and procedures set forth in the FCC's Order which would replace the current intervals and procedures set forth in the agreement. Physical collocation provisioning intervals would be no greater than 90 calendar days for caged and cageless collocation from the date of application. BellSouth proposes 50 calendar days for virtual collocation under ordinary conditions, and 75 calendar days under extraordinary conditions.

Ordinary conditions are defined as space being available with only minor changes required to the network or building infrastructure. These intervals are appropriate because of the complexity associated with completing the implementation of a collocation arrangement. This requires the coordination of work between several different departments, such as Corporate Real Estate & Services, Common Systems Capacity Management, Circuit Capacity Management, and Power Capacity Management. Given the scope of the work activities required, BellSouth's proposed intervals are reasonable.

BellSouth should be afforded the opportunity of requesting a waiver from this Authority from these intervals on a case by case basis based on circumstances that would warrant such an extension. Examples of such circumstances would be: extended licensing or permitting intervals out of BellSouth's control; major BellSouth equipment rearrangement or addition; power plant addition or upgrade; major mechanical addition or upgrade; major upgrade for ADA compliance; environmental hazard or hazardous materials abatement; rearrangement for which equipment shipping intervals are extraordinary in length, etc.

Issue 63: For purposes of the interconnection agreement between WorldCom and BellSouth, Is WorldCom entitled to use any technically feasible entrance cable, including copper facilities?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Some copper cables currently enter BellSouth central offices. These older cables are associated with BellSouth's loop distribution facilities. However, entrance facilities for CLEC's are a form of interconnection. All of BellSouth's interconnection trunk cables entering BellSouth central offices are optical fiber facilities. The rules regarding an ILEC's collocation obligation under the Act established by the FCC in the First Report and Order clearly state that the ILEC has no obligation to accommodate non-fiber optic entrance facilities unless and until such interconnection is first ordered by the state commission. This rule was not altered by the FCC's decision in its Advanced Services Order and NPRM. Neither MCI nor any other CLEC should be permitted to place non-fiber optic entrance facilities since this would accelerate the exhaust of entrance facilities at BellSouth's central offices at an unacceptable rate. The only exception is in conjunction with adjacent space collocation arrangements as defined by the FCC in 47 CFR § 51.323(k)(3). This is because if space for collocation within the central office is exhausted, there would be no room for placement of the electronic equipment required to make the fiber optic cable functional. Thus, if a collocator uses adjacent collocation, it may place non-fiber optic cables between its equipment in the adjacent collocation and the distributing frame within the BellSouth central office.

Issue 64: Is WorldCom entitled to verify BellSouth's assertion, when made, that dual entrance facilities are not available? Should BellSouth maintain a waiting list for entrance space and notify WorldCom when space becomes available?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. The FCC's rule requires BellSouth to provide at least two interconnection points at a premises "at which there are at least two entry points for the incumbent LEC's cable facilities, and at which space is available for new facilities in at least two of those entry points." 47 C.F.R. § 51.323(d)(2). The right to tour a premises referenced in MCI's Petition only applies when an incumbent LEC "contends space for physical collocation is not available" in a given central office. BellSouth is not denying physical collocation when BellSouth does not have dual entrance facilities available. BellSouth provides information as to whether there is more than one entrance point for BellSouth's cable facilities. In the event there is only one entrance point, MCI can visually verify that another entrance point does not exist, which does not require a formal tour of the entire premises. In the event that dual entrance points exist but space is not available, BellSouth will provide documentation, upon request and at MCI's expense, so that MCI can verify that no space is available for new facilities.

Should the fact that there is no entrance space available be the reason for denying a request for collocation, BellSouth will include that office on its space exhaust list as required. However, BellSouth should not be required to incur the time and expense of maintaining a waiting list simply because dual entrance facilities may not be available.

Issue 65: What information must BellSouth provide to WorldCom regarding vendor certification?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is permitted to approve vendors hired by a CLEC such as MCI to construct its collocation space, provided that such approval is based on the same criteria that BellSouth uses in approving vendors for its own purposes. BellSouth has provided MCI with precisely the same information that BellSouth provides its vendors concerning the vendor certification process. If MCI has any questions regarding this process, MCI may contact the BellSouth vendor certification group for further information.

Issue 66: For purposes of the interconnection agreement between WorldCom and BellSouth, what industry guidelines or practices should govern collocation?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is willing to comply with generally accepted industry practices in the provision of physical collocation to the extent it has control over the subject matter thereof. Furthermore, while BellSouth strives to comply with all applicable standards, BellSouth does not have control over the acts of CLECs collocated within its central offices and should not be expected to meet any standards to the extent BellSouth does not have such control. For example, BellSouth relies on the CLEC to identify accurately in its collocation application the equipment it plans to install and specifications related thereto. If the CLEC does not install equipment in accordance with the information provided in its application BellSouth cannot be required to comply with any standards that may be violated as a result thereof. BellSouth asks only that standards to which it must comply relate to the relationship of BellSouth (as a provider of collocation space) and MCI (as a user of collocation space).

Issue 68: Should BellSouth require that payments for make-ready work be made in advance?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. MCI should be required to pay in advance for any work MCI requests BellSouth to perform, as do other CLECs that have signed BellSouth's standard license agreement. BellSouth should not be required to finance MCI's business plans.

Q. WHAT IS WRONG WITH MCI's POSITION?

A. MCI's position is that a requirement for advanced payment would create delays and is not commercially reasonable -- a position with which I do not agree. It is not unusual for contractors to require payment in advance. Furthermore there is no harm to MCI, given MCI's representation that it will pay BellSouth invoices promptly in any event.

Issue 96: Should BellSouth be required to give written notice when a central office conversion will take place before midnight or after 4 a.m.?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth agrees to provide notification to CLECs concerning central office conversions via web postings. This method of carrier notification is used for all CLECs and ensures that BellSouth treats all CLECs in a nondiscriminatory manner.

Issue 100: Should BellSouth operators be required to ask callers for their carrier of choice when such callers request a rate quote or time and charges?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth's operators may respond to customer inquiries concerning rates and time charges for BellSouth's retail services. However, BellSouth is not obligated to inquire about a customer's carrier of choice, as requested by MCI.

Q. HOW DOES BELLSOUTH TREAT CUSTOMER REQUESTS FOR A LONG DISTANCE CARRIER'S RATES?

A. Customers who inquire about long distance rates are advised they should seek that information from their long distance carrier. If that long distance carrier is an Operator Transfer Service (OTS) customer, BellSouth will offer to transfer the caller to that carrier so that the rate can be quoted immediately by the long distance carrier itself.

MCI's proposed language would purport to require BellSouth's operators to inquire as to the customer's carrier of choice of long distance carrier and forward the call to that carrier every time a customer requests a rate quote or time and charges, regardless of whether or not the long distance carrier subscribes to BellSouth's Operator Transfer Service (OTS). BellSouth is not required to do for free as MCI has proposed.

Issue 101: Is BellSouth required to provide shared transport in connection with the provision of custom branding?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Whether shared transport is available between a BellSouth end office from which BellSouth provides unbundled local switching to MCI depends upon the type of customized routing functionality requested by MCI. With the Line Class Code method of customized routing, dedicated trunk groups are required between BellSouth's end office switch and the CLEC's choice of operator services or directory services platform. CLECs who choose the same branding or unbranding may share the trunk group between the BellSouth end office and the OS/DA platform. With the AIN method of customized routing, shared trunk groups may be used between the BellSouth end office switch and the AIN hub location.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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 – Senior Director – Interconnection Services, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 00-00309 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 35 pages and 1 exhibit(s).

W. Keith Milner

Sworn to and subscribed
before me on Jan 30 2000

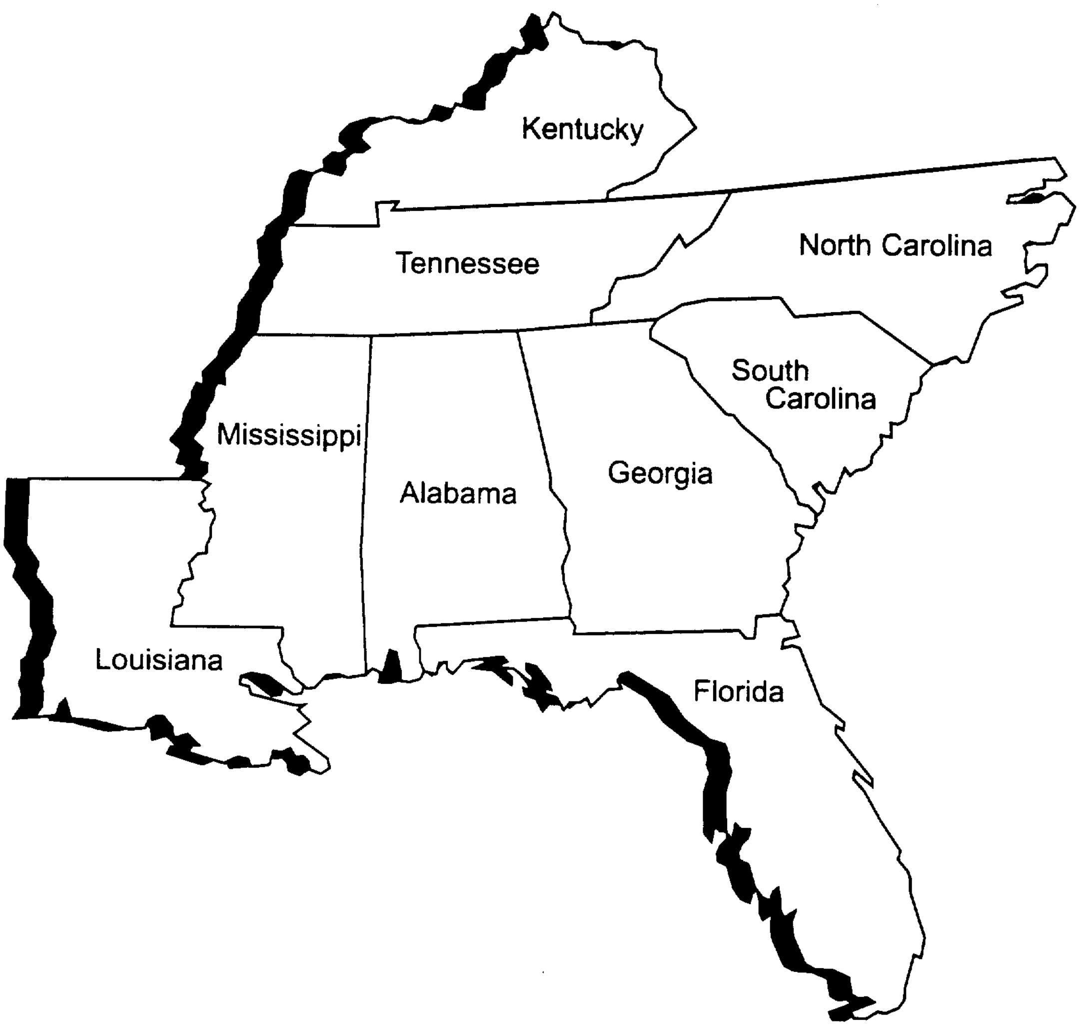
NOTARY PUBLIC

MICHEALE F. HOLCOMB
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2001

BellSouth Telecommunications, Inc.
Tennessee Regulatory Authority
Docket No. 00-00309
December 6, 2000
Exhibit WKM-1

BELLSOUTH
TELECOMMUNICATIONS

TR73600
Issue C



UNBUNDLED LOCAL LOOP – TECHNICAL SPECIFICATIONS

Technical Reference

February, 2000

NOTICE

This Technical Reference describes Unbundled Local Loops provided by BellSouth Telecommunications (BST), Inc. An Unbundled Local Loop provides a transmission path between a BST central office and an end–user location. This document describes the signals as they appear at the associated interfaces. It also describes some aspects of the performance of the channel.

BST reserves the right to revise this document for any reason, including but not limited to, conformity with standards promulgated by various governmental or regulatory agencies, utilization of advances in the state of the technical arts, or the reflection of changes in the design of any equipment, techniques, or procedures described or referred to herein. Liability to anyone arising out of use or reliance upon any information set forth herein is expressly disclaimed, and no representations or warranties, expressed or implied, are made with respect to the accuracy or utility of any information set forth herein.

Nothing contained herein shall be construed as conferring by implication, estoppel or otherwise, any license or right under any patent, whether or not the use of any information herein necessarily employs an invention of any existing or later issued patent.

If further information is required, please contact:

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BellSouth Science & Technology
1884 Data Dr.
Hoover, Alabama 35244

UNBUNDLED LOCAL LOOP – TECHNICAL SPECIFICATIONS

CONTENTS

UNBUNDLED LOCAL LOOP – TECHNICAL SPECIFICATIONS

1. General

1.1 Scope

This document provides the technical specifications for the Unbundled Local Loops offered by BellSouth Telecommunications (BST). Unbundled Local Loops enable a Competitive Local Exchange Carrier (CLEC) to provide services to an end-user location. While Unbundled Local Loops supporting a wide variety of signaling schemes are available, the widespread use of Digital Loop Carrier (DLC) in the BST network requires that a particular signaling scheme be specified when an Unbundled Local Loop is ordered.

A CLEC may utilize an unbundled loop to provide any telecommunications service it wishes. However, BST will only provision, maintain, and repair the loops to the standards that are consistent with the type of loop ordered. For example, if a CLEC orders an ISDN-capable loop but wants to use the loop for a service other than ISDN, BST will only support that the loop is capable of providing ISDN service.

BST will not make modifications to any loop to make it perform at a particular service level if it was not ordered as such. For example, if a loop was ordered as a Unbundled Voice Loop, but intended to be used for ADSL, BST will not remove any existing load coils from the loop.

1.2 Availability

Unbundled Local Loops are provided subject to availability on a first-come first-served basis.

1.3 Revisions

This revision is issued to completely rearrange the order and content of this document to make the document consistent with the Unbundled Network Element services currently being offered to the CLECs by BellSouth. The changes to Issue B are too numerous to list individually here.

This revision does not reflect the work efforts surrounding the FCC's UNE (Rule 319) Remand Order. As changes are made to existing services and/or new services are added, BST will update this document accordingly.

BST recognizes that the industry is working toward standards concerning spectrum management that will define spectrum management classes. As standards are approved, BST will update this document to reflect those standards.

2. References

The following documents are referenced:

(1) ANSI T1.102–1993, *Telecommunications – Digital Hierarchy – Electrical Interfaces*

(2) ANSI T1.401–1993, *Telecommunications – Interface Between Carriers and Customer Installations – Analog Voicegrade Switched Access Lines Using Loop–Start and Ground–Start Signaling*

(3) ANSI T1.403–1999, *Telecommunications – Network and Customer Installation Interfaces – DS1 Electrical Interface*

(4) ANSI T1.405–1996, *Telecommunications – Interface Between Carriers and Customer Installation Interfaces, Direct–Inward–Dialing Analog Voicegrade Switched Access Using Loop Reverse–Battery Signaling*

(5) ANSI T1.407–1997, *Telecommunications – Interface Between Carriers and Customer Installations – Analog Voicegrade Special Access Lines Using Customer–Installation–Provided Loop–Start Supervision*

(6) ANSI T1.410–1992, *Telecommunications – Carrier–to–Customer Metallic Interface – Digital Data at 64 kbit/s and Subrates*

(7) ANSI T1.413–1998, *Telecommunications – Network and Customer Installation Interfaces – Asymmetric Digital Subscriber Line (ADSL) Metallic Interface*

(8) ANSI T1.510–1999, *Network Performance Parameters for Dedicated Digital Services for Rates Up to and Including DS3–Specifications*

(9) ANSI T1.601–1996, *Telecommunications – ISDN Basic Access Interface for use on Metallic Loops for Application on the Network Side of the NT*

(10) ANSI/IEEE 455–1985, *Standard Test Procedure for Measuring Longitudinal Balance of Telephone Equipment Operating in the Voice Band*

(11) ANSI/IEEE 743–1995, *Standard Equipment Requirements and Measurement Techniques for Analog Transmission Parameters for Telecommunications*

(12) Code of Federal Regulations, Title 47, FCC Rules and Regulations, Part 68, *Connection of Terminal Equipment to the Telephone Network.* Washington, D.C.: Federal Communications Commission.

(13) Committee T1 Technical Report No. 28, A *Technical Report on High–Bit–Rate Digital Subscriber Lines*

(14) Bellcore TA–TSY–000077, *Digital Channel Banks – Requirements for Dataport Channel Unit Functions, April 1986*

(15) Bellcore SR–TSV–002275, *BOC Notes on the LEC Networks* – 1994

(16) Bellcore GR–1089–CORE, *Electromagnetic Compatibility and Electrical Safety – Generic Criteria for Network Telecommunications Equipment – Issue 2, Revised Feb 99.*

3. Overview and Generic Requirements

3.1 Loop Topology

Unbundled Local Loops extend from the Main Distributing Frame (MDF) in BST's Central Office (CO) to the End User Network Interface. They may be composed in either of the following arrangements:

- entirely of paired metallic conductors, or
- the concatenation of a universal DLC channel with paired metallic conductors.

3.2 Digital Loop Carrier

The use of DLC brings up the following two considerations.

- Some technologies, such as High Bit-rate Digital Subscriber Line (HDSL), cannot be transported via DLC due to the bandwidth employed. When a customer is served by DLC, an Unbundled Local Loop providing such a wide bandwidth will not typically be available.
- Many dedicated voiceband circuits employ signaling that requires unique DLC line cards.

3.3 Inductive Loading

Of the loops employing only metallic facilities, significant percentages are loaded. Loading involves the placement of inductors, typically every 6000 feet, in the loop. These inductors introduce attenuation at frequencies above the voiceband, making wide bandwidth services unavailable.

3.4 Types of Unbundled Local Loops

Due to the above considerations, a number of types of Unbundled Local Loops have been developed in order to simplify the ordering and provisioning process. The different types of loops can be placed into the following categories:

- Unbundled Voice Loop (UVL)
- Unbundled Digital Loop (UDL)
- Unbundled Copper Loop (UCL)

Unbundled Voice Loops provide a two-wire or four-wire voiceband transmission channel with various signaling options.

Unbundled Digital Loops provide a channel that can support one of a described set of digital transmission schemes.

Unbundled Copper Loops provide an all-metallic, unloaded copper path to CLECs for use with any telecommunications service that can use this type of facility.

This document also covers some technical aspects of Unbundled Sub-Loops (USLs), Unbundled Network Terminating Wire (UNTW), Unbundled Sub-Loop Concentration (USLC) and Unbundled Loop Concentration (ULC).

3.5 Interfaces

Unbundled Local Loops are available with two-wire and four-wire interfaces, depending on the particular type. The same number of wires will be provided at both the MDF and the End User Interface. For two-wire interfaces, one conductor is denoted Tip and the other is denoted Ring. For four-wire interfaces, the conductors of one pair are denoted Tip and Ring; the conductors of the other pair are denoted Tip 1 and Ring 1.

The interface at the MDF is not accessible by the CLEC. Instead, it is connected to other BST unbundled elements, or it is connected-via tie cabling-to collocated CLEC equipment. The tie cabling is not part of the unbundled loop.

3.6 CLEC Equipment Requirements

Since a CLEC may utilize an Unbundled Local Loop to provide any telecommunications service it wishes and BST does not know what type of service is actually placed on the loop, regardless of how it was ordered, generic precautions must be specified for all local loop offerings.

Physical Requirements

In addition to applicable FCC, NEC, and UL requirements and orders, CLEC equipment shall also meet the following requirements:

- The dc voltage applied to either conductor shall be negative with respect to ground.
- The open-circuit dc voltage applied to any conductor shall be less than 80 Vdc when measured to ground or any other conductor.
- The power delivered to a load via BST facilities shall not exceed 2.5 watts.
- The current provided, via BST facilities, shall not exceed 150 mA.

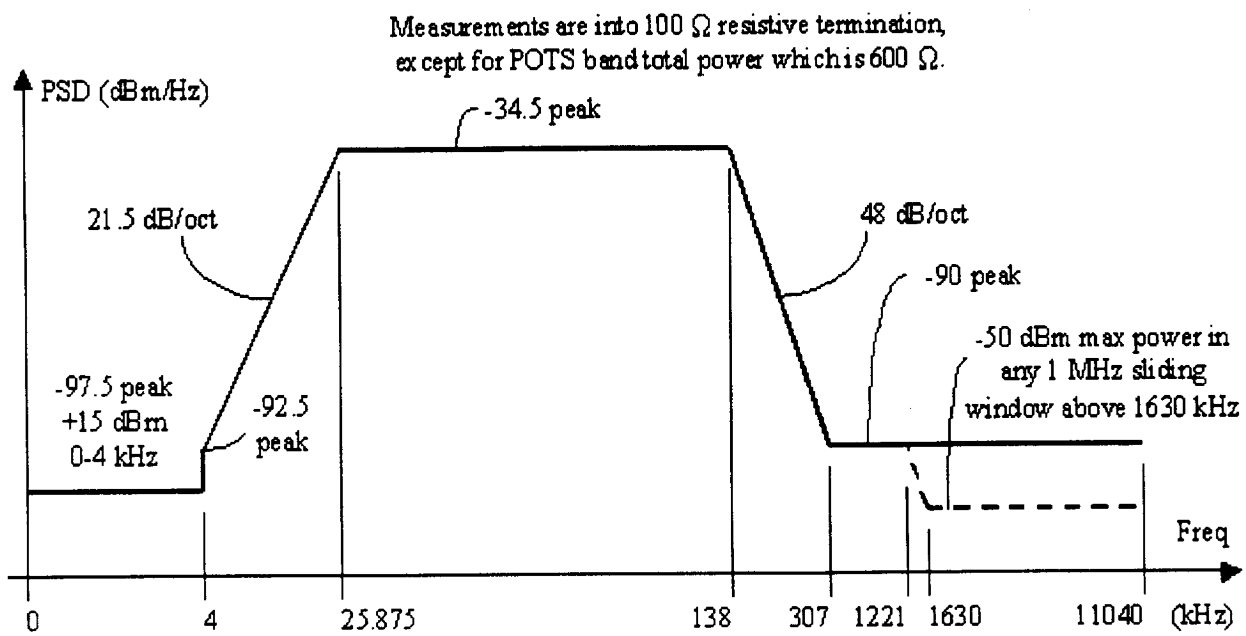
Spectrum Considerations

On any unbundled loop that a CLEC chooses to employ any Digital Subscriber Line (DSL)-based technology, crosstalk into other cable facilities is a concern. Accordingly, the CLEC is responsible for limiting the Power Spectral Density (PSD) of the signal transmitted at both the End User interface and at the MDF interface. The following requirements shall be met to minimize interference to voiceband and certain loop transmission systems:

- The "downstream" data path, as defined in ANSI T1.413, shall be in the MDF-to-NI direction.

- The "upstream" data path shall be in the NI-to-MDF direction.
- The PSD shall be limited to that specified in Figures 1 and 2.

Upstream Transmitter Spectrum



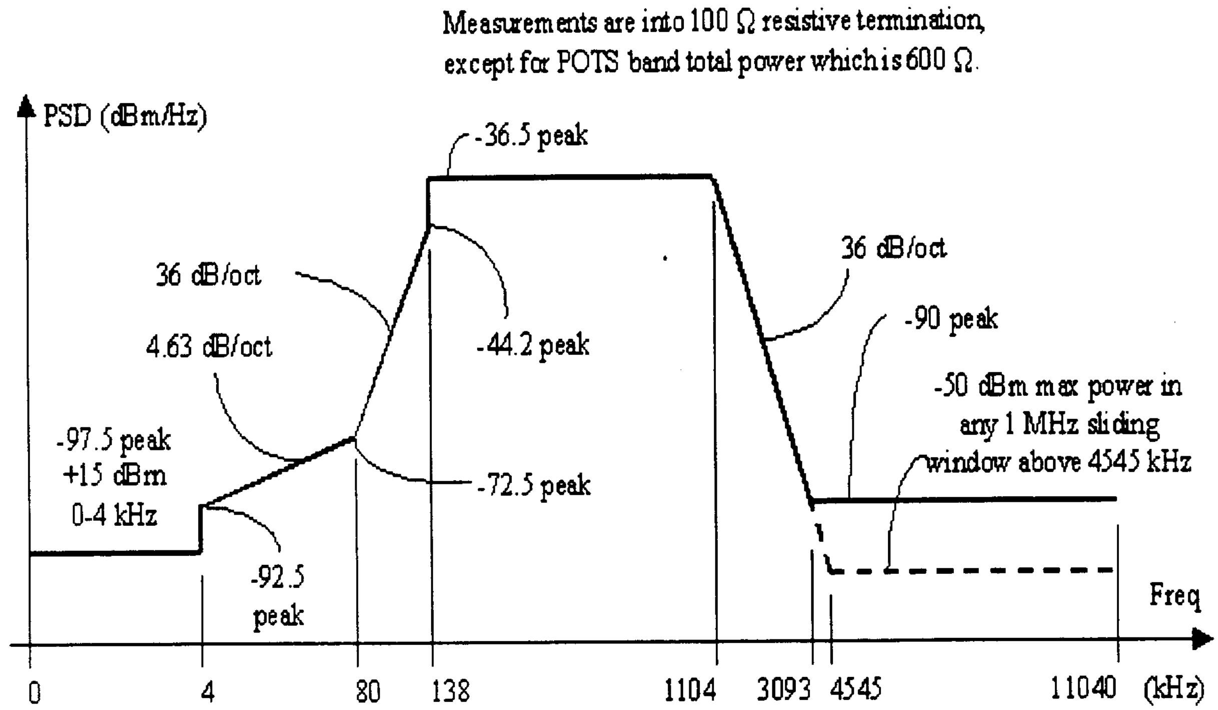
Note: **The breakpoint frequencies and values are exact; the indicated slopes are approximate.**

Note: **The power in a 1 MHz sliding window is measured in 1 MHz bandwidths starting at the measurement frequency.**

FREQUENCY BAND, kHz	EQUATION FOR LINE, dBm/Hertz
0 - 4	-97.5, +15 dBrn, 0-4 kHz
>4 - 25.875	-92.5 + 21.5*log(f/4)/log(2)
25.875 - 138	-34.5
138 - 307	-34.5 - 48*log(f/138)log(2)
307 - 1221	-90
1221 - 1630	-90 peak, with max power in 1 MHz sliding window of (-90 - 48*log(f/1221)/log(2) + 60) dBm
1630 - 11040	-90, with -50 dBm power in any 1 MHz sliding window above 1630 kHz

Figure 1 - Upstream Transmitter Spectrum
(ADSL Applications)

Downstream Transmitter Spectrum for Reduced NEXT



Note: **The breakpoint frequencies and values are exact; the indicated slopes are approximate.**

Note: **The power in a 1 MHz sliding window is measured in 1 MHz bandwidth starting at the measurement frequency.**

FREQUENCY BAND, kHz	EQUATION FOR LINE, dBm/Hertz
0 - 4	-97.5, +15 dBrn, 0-4 kHz
>4 - 80	-92.5 + 4.63*log(f/4)/log(2)
80 - 138	-72.5 + 36*log(f/80)/f(2)
138 - 1104	-36.5
1104 - 3093	-36.5 - 36*log(f/1104)/log(2)
3093 - 4545	-90 peak, with max power in 1 MHz sliding window of (-36.5 - 36*log(f/1104)/log(2) + 60) dBm
4545 - 11040	-90, with -50 dBm power in any 1 MHz sliding window above 4545 kHz

Figure 2 - Downstream Transmitter Spectrum for Reduced NEXT (ADSL Applications)

3.7 Copper Connectivity

As described in Sections 7.5 and 8, BST provides loops that meet the characteristics of ADSL/HDSL industry standards with the Unbundled Digital Loops UDL-2W/EE and UDL-4W/EE and the Unbundled Copper Loop service offerings. However, a CLEC can attempt to run ADSL on any UNE loop, even though BST does not support it. Copper connectivity cannot be assured on any UNE loop except on the three mentioned above. For example, if ADSL is placed on a UVL loop, copper connectivity cannot be assured.

3.8 Right to Disconnect

BST reserves the right to disconnect a service or equipment connected to an unbundled local loop that either: (a) fails to meet the requirements of this document, or (b) is shown to be causing harm to other services or systems.

3.9 Foreign Voltage

The foreign voltage, when measured with a high impedance voltmeter on any UNE pair, shall be less than 6 Vdc between conductors or between either conductor to ground and 50 Vac_{rms} between either conductor to ground.

3.10 Noise

Due to the lack of a common means of testing for noise on facilities at higher frequencies, BST has chosen a common noise measurement requirement that is indicative of the power influence and balance of a facility. The idle-channel noise on any unbundled service offering shall be less than 20 dBrnC.

4. Unbundled Voice Loop - Description

Unbundled Voice Loops provide a two-wire or four-wire voiceband transmission channel with various signaling options. UVLs are offered in a single non-design version and several design versions. Copper continuity is not assured with this service.

4.1 Non-Design UVL 2-Wire/Service Level 1

This Unbundled Voice Loop provides a voice grade transmission channel suitable for loop-start signaling and the transport of analog voice grade signals. This loop, which is typically used to provide switched access telephone service, is non-designed. This offering does not have test points and does not come with Order Coordination.

This loop provides loop-start signaling, arranged-for battery-feed by the CLEC and loop closure by the end-user. This loop is only available via a 2-wire, loop-start interface.

4.2 Designed Unbundled Voice Loops

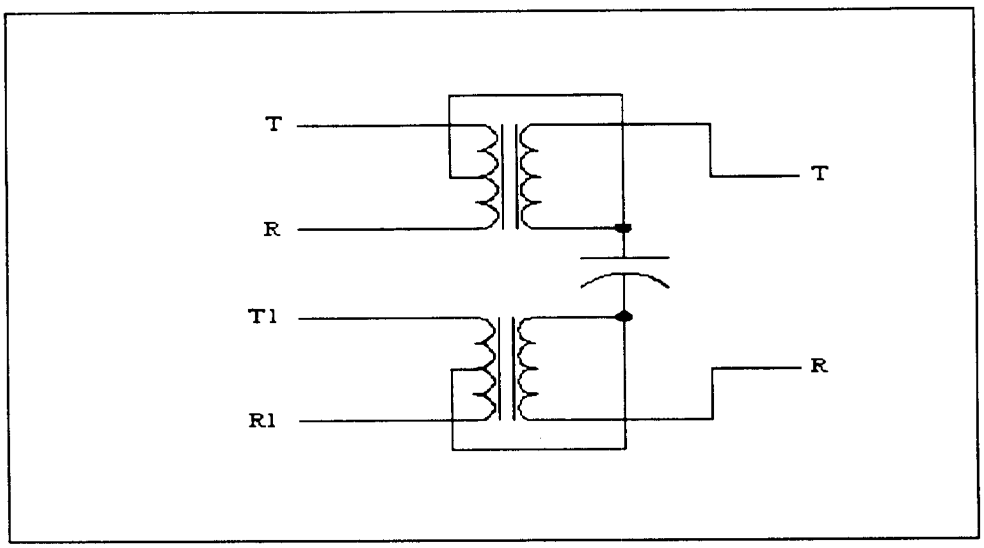
The following signaling and interface combinations are supported on Designed Unbundled Voice Loops:

Number of Wires	Signaling Options	Service Abbreviation
2	Loop-start signaling - office end at MDF	UVL-2W/SL2 (loop)
2	Ground-start signaling - office end at MDF	UVL-2W/SL2 (ground)
2	Reverse-Battery - originating end at MDF	UVL-2W/ (reverse battery)
4	Loop-start signaling - station end at MDF	UVL-4W (loop)
4	Ground-start signaling - office end at MDF	UVL-4W (ground)

These types of signaling are described briefly below. Bellcore SR-TSV-002275 contains a more thorough discussion. Section 5 contains detailed requirements for these types of signaling at both interfaces of each Designed Unbundled Voice Loop.

4.2.1 Two-wire and Four-wire Signaling

In the discussion below, a two-wire circuit is assumed. Four-wire circuits employ similar signaling, except that the dc signaling - instead of being applied directly to the tip and ring conductors - is applied to a center-taps of coupling transformer, so that the dc signals appear in the common-mode across both conductors of each of the four-wire pairs. A circuit suitable for the conversion of four-wire to two-wire is shown below.



4.2.2 Loop Start

The two ends of a loop-start circuit are denoted the office end and the station end. The office end provides a voltage across Tip and Ring. In the idle state, the station presents a high resistance across Tip and Ring. To request service, the station presents a low resistance between the conductors. The resultant current flow is detected by the office end. To alert an idle station of an incoming call, the office end applies ringing voltage, relative to ground, to the Ring.

Loop-start circuits arranged with the office end at the MDF interface are commonly used to provide exchange access service. Section 5.2 contains signaling requirements for both the MDF and End User interfaces.

4.2.3 Ground Start

Ground-start signaling is similar to loop-start, except that in the idle state, the office doesn't apply a voltage across Tip and Ring. Instead it applies a voltage, relative to ground, on only the Ring. This results in the following differences, relative to loop-start service:

- In order to request service, the station provides a low resistance from Tip to ground. Sensing current flow in the Ring, the office provides a (differential) voltage across both Tip and Ring. Upon the application of the differential voltage, the station places a low resistance across the Tip and Ring, and removes the shunt to ground.
- Upon alerting the station, the office applies differential voltage, even between bursts of ringing. If suitably arranged, the station can sense this differential voltage and detect the alerting signal, even before a ringing burst is sent by the office.

Ground-start circuits arranged with the office end at the MDF interface are often used to provide two-way trunks to a PBX. Section 5.3 contains signaling requirements for both the MDF and End User Interface in such an arrangement.

4.2.4 Reverse Battery

Reverse-Battery signaling is typically used on trunks, rather than lines. There is no "office end" or "station end" convention. Ringing is not employed. Reverse-battery signaling accommodates only one-way trunks[1]. For this reason, the ends of the circuit are usually denoted the originating and terminating end.

The terminating end of the circuit provides a voltage across Tip and Ring. In the idle state, the originating end presents a high resistance across Tip and Ring. To request service, the originating end places a low resistance across the conductors. The terminating end senses the resultant loop current. To signal that toward the originating that, for instance, it is ready to accept address digits, the terminating end reverses the polarity across Tip and Ring.

The originating end can return to idle by removing the low resistance across Tip and Ring. If properly equipped, the originating end can sense a reversal of polarity as an indication of return to idle by the terminating end.

Reverse-Battery circuits, with the originating end at the MDF, are often used to provide Direct Inward Dialing (DID) trunks to PBX's located behind the End User Interface. Section 5.4 contains signaling requirements for such an arrangement.

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[1] The term "one-way" indicates that a trunk can only be originated from one end. The voice-frequency capability is bi-directional.

4.3 Signaling Requirements

In practically all cases employing metallic facilities, the loop resistance (the sum of the resistance of both tip and ring) is less than 1500Ω .

In those cases where loop resistance exceeds 1500 Ω, it will never exceed 2800 Ω . In these cases, BST cannot meet the prescribed signaling requirements at the End User Interface unless the CLEC provides sufficient voltage at the office end of the circuit. The open circuit tip-to-ring dc voltage provided by the CLEC equipment shall be less than 80 Vdc.

4.4 Transmission Requirements

In those rare cases where the loop resistance exceeds 1500 Ω, the insertion loss at 1 kHz, measured with a 900 Ω termination at the MDF and a 600 Ω termination at the End User Interface will never exceed 15 dB.

5. Unbundled Voice Loop - Signaling Requirements

5.1 General

When metallic facilities are employed, signaling and supervision is dependent, of course, on the source voltage (provided by either the CLEC equipment or BST equipment to which the loop is connected), and the total circuit resistance. For all service offerings, in practically all cases, the loop resistance (the sum of the resistance of both tip and ring) shall be less than 1500 Ω . For some UVL loops, loop resistance may exceed 1500 Ω, but will never exceed 2800Ω. In these cases, BST cannot meet the prescribed signaling requirements at the End User Interface unless the CLEC provides sufficient voltage at the office end of the circuit. The open circuit tip-ring dc voltage provided by the CLEC equipment shall be less than 80 Vdc. For all service offerings, the dc resistance between the tip conductor and ground and the ring conductor and ground shall each be greater than 100 kΩ.

Except for instances within ringing burst (as described below), the CLEC shall not apply voltages to either conductor that are positive with respect to ground. Current supplied by CLEC equipment shall be less than 150 mA. Voltages from either conductor to ground shall be more positive than -80 Vdc.

When DLC is employed, both the DLC system and the CLEC must employ compatible signaling. The following requirements are intended to ensure such compatibility, both when the loop is provided via DLC and via metallic facilities.

The following requirements apply to both two-wire and four-wire interfaces. For purposes of clarity, the requirements are based on two-wire interfaces. When four-wire interfaces are employed, references and/or measurements to Tip apply to the common mode (simplex) path via both Tip and Ring. Similarly, references and/or measurements to Ring apply to the common mode (simplex) path via Tip 1 and Ring 1.

5.2 Loop-Start - Office End at MDF

5.2.1 General

A small percentage of Designed Unbundled Voice Loops provided via DLC may not be able to support the distinctive ringing or forward disconnect features.

5.2.2 MDF Interface - Idle State

In the idle state, the CLEC equipment shall provide an open circuit Tip-to-Ring voltage between 42.5 and 80 Vdc. The Ring shall be negative, relative to the Tip. No positive voltage - relative to ground - shall be applied to either conductor.

In the idle state, the loop shall provide a dc resistance at the MDF meeting either of the following requirements:

- A dc resistance between Tip and Ring $\geq$ 10,000 Ω (loop provided via DLC), or
- A dc resistance between Tip and Ring $\geq$ the parallel combination of the following:
  - the series combination of the on-hook dc resistance of connected equipment at the End User Interface and the dc resistance of the loop, and
  - a leakage resistance of 100,000 Ω .

5.2.3 MDF Interface - Alerting State

In the alerting state, the CLEC equipment shall alternately apply a ringing signal and the normal idle-state potential. The ringing signal shall be applied to the Ring conductor. The voltage on the Tip conductor, relative to Ground shall be between 0.0 and -5.0 Vdc. In any six-second period, there shall be at least three continuous seconds of the normal idle-state voltage. The ringing signal shall consist of an ac signal superimposed on a dc signal.

The requirements of the ac component are as follows:

- The frequency shall be 20 $\pm$ 3 Hz.
- The magnitude shall be between 84 and 104 V_{rms}.
- The waveform shall have a peak-to-rms ratio between 1.35 and 1.45.
- The ac current into a line shall be limited to less than 220 mA.

The potential of the dc component shall be between -36 and 56.6 Vdc, relative to ground.

The ringing signal (ac component + dc component) shall be applied to the Ring, with a source impedance $\leq$ 500 Ω . Ground shall be applied to the Tip, with a source impedance of $\leq$ 500 Ω.

The ringing signal shall be removed within 200 milliseconds after the line has gone off-hook, as defined below. The ringing signal shall not be 'tripped' when ringing into the parallel combination of the following:

- 10,000 Ω of dc resistance
- a 2 μF capacitor and the series combination of 1386 Ω and 20 μF (simulating 5 bridged ringers)
- the series combination of 1386 Ω and,20 μF (simulating 5 bridged ringers)

5.2.4 MDF Interface - Off-Hook State

The CLEC equipment shall recognize a resistance of 1900 Ω applied between Tip and Ring at the MDF as off-hook. For interoperability with loops with resistance greater than 1500 Ω, the CLEC equipment shall recognize a resistance of 3200 Ω applied between Tip and Ring at the MDF as off-hook. In either case, the CLEC must provide at least 20 mA through the limiting resistance.

The CLEC shall also meet the following requirements:

- The power delivered to any load via Tip and/or Ring shall not exceed 2.5 W.
- The current provided, via Tip and/or Ring, shall not exceed 150 mA.

In the off-hook state, the loop shall provide a dc resistance at the MDF meeting one of the following requirements:

- A dc resistance between Tip and Ring ≤ 1150 Ω (loop provided via DLC), or
- A dc resistance between Tip and Ring ≤ the series combination of the off-hook dc resistance of connected equipment at the End User Interface and the dc resistance of the loop.

5.2.5 End-User Interface

Signaling provided by connecting equipment at the End User Interface shall meet the Customer Installation requirements in ANSI T1.401-1993. The loop shall meet the network requirements in ANSI T1.401-1993.

5.3 Ground-Start - Office End at MDF

5.3.1 General

This arrangement is commonly used to support two-way trunks providing switched access to PBX's.

A small percentage of Designed Unbundled Voice Loops provided via DLC may not be able to support the distinctive ringing or forward disconnect features.

5.3.2 MDF Interface - Idle State

In the idle state, the CLEC equipment shall provide an open circuit Ring-to-ground voltage between 16 and 55 Vdc. The Ring shall be negative, relative to ground. The dc resistance from Tip to ground shall be ≥ 50,000 Ω.

In the idle state, the loop shall provide a dc resistance at the MDF meeting one of the following requirements:

- A dc resistance from Ring to Ground ≥ 10,000 Ω ((loop provided via DLC), or
- A dc resistance from Ring to Ground ≥ the parallel combination of the following:
  - the series combination of the dc resistance from Ring to Ground at the End User Interface and ½ of the dc resistance of the loop, and
  - a leakage resistance of 100,000 Ω .

5.3.3 MDF Interface - Alerting State

The CLEC shall meet the requirements of 5.2.3.

5.3.4 MDF Interface - Service Request State

When the end user initiates a call by placing a low resistance (≤ 580 Ω) from Ring to Ground, the loop shall provide a dc resistance at the MDF meeting one of the following requirements

- A dc resistance from Ring to Ground ≤ 900 Ω (loop provided via DLC), or
- A dc resistance from Ring to Ground ≤ the series combination of the dc resistance from Ring to Ground at the End User Interface and ½ of the dc resistance of the loop.

5.3.5 MDF Interface - Off-Hook State

Upon application of the Ring ground in the Service-Request State, the CLEC equipment shall provide a current-feed interface meeting the requirements of 5.2.4.

The loop shall present a dc resistance across Tip and Ring meeting the requirements of 5.2.4.

5.3.6 End-User Interface

Signaling provided by connecting equipment at the End User Interface shall meet the Customer Installation requirements in ANSI T1.401-1993. The loop shall meet the network requirements in ANSI T1.401-1993.

5.4 Reverse-Battery - Originating End at the MDF

5.4.1 MDF Interface - Idle State

In the idle state, the CLEC equipment shall maintain a dc resistance from Tip to Ring, Tip to Ground, and Ring to Ground $\geq$ 22,500 Ω.

If the loop is provided via Digital Loop Carrier, the loop shall provide at least 36 Vdc between Tip and Ring, with the Tip positive with respect to the Ring, in the idle state.

5.4.2 MDF Interface - Seizure

The Originating end signals an off-hook (seizure) by placing a low resistance between Tip and Ring. In this state, the CLEC equipment shall provide a dc resistance between Tip and Ring $\leq$ 670 Ω.

The current provided by the loop (with CLEC equipment attached that meets the above requirement) shall meet the following requirement:

- If the absolute value of the Tip to Ring voltage is $\geq$ 33.8 Vdc, the current shall be at least that produced by a 36 Vdc source in series with 135 Ω .
- If the absolute value of the Tip to Ring voltage $\geq$ 29.5 Vdc, but < 33.8 Vdc, the current shall be at least that produced by a 41.7 dc source in series with 489 Ω .
- If the absolute value of the Tip to Ring voltage < 29.5 Vdc, the current may be as low as 0 mA.

5.4.3 MDF Interface - Reverse-Battery State

The Terminating end signals an off-hook by reversing the polarity of the voltage applied across Tip and Ring. In this state, the CLEC equipment shall maintain a dc resistance of $\leq$ 670 Ω across Tip and Ring. In this state, the loop shall meet the requirements of 5.4.2.

5.4.4 End User Interface

Signaling provided by connecting equipment at the End User Interface shall meet the Customer Installation requirements in ANSI T1.405-1996. The loop shall meet the network requirements in ANSI T1.405-1996.

6. Unbundled Voice Loop - Voice-Frequency Transmission Requirements

6.1 General

When Loop-Start or Ground-Start signaling is employed, the following specifications are supported only during the off-hook state. These specifications apply to all Designed Unbundled Voice Loops, regardless of the signaling state, except where specified. ANSI/IEEE 743-1995 contains requirements for instrumentation necessary to measure compliance with the following requirements.

6.2 Insertion Loss

The following specifications apply to all Unbundled Voice Loops when measured with a 900 Ω ac impedance at the MDF and a 600 Ω ac impedance at the End User Interface:

- The actual measured insertion loss at 1 kHz shall be 10 dB or less. (See note below.)
- The actual measured insertion loss at 2.8 kHz shall be no greater than 9 dB above that at 1 kHz.

BST does not support transmission on any Designed Unbundled Voice Loop at frequencies below 300 Hz, or above 3.0 kHz.

NOTE: **In those rare cases where a UVL loop resistance exceeds 1500 Ω, the insertion loss at 1 kHz will never exceed 15 dB.**

6.3 Noise

The idle-channel noise shall be less than 20 dBrnC.

The Signal to C-Notched Noise Ratio shall be at least 32 dB, when measured with a -13 dBm holding tone.

6.4 Noise-to-Ground

The Noise-to-Ground parameter has two specifications. When measured with a C-message weighting filter, it should be less than 90 dBrnC. When measured with a high-impedance voltmeter, it shall not exceed 50 V (126 dBrn).

NOTE: **While dBrn is in units of power, both of these requirements involve voltage measurement, with results displayed in units of power, assuming that the voltage is across a 600 Ω resistor.**

The longitudinal balance (longitudinal to metallic conversion loss) of any metallic component of the loop shall be at least 50 dB for frequencies up to 1 kHz. The longitudinal balance of interconnected CLEC equipment shall exceed 60 dB at any frequency up to 1 kHz. This parameter may be measured using ANSI/IEEE 455-1985.

6.5 Voiceband Data

BST does not guarantee that an Unbundled Voice Loop (non-designed or designed) will be suitable for analog data or Facsimile transmission. If a customer is able to send and receive data, BST does not guarantee a data rate.

6.6 Signal Power

The power of the voiceband signal, at either the End User Interface or the MDF, shall not exceed -9 dBm, when averaged over any 3-second period.

The out-of-band signal power shall meet the out-of-band signal power limits in Section 68.308 of FCC Part 68 requirements. In the event that connected equipment is not registered under Part 68, this requirement shall still apply.

7. Unbundled Digital Loop

7.1 General

An Unbundled Digital Loop provides a channel intended to support one of a described set of digital transmission schemes. These schemes include the following:

- Digital Baseband at 2.4, 4.8, 9.6, 19.2, 56 and 64 kbps
- Basic Rate Access ISDN
- High-Bit-Rate Digital Subscriber Line (HDSL)
- Asymmetrical Digital Subscriber Line (ADSL)
- DS1

Requirements for each of these services are described below.

7.2 Digital Baseband at 2.4, 4.8, 9.6, 19.2, 56 and 64 kbps

7.2.1 Interfaces

The interface at the MDF is a 4-wire interface, described as a DS-0A interface in Bellcore TA-TSY-000077. The End User Interface is a 4-wire interface described in ANSI T1.410-1992. Signals applied at either interface shall meet the requirements of these documents.

7.2.2 Transport

The loop facility may be provided via metallic facilities, DLC, or both. Where metallic facilities are employed, loops measuring less than the insertion loss specified for each service in Table 7.2 will be served directly on copper. This loss should be measured between 135 Ω terminations at the insertion loss frequency specified for each service in Table 7.2. Loops measuring over the specified limit in Table 7.2 but less than 50 dB at 13.3 kHz may be served with range extension devices. Loops measuring more than this second limit will be considered out of range for metallic-only service but may be served if DLC exists in the area. Where spare DLC facilities exist, only the length of the copper extension from the DLC to the customer is an issue. DC signaling, in the simplex path, is only supported to the extent necessary to provide maintenance functions as described in Bellcore TA-TSY-000077 and ANSI T1.410-1992.

Table 7.2 Maximum Allowable Digital Baseband Service Insertion Losses

Service	Insertion Loss Frequency	Max Allowable Insertion Loss
2.4 kbps	1.2 kHz	34
4.8 kbps	2.4 kHz	34
9.6 kbps	4.8 kHz	34
19.2 kbps	9.6 kHz	40
56 kbps	28.0 kHz	40
64 kbps	36.0 kHz	40

7.3 Basic Rate Access ISDN

7.3.1 Interfaces

The interface at both the CLEC (collocated or elsewhere) and the End User Interface is a 2-wire interface as defined in ANSI T1.601-1996. The supported arrangement involves an NT at the end-user and an LT provided by the CLEC. No other arrangements are supported. Signals applied at either interface shall meet the requirements of this document.

7.3.2 Transport

The loop facility may be provided via metallic facilities, DLC, or both. Where metallic facilities are employed, loops measuring less than 42 dB at 40 kHz will be served directly on copper. Loops measuring over this limit but less than 52 dB at 20 kHz may be served with range extension devices. Loops measuring more than this second limit will be considered out of range for metallic-only service but may be served if DLC exists in the area. Where spare DLC facilities exist, only the length of the copper extension from the DLC to the customer is an issue. No dc specifications are supported. Sealing current - even if not provided by the CLEC equipment (LT) - may be provided, but is not guaranteed. The noise requirements in Sections 6.3 and 6.4 apply to this service.

7.4 HDSL-capable

7.4.1 Availability

This channel is not available when DLC is employed. This channel is not available if the loop facilities do not meet Carrier Serving Area (CSA) guidelines as described in Committee T1 Technical Report No. 28.

7.4.2 Interfaces

At the CLEC's request, either a 2-wire or 4-wire channel will be provided. The signal applied at either interface shall meet the following specifications:

- The average signal power shall not exceed +15.0 dBrn across 100 Ω.
- The PSD shall be limited to that specified in Figure 3.

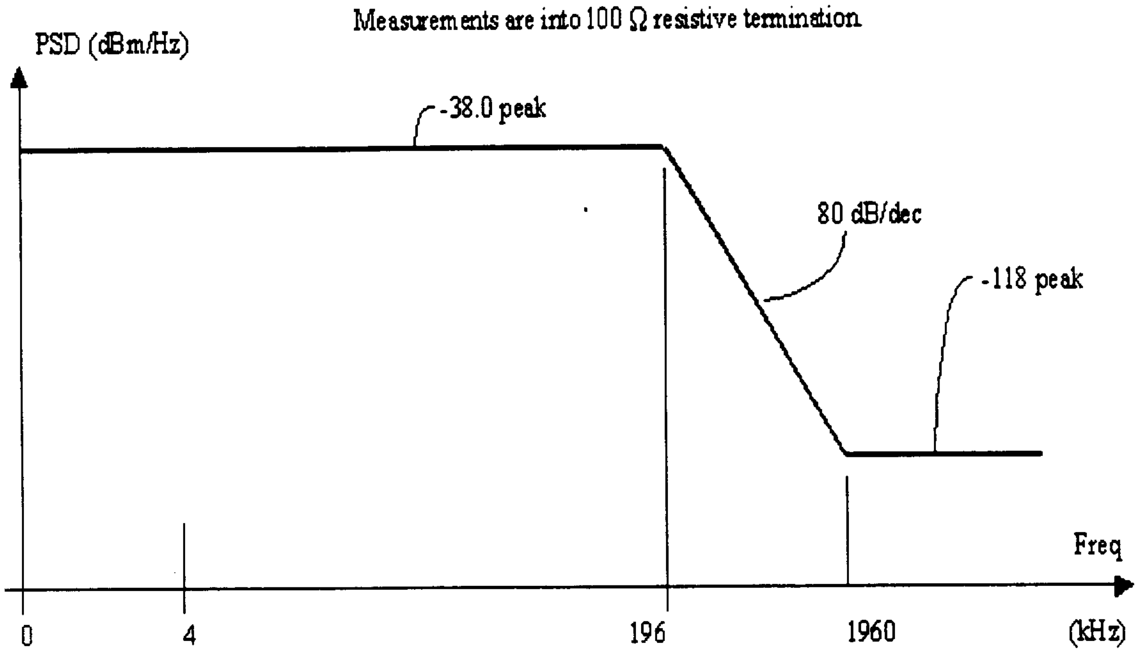

Figure 3 - HDSL Transmitter Spectrum

7.4.3 Transport

The loop facility consists of only metallic facilities meeting CSA design guidelines as documented in Committee T1 Technical Report No. 28. The dc resistance of a single wire pair should not exceed 850 Ω. The insertion loss of a pair at 100 kHz, measured between 135 Ω terminations, shall not exceed 35 dB. No industry-wide standard exists for a designed loss maximum for HDSL. Different HDSL equipment vendors may use different design parameters. The loss specified above was developed through extensive modeling of CSA loops at BST and represents the worst-case CSA loop loss.

7.5 ADSL-capable

7.5.1 Availability

This channel is not available when DLC is employed. This channel is not available if the loop facilities do not meet Carrier Serving Area (CSA) guidelines as described in Committee T1 Technical Report No. 28.

7.5.2 Interfaces

This offering is available as a 2-wire channel only. The signal applied at each end shall conform to the PSD diagrams as shown in Figures 1 and 2.

7.5.3 Transport

The loop facility consists of only metallic facilities meeting CSA design guidelines as documented in Committee T1 Technical Report No. 28. The dc resistance of a single wire pair should not exceed 850 Ω. The insertion loss of a pair at 100 kHz, measured between 135 Ω terminations, shall not exceed 35 dB, the worst-case CSA loop loss.

This UDL offering is limited to CSA loops and is intended to conform with the ANSI standard T1.413 document's ADSL performance objective of 6.14 Mb/s. However, BST does not make any bit-rate performance guarantee with this offering.

NOTE: **BST recognizes that ADSL will work on loops built beyond the CSA design guidelines. BST offers other Unbundled Network Elements that are consistent with the T1.413 objective for 1.536 Mb/s performance.**

7.6 DS1

7.6.1 Availability

This channel is available where DS1-capable facilities exist.

7.6.2 Interfaces

One balanced twisted pair shall be used for each direction of transmission.

The physical layer of the DS1 NI is consistent with the interface requirements delineated in the following specifications:

TR 73572	*Expanded Interconnection Service DS1 and DS3 Level Network Interface*
ANSI T1.403	*Network-and-Customer Installation - DS1 Metallic Interface*

TR 73572 defines the central office interface for Collocated transmission equipment with BST services. CLEC equipment that is connected to this offering shall meet the DSX-1 signal power limits specified in ANSI T1.102. BST will designate a meet point location within the central office where BST DS1 services will be terminated at the NI for interconnection to the CLEC transmission equipment.

ANSI T1.403 applies to end-user interfaces. End-user CPE that is connected to this offering shall meet the DS1 signal power limits in ANSI T1.403 and Part 68 of the FCC Rules. Interconnection at the DS1 End-User NI is through one of four Universal Service Order Code (USOC) connectors, RJ48C, RJ48X, RJ48M, RJ48H, as shown in ANSI T1.403 and Part 68 of the FCC Rules and Regulations as revised by Public Notice Numbers 4609 (September 21, 1988) and 4572 (October 3, 1988). The RJ48C or RJ48X jack is used for single DS1 line installations, and the RJ48M (8 DS1s) or RJ48H (12 DS1s) may be used for multiple circuit installations. These have a jack to the network and a plug from the CI installation. Alternatively, an appropriate DS1 rate digital cross connect panel may function as the interconnection arrangement at the NI.

7.6.3 Transport

This service enables full duplex 1.544 Mbps digital transmission and supports either Superframe (SF) or Extended Superframe (ESF) framing formats as specified in ANSI T1.403-1999. The service is available with either the AMI or B8ZS line codes as specified in ANSI T1.403-1999. This DS1 offering may be provisioned via a variety of loop transmission technologies, including, but not limited to, metallic facilities without signal regeneration, metallic facilities with signal regeneration, metallic facilities with HDSL-based technology or fiber optic transport systems. The technology used will be based upon existing capacities and distance from the central office.

BST will conduct short-term bit-error-rate stress testing, as outlined in ANSI T1.510-1999, on each DS1 circuit during installation to insure proper circuit performance.

8. Unbundled Copper Loop

An Unbundled Copper Loop provides a dedicated, all-metallic transmission facility from the BST Serving Wire Center MDF to the end user. A UCL will consist of a copper pair that BST records indicate is non-loaded and under 18 kf in length. In addition, up to 6 kf of bridged tap may be included on the facility.

The loop is not intended to support any particular service and may be utilized by the CLEC to provide a wide-range of telecommunications services, so long as those services do not adversely affect BST's network.

8.1 Availability

This channel is not available when DLC is employed. This channel is not available if the loop facilities do not meet Resistance Design (RD) guidelines as defined in Bellcore SR-TSV-002275. With this service, metallic copper continuity is assured. BST will provide UCLs where they already exist in the BST network. BST is not obligated to provision UCL service in a non-copper area.

8.2 Interfaces

This service offering is only available in a 2-wire interface. If any DSL-based service is employed on the loop, the signals applied at each interface shall conform to the appropriate PSD diagrams in Figures 1 and 2.

8.3 Transport

The loop facility consists of only unloaded metallic facilities which BST records indicate meet Resistance Design guidelines. The loop resistance must not exceed 1300 Ω. The total allowable length of the loop is 18 kf. An additional 6 kf of bridged tap is allowed. BST will guarantee electrical continuity and capacitive balance.[2] The insertion loss of a pair meeting the RD guidelines shall not exceed 46 dB at 40 kHz, measured between 135 Ω terminations.

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[2] BST considers a capacitive unbalance as high as 5% to be acceptable.

This UCL offering is limited to RD loops and is intended to conform with the ANSI standard T1.413 document's ADSL performance objective of 1.536 Mb/s. However, BST does not make any bit-rate performance guarantee with this offering.

At special request from the CLEC, and subject to BellSouth's Special Construction process, BST will unload a copper pair longer than 18 kf. This modified circuit must be ordered as a UCL. These circuits will not meet the UCL specs of loop resistance or insertion loss; therefore, BST will only provide electrical continuity and balance.

9. Unbundled Sub-Loop

An Unbundled Sub-Loop (USL) is a non-design service providing a dedicated voice-frequency transmission facility from a customer's premise to a BST cross-connect device. The cross-connect device may be located within a remote terminal or a stand-alone cross-box in the field or in the equipment room of a building. This facility does include a Network Interface Device (NID) at the customer's location for the purpose of connecting the loop to the customer's inside wire. This facility, which may be loaded, will allow an end user to send and receive telecommunications traffic when it is properly connected to a CLEC loop/feeder facility. The CLEC must provide a cable from its feeder system to the BST cross-connect device.

9.1 Availability

This service is available anywhere a CLEC chooses to place a feeder facility and connecting cable in proximity to an existing BST cross-connect device.

9.2 Interfaces

This service offering is available as a 2-wire or 4-wire interface.

9.3 Transport

This service will provide a copper pair capable of voice-frequency transmission from the feeder/distribution interface to the customer. This pair may contain load coils. BST does not provide any specific telecommunications services associated with a Sub-Loop. The requirements in Sections 3.6 apply to these loops. The loop resistance shall be less than 2800 Ω.

10. Unbundled Network Terminating Wire

An Unbundled Network Terminating Wire (UNTW) is a dedicated transmission facility that BST provides from the Wiring Closet/Garden Terminal, or other cross-connect type, at the point of termination of BST's loop distribution facilities, to the end user premises.

When properly connected to the CLEC's loop distribution and CLEC's Network Interface Device facilities, the offering will provide a communication pathway from the CLEC to the end user's inside wire.

This service does not include a Network Interface Device (NID).

10.1 Availability

In the states where BST has been ordered to provide sub-loop unbundling, this service is available anywhere a CLEC chooses to place a feeder distribution cable in proximity to an existing customer served by BST.

10.2 Interfaces

This service offering is available as a 2-wire or 4-wire interface.

10.3 Transport

This service will provide a copper pair from the BST distribution terminal to the customer. BST does not provide any specific telecommunications services associated with the UNTW. The requirements in Sections 3.6 apply to these loops.

11. Network Interface Device (NID) Access

NID Access is designed to allow a CLEC the opportunity to connect its loop to the inside-wiring portion of BST's Network Interface Device (NID). It is expected that the CLEC will provision a loop and a NID to the customer's location. The CLEC will perform a physical cross-connect of the inside wire to its loop, through BST's NID.

Where spare NID capacity does not exist, the CLEC will be allowed to disconnect the BST loop from the BST NID in order to connect the CLEC loop. In these cases, the CLEC accepts all liability associated with the process and the CLEC holds the responsibility of leaving BST's pair open (no dc continuity between conductors) with the conductors not exposed.

12. Unbundled Sub-Loop Concentration

Unbundled Sub-Loop Concentration (USLC) will allow a CLEC to concentrate loop distribution elements provided by the CLEC on to multiple DS1s for the purpose of connecting the loop distribution elements, at a concentrated level, to BST's feeder facilities. This concentration will take place at an existing BST remote terminal where spare capacity exists. BST will transport the DS1s carrying the distribution circuits back to the Serving Wire Center for termination on a BST DSX panel and will ultimately terminate to the CLEC's collocation space in that SWC.

12.1 Availability

BST will offer this capability in all locations where capacity is available. If no capacity exists in the BST RT or cross-box, BST will utilize its special construction process to determine if an additional RT or cross-box can be placed near the existing RT or cross-box for increased capacity. If this cannot be done, BST will not be able to provide USLC in that area.

12.2 Interfaces

This service can be provisioned with either a TR008 or a TR303 interface. Each USLC will be dedicated to a single CLEC.

12.3 Transport

In order for the BST loop concentration system to perform properly, certain interface requirements into the concentration system must be observed.

The interface requirements into a loop concentration system are service dependent. For each CLEC-requested service to be placed through the concentration system, BST will provision appropriate channel units. All dc voltage, current and signal powers applied to each channel unit by the CLEC shall comply with extant industry documents related to that service.

The optional test circuit, commonly referred to as a dc test pair, offered with this service shall comply with the appropriate system (TR008 or TR303) testing requirements. The maximum dc voltage allowed on the test pair is 120 Vdc, with a maximum resulting current of 15 mA. The maximum allowable ac voltage is 60 Vac. This test circuit will be emulated with Tollgrade channel units using two channels of the concentrated carrier system.

13. Unbundled Loop Concentration

Unbundled Loop Concentration (ULC) will be offered as an expandable unit that concentrates unbundled loops up to a DS1 level circuit within the BST Serving Wire Center where the loops terminate onto the MDF for transport to the CLEC's collocation space. BST will allow UVL and UDL loops to be combined onto the ULC offering.

13.1 Availability

BST will offer this capability in all locations.

13.2 Interfaces

This service can be provisioned with either a TR008 or a TR303 interface. Each ULC will be dedicated to a single CLEC.

13.3 Transport

In order for the BST loop concentration system to perform properly, certain interface requirements into the concentration system must be observed.

The interface requirements into a loop concentration system are service dependent. For each CLEC-requested service to be placed through the concentration system, BST will provision appropriate channel units. All dc voltage, current and signal powers applied to each channel unit by the CLEC shall comply with extant industry documents related to that service.

The optional test circuit, commonly referred to as a dc test pair, offered with this service shall comply with the appropriate system (TR008 or TR303) testing requirements. The maximum dc voltage allowed on the test pair is 120 Vdc, with a maximum resulting current of 15 mA. The maximum allowable ac voltage is 60 Vac. This test circuit will be emulated with Tollgrade channel units using two channels of the concentrated carrier system.

14. Electrical Disturbances

Unbundled Local Loops may be exposed to electrical surges from lightning and commercial power system disturbances. Despite protective devices on the MDF, some of these disturbances are likely to reach CLEC equipment. CLEC equipment shall be designed to withstand certain surges without being damaged, and shall fail in a safe manner under infrequent high stress.

The prevalent voltage-limiting device available for CO use is the 3-mil carbon block. The performance of these devices can best be characterized by a normal distribution function. The upper 3σ firing voltage is 1000 volts peak under surge conditions. The protector may also limit - to about 350 mA over extended periods - the current that is permitted to flow to equipment. In addition, a protective fuse cable located outside the CO incorporating 24 or 26 AWG conductors to coordinate with the protector, serves to limit current to safe levels in the event of prolonged operation of the protector during power fault conditions.

15. ANNEX A - Characteristics of Tie Cable(s) And/or Wiring Component

The cabling and/or wire between the MDF interface and the collocated CLEC equipment (if any) is not a component of the Unbundled Local Loop. It is an unbundled element. The following specifications apply:

- The total length should be less than 1500 feet.
- The dc resistance should be less than 80 Ω.
- The insertion loss, measured between 900 Ω terminations at 1 kHz, should be 0.5 dB or less.
- The noise shall be 15 dBrnC or less.

DSX-1 Cross-connect

- The total length of all DSX-1 cross-connect wiring should be less than 85 feet of 22-gauge cable.
- The cabling between the equipment and the DSX-1 panels shall be built-out in each direction of transmission such that the overall cabling and build-out is the equivalent of 655 feet of 22-gauge ABAM cable.

16. ANNEX B - NC/NCI Codes

Network Channel (NC) and Network Channel Interface (NCI) codes are used to supplement ordering. These codes provide a shorthand notation of the interface and performance characteristics described in this document. This section may be used as a reference for NC and NCI codes to be used when ordering the services described in this document, which are services covered under the BellSouth Special Access Tariff.

16.1 Network Channel (NC) Codes

The Network Channel code is a representation used to identify non-switched channel services and to designate the channel parameters. Table 16.1 shows the format of the NC code. It is a four-character code that consists of a Channel Service Code and an Optional Feature Code. The Channel Service Code is a two-character code that indicates the channel service. This code is always filled in. The Optional Feature Code is a two-character code that indicates service options available for each channel service code. A hyphen (-) is used in positions 3 and 4 of the NC code to indicate the absence of features or options.

Table 16.1 Network Channel (NC) code format.

Field Identity	Channel Service Code		Optional Feature Code	
Character Position	1	2	3	4
Character Type	Alpha	alpha	Alphanumeric	Alphanumeric

16.2 Network Channel Interface (NCI) Codes

The Network Channel Interface (NCI) code designates five interface elements located at the Point of Termination (POT) or customer location. The interface elements are described below:

- **Total Conductors** is a two character numeric code (the first two characters of the NCI) that represents the total number of physical conductors required at the interface. This field is always filled.

- **Protocol** is a two character alpha code (positions 3 & 4) that indicates the transmission requirements. The protocols specified at either end of a circuit do not have to be the same, but they do have to be technically compatible. This field is always filled.

- **Impedance** is a one character alpha code (position 5) indicating the nominal impedance that terminates the channel. This field is always filled.

- **Delimiter** is either a period (.) or virgule (/) in position 6 that indicates the start of the protocol option code. If the option field is not coded, a double delimiter will be placed in character positions 6 and 7.

- **Protocol Options** is a one-to three–character alphanumeric code (positions 7 to 9) that indicates additional features of the protocol to be used. Protocol option codes are left justified in the field when fewer than three characters are used.
- **Delimiter** is either a period (.) or virgule (/) in position 10 if a three character protocol option code is used, or position 9 if a two character protocol option code is used, or position 8 if a single character protocol option code is used.
- **Transmission Level Point** (TLP) (last two positions after the second delimiter) is not used for unbundled loops at this time but may be used to indicate direction of service by some Local Transport Providers.

The following table illustrates the NCI code format:

Table 16.2 Network Channel Interface Code Format.

Field Identifier	Total Conductors	Protocol	Impedance	Delimiter	Protocol Options	Delimiter	TLP Level TX/RX
Character Position	1&2	3&4	5	6	7 to 9, left justified	8 or 9 or 10	last two positions
Code Type	Numeric	Alpha	Alpha	. or /	Alpha-Numeric	. or /	Alpha-Numeric

The following table provides the NC and NCI codes that apply to the services covered in this document.

Table 16.3 Network Channel/Network Channel Interface Code Format.

Service	NC	NCI At CLEC	SEC NCI at End User	Related TR73600 Section(s)
UVL-2W/SL1 (Loop Start)	TY--	N/A	N/A	4.1, 5.1, 6
UVL-2W/SL2 (Loop Start)	LY--	02QC3.OOD	02LS2	4.2, 5.2, 6
UVL-4W (Loop Start)	LY--	04QC2.OOD	04LS2	4.2, 5.2, 6
UVL-2W/SL2 (Grnd Start)	LY--	02QC3.OOB	02GS2	4.2, 5.3, 6
UVL-4W (Ground Start)	LY--	04QC2.OOB	04GS2	4.2, 5.3, 6
UVL-2W (Rev Batt)	LY--	02QC3.RVO	02RV2.T	4.2, 5.4, 6
UDL-4W/D0 (2.4 Kbs)	LY--	04QC5.OOJ	04DU5.24	7.2
UDL-4W/D0 (4.8 Kbs)	LY--	04QC5.OOK	04DU5.48	7.2
UDL-4W/D0 (9.6 Kbs)	LY--	04QC5.OOL	04DU5.96	7.2
UDL-4W/D0 (19.2Kbs)	LY--	04QC5.OOM	04DU5.19	7.2
UDL-4W/D0 (56 Kbs)	LY--	04QC5.OOP	04DU5.56	7.2
UDL-4W/D0 (64 Kbs)	LY--	04QC5.OOQ	04DU5.64	7.2
UDL-2W/I (BR ISDN)	LY--	02QC5.OOS	02IS5	7.3
UDL-2W/EE (HDSL)	LX--	02QB9.00H	02DU9.00H	7.4
UDL-4W/EE (HDSL)	LX--	04QB9.00H	04DU9.00H	7.4
UDL-2W/EE (ADSL)	LX--	02QB9.00A	02DU9.00A	7.5
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BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF DAVID P. SCOLLARD

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 00-00309

DECEMBER 06, 2000

Q. PLEASE STATE YOUR NAME, ADDRESS, AND POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC.

A. I am David P. Scollard, Room 26D3, 600 N. 19th St., Birmingham, AL 35203. My current position is Manager, Wholesale Billing at BellSouth Billing, Inc., a wholly owned subsidiary of BellSouth Telecommunications, Inc. In that role, I am responsible for overseeing the implementation of various changes to BellSouth's Customer Records Information System ("CRIS") and Carrier Access Billing System ("CABS").

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.

A. I graduated from Auburn University with a Bachelor of Science Degree in Mathematics in 1983. I began my career at BellSouth as a Systems Analyst within the Information Technology Department with responsibility for developing applications supporting the Finance organization. I have served in a number of billing system design and billing operations roles within the billing organization. Since I assumed my present responsibilities, I have overseen the progress of a number of billing system revision projects such as the implementation of the 1997 Federal Communications Commission ("FCC") access reform provisions, billing of unbundled network elements ("UNEs"), as well as the development of billing solutions in support of new products offered to end user customers. I am familiar with the billing provided by BellSouth to local competitors, interexchange carriers and retail end user customers.

Q. HAVE YOU TESTIFIED PREVIOUSLY BEFORE ANY STATE PUBLIC SERVICE COMMISSION? IF SO, BRIEFLY DESCRIBE THE SUBJECT OF YOUR TESTIMONY.

A. I have testified before the state Public Service Commissions in Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, South Carolina, the Tennessee Regulatory Authority, and the Utilities Commission in North Carolina on issues regarding the capabilities of the systems used by BellSouth to bill for services provided to retail customers, Interexchange Carriers (IXCs) as well as Competitive Local Exchange Carriers (CLECs).

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to address issues relating to BellSouth's billing for services raised by MCI WorldCom ("MCI") in its Petition for Arbitration filed with the Tennessee Regulatory Authority ("Authority"). Specifically, I will address issues 75, and 95.

Issue 75: For end users served by INP should the end user or the end-user's local

carrier be responsible for paying the terminating carrier for collect calls, third party billed calls or other operator assisted calls?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth's position is that the local carrier (such as MCI) serving the end user via Interim Number Portability facilities is responsible for paying for collect calls, third number calls or other operator handled calls incurred by the end user. MCI is BellSouth's customer of record when INP is used, has all of the information necessary to bill the end user and can put a block on such calls thereby avoiding the issue entirely. Any issue MCI has with billing its end users for collect and third party calls should be short lived since the INP process has effectively been replaced by the Local Number Portability (LNP) service.

Q. WHAT TYPES OF CALLS ARE INVOLVED IN THIS ISSUE?

A. Third number billed calls are at issue. For example, suppose a BellSouth end user ports to MCI using INP. That same end user then goes to her uncle's house (who is a BellSouth local and toll end user) to place an intra-LATA toll call. Since the end user does not want her uncle to pay for the call she asks the operator to bill that call to her long-standing BellSouth telephone number (the ported number). This issue deals with how BellSouth should recover its revenue for those types of calls.

Q. WHY SHOULD THE LOCAL CARRIER, SUCH AS MCI, PAY FOR SUCH CALLS?

A. There are at least three reasons. First, INP is unique in that the end user customer is actually provided two telephone numbers. The BellSouth provided number from which portability occurs and the second number provided by MCI to which calls are routed. When MCI elects to provide service to an end user via an INP arrangement, MCI becomes BellSouth's customer of record for all services connected with the telephone number provided by BellSouth. Therefore, it is MCI which should be held accountable for the charges which are to be billed against that number. The proposal made by BellSouth is identical to the processes used when MCI serves an end user via resold services and unbundled network elements.

Second, the industry supported mechanisms by which these types of calls are settled between carriers is based on the NPA/NXX of the end user to be billed. In the example listed above, the niece's call from her uncle's house that is charged to her long-standing BellSouth telephone number looks like it is to be billed to a BellSouth end user since the "bill to" number contains a BellSouth NPA/NXX. The industry bodies, rightly so, decided to forego the expense of revising the systems for INP since it was only an interim offering and to concentrate its efforts to support LNP. Therefore, all of the existing carrier-to-carrier settlements systems only support BellSouth billing its customer of record for the call. In this case, that is MCI. BellSouth then provides MCI with a copy of the call record so it can perform the needed billing to its end user.

Again, this is identical to the way these calls are handled in the resale and UNE environments.

Third, the proposed BellSouth language provides that MCI can limit its potential liability for these charges by placing blocks on the telephone number provided by BellSouth such that third number or collect calls or both are blocked. The end user would then have the option of having these types of calls charged to the telephone number provided by MCI which would avoid the issue entirely. It is not clear why this approach is unacceptable to MCI.

Q. ARE THERE OTHER WAYS MCI CAN AVOID THIS ISSUE OTHER THAN BLOCKING THESE TYPES OF CALLS?

A. Yes. In Tennessee, MCI can elect to serve its end users using Local Number Portability. Therefore, MCI can avoid this issue it has with INP by simply serving its customers with Local Number Portability.

Q. IS BELLSOUTH'S PROPOSAL CONSISTENT WITH INDUSTRY PRACTICE?

A. Yes. BellSouth uses the industry billing mechanisms every day to provide CLECs, including MCI, with records to bill for collect and third number billed calls placed by the CLECs end users, carried by BellSouth so that the CLEC can bill the end user on the bills provided to the end user. These mechanisms hold the CLECs liable for the non-payment of these calls. The Agreement language proposed by BellSouth for MCI's end users served by INP describes the same usage exchange functions and responsibilities as in the process used to bill MCI's other end users.

Q. WHAT ACTION DOES BELLSOUTH WANT THE AUTHORITY TO TAKE REGARDING THIS ISSUE?

A. BellSouth asks the Authority to direct the parties to adopt the language proposed by BellSouth on this issue.

Issue 95: Should BellSouth be required to provide MCI with billing records with all EMI standard fields?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth provides and is willing to continue to provide MCI with billing records consistent with Electronic Message Interexchange (EMI) guidelines. However, the agreement should make clear how these records will be provided, which MCI's proposal does not do.

Q. WHAT IS BELLSOUTH'S UNDERSTANDING OF THE ISSUE?

A. BellSouth's understanding of the issue is much different than that put forth in the testimony of MCI in other states. BellSouth does provide CLECs with usage records created using the EMI guidelines. BellSouth has a number of interfaces that allow MCI to receive these usage records. Each interface has been created using the guidelines contained in the EMI documents. BellSouth's proposed language dealing with usage recordings is to clarify the exact nature of how these records will be provided. The EMI guidelines call for differing types of records, record fields and data formats depending on the type of usage being recorded. For example, the EMI standards for usage record associated with meet point billing are far different than a usage record exchanged between companies to be used to bill for a toll call reverse billed to the terminating number. The language proposed by BellSouth clearly defines which types of records will be included on the different interfaces and the processes used to create each.

Q. DOES BELLSOUTH PROVIDE MCI WITH ALL EMI STANDARD FIELDS ON THE USAGE RECORDS IT PROVIDES TO CLECs ?

A. Yes. The fact is that BellSouth does provide the EMI fields that are required for the types of records included on the usage interfaces. BellSouth is not seeking to move away from the industry guidelines and develop proprietary records. However, the wording in the contract should be revised to clearly reflect how these industry guidelines will be used by the systems to support MCI. BellSouth's proposed language does just that.

Q. WHAT ACTION DOES BELLSOUTH WANT THE AUTHORITY TO TAKE REGARDING THIS ISSUE?

A. BellSouth asks the Authority to direct the parties to adopt the language proposed by BellSouth in resolving this issue.

A. Yes.

<u>AFFIDAVIT</u>

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 David P. Scollard – Manager – Wholesale Billing, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 00-00309 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 8 pages and 0 exhibit(s).

David P. Scollard

David P. Scollard

Sworn to and subscribed
before me on May 30, 2000

NOTARY PUBLIC

MICHEALE F. HOLCOMB
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2001

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF DAVID A. COON

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 00-00309

DECEMBER 6, 2000

Q. PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR BUSINESS ADDRESS.

A. My name is David A. Coon. I am employed by BellSouth as Director – Interconnection Services for the nine-state BellSouth region. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q. WHAT IS YOUR PROFESSIONAL EXPERIENCE AND EDUCATIONAL BACKGROUND?

A. My career at BellSouth spans over 20 years and includes positions in Network, Regulatory, Finance, Corporate Planning, Small Business Services and Interconnection Operations. Prior to my BellSouth employment, I performed a variety of functions in the Network, Regulatory and Marketing Support organizations of C&P Telephone Company-Washington. I have extensive experience in the development and use of quantitative measurements and results including the establishment, analysis and monitoring of BellSouth process measures.

I received a Bachelors Degree in Civil Engineering from Ohio University and a Masters Degree in Engineering Administration from George Washington University. I received the Certified Management Accountant (CMA) designation in 1996 from the Institute of Management Accountants.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I will respond to the following issue in the MCI WorldCom Petition for Arbitration in Tennessee:

Issue 105: What performance measurement system should BellSouth be required to provide? (Attachment 10)

Q. WHAT ARE THE APPROPRIATE PERFORMANCE MEASUREMENTS BELLSOUTH SHOULD BE REQUIRED TO PROVIDE TO MCI WORLDCOM?

A. The appropriate measurements to be included in the BellSouth/MCI WorldCom Interconnection Agreement are the Service Quality Measurements (SQMs) proposed by BellSouth. These measures cover 9 separate functional categories: (1) Pre-Ordering OSS; (2), Ordering; (3) Provisioning; (4) Maintenance and Repair; (5) Billing; (6) Operator Services (Toll) and Directory Assistance; (7)

E911; (8) Trunk Group Performance: and (9) Collocation. BellSouth's measurements are the result of nearly two years of work with several state commissions, direction provided by the FCC and input from various CLECs, including MCI WorldCom. As of April 24, 2000, 79 CLECs currently have signed agreements with BellSouth, in Tennessee, which include the SQMs proposed by BellSouth. The SQMs are more than adequate to allow the Tennessee Regulatory Authority and MCI WorldCom to monitor non-discriminatory access. It is unreasonable and unnecessary to have BellSouth develop and adhere to a different mandated set of performance measures for MCI WorldCom as MCI WorldCom proposes in its version of Attachment 10, MCI WorldCom Measurements and Performance Standards, Version 1.1 ("MPS"). However, if MCI WorldCom wishes to pursue additional performance measures beyond those provided in the BellSouth Service Quality Measurements (SQM) and is willing to reimburse BellSouth for the investigation, development and delivery of those additional measurements, BellSouth is willing to consider such a request

.Q. HOW IS THE BELLSOUTH SERVICE QUALITY MEASUREMENT DOCUMENT STRUCTURED?

A. The BellSouth SQM document (a copy of which is attached as Exhibit DAC-1) consists of a Table of Contents, four (4) Appendices; A) Reporting Scope, B) Glossary of Acronyms and Terms, C) Audit Policy and D) Retail Analogs and

Benchmarks and a separate section for each measurement which further defines each measurement based on ten (10) distinct categories. Those 10 distinct categories are as follows: Measurement, Definition, Exclusions, Business Rules, Level of Disaggregation, Calculation, Report Structure, Data Retained Relating to CLEC Experience, Data Retained Relating to BST Experience and Retail Analog/Benchmark.

Q. IS THE STRUCTURE OF THE BELLSOUTH SQM APPROPRIATE?

A. Yes. The physical layout of BellSouth's SQM document has never been an issue in any regulatory proceeding. The SQM layout matches the layout of similar documents from LCUG, GTE and SPRINT as stipulated by the North Carolina Utilities Commission in the generic North Carolina performance measurement docket, and the Bell Atlantic and Southwestern Bell 271 applications.

Q. AT ¶ 174, MCI ASSERTS THAT "THE MPS PROVIDES A MORE COMPLETE LIST OF MEASUREMENTS AND BETTER DEFINES THE MEASUREMENTS, EXCLUSIONS, BUSINESS RULES AND APPLICABLE FORMULAS THAN DOES BELLSOUTH'S SQM. DO YOU AGREE?

A. Absolutely not. The BellSouth SQM has undergone a continuous metamorphosis over the past two years. As part of the Louisiana Workshops in Docket No. U-22252, Subdocket C and the Georgia Generic Performance Measurements

Docket, Docket No. 7892-U, BellSouth has collaborated with CLECs, including MCI WorldCom, to modify and expand its SQMs so as to satisfy the CLEC industry. As a result of these collaborations, BellSouth has greatly expanded the content of the measurement proposal. The additions expand the business rules, more clearly define the measurements and formulas for delivering the reported results, deliver further product disaggregation, and add proposed standards or benchmarks for nearly every measurement. In addition, BellSouth voluntarily makes available the raw data utilized for the measurements and a comprehensive raw data user manual. This data and the user manual allow the CLECs to build customized reports and further disaggregate reports based on individual CLEC needs. I know of no other local exchange company that provides similar tools to the CLEC community.

Concurrent with the Louisiana Workshops, dockets on performance measurements have commenced in North Carolina, South Carolina and Florida. MCI WorldCom stubbornly continues to propose that the only adequate set of measurements is its MPS, which is based on those proposed by the Local Competition User Group (LCUG). The LCUG measures have not been adopted by any state regulatory body anywhere in BellSouth's nine-state region.

It is entirely inappropriate and oppressive for MCI WorldCom to attempt to independently negotiate for a mandated set of performance measurements outside of these collaborative processes.

Q. WHY SHOULD THE TENNESSEE REGULATORY AUTHORITY ORDER THE USE OF BELLSOUTH'S SERVICE QUALITY MEASUREMENTS IN THE BELLSOUTH/MCI WORLDCOM INTERCONNECTION AGREEMENT?

A. If each CLEC has a separate and distinct set of mandated Performance Measurements for its Interconnection Agreement, comparisons between the service quality provided to the CLECs and to BellSouth retail units would be impossible. Further, in order for BellSouth's Voluntary Self Effectuating Enforcement Mechanisms (VSEEM III) proposal to work, it is imperative that all CLECs have the same set of performance measurements. As previously stated, 79 CLECs in Tennessee already have signed Agreements with BellSouth that include the BellSouth SQMs.

Furthermore, there is the practical matter of how to administer all the data required for multiple sets of measurements. BellSouth has invested millions of dollars developing the capability required for the current set of Performance Measurements. Over 800 CLECs have signed Agreements with BellSouth in BellSouth's region. To attempt to produce a separate set of mandated performance measurements for each one of them would be not only overly burdensome but a near impossibility and would take years to implement. This would be inconsistent with the FCC's desire that performance measurements and reporting requirements should "balance our goal of detecting possible instances of discrimination with our goal of minimizing, to the extent possible, burdens imposed on incumbent LECs". (Notice of Proposed Rule Making, CC Docket 98-56 at Paragraph 36)

Q. AT ¶ 175, MCI WORLDCOM ALLEGES THAT "THE MPS PROVIDES APPROPRIATE LEVELS OF DISAGGREGATION IN ALL THESE AREAS (PRODUCT, ORDERING ACTIVITY, GEOGRAPHIC SCOPE, VOLUME, INTERFACE TYPE AND REASON FOR HELD ORDERS), WHILE THE SQM DOES NOT." DO YOU AGREE?

A. No. BellSouth's SQM provides disaggregation for all the categories, delineated in the parenthesis above, cited by MCI WorldCom. The Telecommunications Act of 1996 (the "Act") requires BellSouth to produce Performance Measurements that permit regulatory bodies to monitor non-discriminatory access. It was not the intent of the Act or the FCC to have measurements for each and every process or subprocess, for each and every product, at the lowest geographic level, each month. The FCC provided guidance on the number of measures in the NPRM when it stated that the "requirement for performance measurements should balance the goal of detecting discrimination with the goal of minimizing the burden on the local exchange carrier." (CC Docket 98-56, Para 36)

Q. IN ¶ 176 MCI WORLDCOM ALLEGES THAT "BELLSOUTH PROPOSES CERTAIN RETAIL ANALOGS THAT ARE NOT SUITABLE, DOES NOT

PROPOSE ANY BENCHMARKS FOR CERTAIN MEASURES, AND IN MANY CASES PROPOSES BENCHMARKS THAT ARE FAR TOO LAX." DO YOU AGREE?

A. No. BellSouth has proposed a set of Retail Analogs and Benchmarks, included as Appendix "D" in the BellSouth SQM, based on an examination of the data produced by the processes over the past two years. Most measures are based on retail analogs proposed. BellSouth's position evolved during the Louisiana workshops from a proposal with retail analogs only for resale products to a comprehensive proposal offering a retail analog or benchmark for almost every measure. BellSouth believes that appropriate analogs or benchmarks must be based on data produced by the processes in BellSouth. These analogs and/or benchmarks fairly balance the interest of the CLECs, this Authority and BellSouth.

Q. AT ¶ 177 MCI WORLDCOM ALLEGES "THAT THE "MODIFIED Z" TEST BE THE STATISTICAL METHODOLOGY APPLIED TO ASSESS PARITY. ... THAT THIS METHODOLOGY IS SUPERIOR THAN THE STATISTICAL METHODOLOGY THAT HAS BEEN PROPOSED BY BELLSOUTH." DO YOU AGREE"

A. No. In December 1998, BellSouth and the CLECs had two different approaches to solving the issue of parity testing. At that time, as part of the Louisiana performance measurements workshops, the Louisiana Public Service Commission staff instructed represented parties to collaborate on a solution. BellSouth's independent statisticians and AT&T were to participate in the collaboration; MCI and other CLECs deferred their participation to Dr. Colin Mallows of AT&T Research Laboratories resulting in Dr. Mallows representing the interest of, not only AT&T, but also the Joint CLEC participants.

In February 1999, Drs. S. Hinkins, E. Mulrow, and F. Scheuren of Ernst & Young LLP (consultants for BellSouth Telecommunications), and Dr. C. Mallows of AT&T Labs-Research collaborated to set out their views on the application of a statistical analysis to performance measurement data. These views were filed in a report to the Louisiana Public Service Commission, *Statistical Techniques For The Analysis And Comparison Of Performance Measure Data.* A copy of this report is attached as Exhibit DAC-2. In that report, these statisticians found that when a retail analog is available, CLEC performance can be directly compared with ILEC performance. The statisticians now believe that the "Truncated Z" test statistic, proposed by BellSouth, which is a modification of the original so-called "Modified Z, " provides the best compromise with respect to possessing the desired qualities of a performance data test statistic.

It is important to note that while both MCI WorldCom and AT&T agreed to allow Dr. Mallows to represent them in the collaboration to define a joint optimum testing methodology, neither MCI WorldCom nor AT&T have agreed to adopt the proposal reached by the collaboration and both stubbornly still insist on their own respective testing methodologies.

Q. AT ¶¶ 178-179, MCI WORLDCOM ALLEGES THAT "IT APPEARS THE PARTIES DISAGREE CONCERNING A HOST OF REMEDIES ISSUES." WHAT IS THE APPROPRIATE ENFORCEMENT MECHANISMS THAT SHOULD BE ADOPTED BY THE AUTHORITY?

A. Nothing in the Telecommunications Act of 1996 (the "1996 Act") requires a self-executing enforcement plan. The FCC has acknowledged as much in its orders. In its August 1996 Local Competition Order, the FCC notes that several carriers advocated for performance penalties. *See Local Competition Order, 11 FCC Rcd at 15658 [¶ 305].* The FCC did not adopt such performance penalties in the Local Competition Order. Instead, it acknowledged the wide variety of remedies available to a CLEC when it believes it has received discriminatory performance in violation of the Act; see *FCC's Local Competition Order ¶ 129, 11 FCC Rcd. at 15565 (emphasizing the existence of sections 207 and 208 FCC complaints for damages, as well as actions under the antitrust laws, other statutes and common law);* and "encourage[d]" the States only to adopt reporting requirements for ILECs. Likewise, in its order approving Bell Atlantic's entry into long distance in New York, the FCC analyzed Bell Atlantic's performance plan "solely for the purpose of determining whether the risk of post-approval non-compliance is sufficiently great that approval of its section 271 application would not be in the public interest." Bell Atlantic Order, at ¶433 n.1326.

More recently, in its October 13, 1998 order regarding BellSouth's Section 271 application for Louisiana, the FCC reiterated that the existence of such an enforcement plan is not a pre-requisite to compliance with the competitive checklist, but rather is a factor that the FCC will consider in assessing whether the RBOC's entrance into the interLATA market would serve the "public interest." See FCC's Louisiana II Order, at ¶363 and n.1136. The FCC stated that "evidence that a BOC has agreed in its interconnection agreements to performance monitoring" (including performance standards, reporting requirements, and appropriate self-executing enforcement mechanisms) "would be probative evidence that a BOC will continue to cooperate with new entrants, even after it is authorized to provide in-region, interLATA services." Id. at ¶¶363-64.

The FCC has made it clear that the primary, if not sole, purpose of a voluntary self effectuating remedy plan is to guard against RBOC "backsliding;" that is, providing discriminatory performance after it has received the so-called "carrot" of long distance approval.

Q. DOES BELLSOUTH HAVE A REMEDY PLAN?

A. Yes. BellSouth has offered a Voluntary Self Effectuating Enforcement Mechanism (VSEEM III) proposal. This proposal is based on key, outcome measurements contained in the BellSouth SQM, and provides for a three-tiered schedule of penalties for non-performance.

Tier-1 enforcement mechanisms are triggered when BellSouth fails on any one of the Tier-1 VSEEM measurements for a particular month, and is paid directly to individual CLECs, including MCI WorldCom.

Tier-2 enforcement mechanisms are triggered when BellSouth fails at the CLEC aggregate level on any one of the Tier-2 VSEEM measurements in a calendar quarter. These payments are paid directly to the State Commission or designated agency.

Tier-3 enforcement mechanisms are triggered when BellSouth consistently fails at the CLEC aggregate level on any five of the Tier-3 VSEEM measurements in a calendar quarter. Tier-3 consequences are non-monetary, wherein BellSouth is offering to discontinue marketing of Long Distance in that particular state.

This 3-tiered approach, particularly Tier-3, will impose significant competitive pressure on BellSouth to provide CLECs, including MCI WorldCom, with non-discriminatory performance as required by the Act.

Q. SHOULD THE TRA ADOPT BELLSOUTH'S REMEDY PLAN?

A. Yes. The Authority should adopt BellSouth's remedies proposal entitled Voluntary Self-Effectuating Enforcement Mechanism III ("VSEEM III"). That proposal, like two others recently approved by state public service commissions, is a voluntary proposal that incorporates input from the industry and regulators.

BellSouth's plan is modeled after the Southwestern Bell voluntary enforcement plan recently approved by the Texas Commission and also incorporates features of the Bell Atlantic plan, which was recently approved by the New York Commission and the FCC. Both the SBC and Bell Atlantic plans were constructed during a collaborative process that involved extensive input from the industry and the regulators. Likewise, BellSouth's VSEEM proposal, introduced in its original form as VSEEM I in early 1999, has evolved significantly during the collaborative process established by the Louisiana Commission and reflects the input of the CLECs, the LPSC Staff and the FCC Staff. By contrast, the MCI WorldCom plan reflects the sole input of its author. It has not been approved anywhere in the country, and has not altered in any material fashion (except to grow ever more punitive) during the 18-month period this collaborative process has been conducted.

BellSouth submits that its voluntary proposal should be accepted by this Authority because it clearly falls well within the FCC's prescribed "zone of reasonableness," and provides powerful incentives to foster post-entry checklist compliance. This Authority will continue to monitor BellSouth's performance and can evaluate the effectiveness of VSEEM III once it is put into place to determine if it in fact operates as an effective deterrent against discriminatory performance. If it does not, the Authority retains full authority to re-visit this issue.

Q. AT ¶ 180, MCI WORLDCOM SEEKS THE RIGHT TO TRIGGER A PERFORMANCE MEASUREMENT AUDIT UP TO ONCE EVERY SIX MONTHS. DOES BELLSOUTH CURRENTLY PROVIDE A VALIDATION AND AUDIT CAPABILITY SUFFICIENT FOR THE TRA TO CONCLUDE THAT BELLSOUTH MEETS ITS OBLIGATIONS UNDER THE ACT?

A. Yes. BellSouth's SQM, Appendix C, sets forth BellSouth's position on auditing performance measurements as follows:

"If requested by a Public Service Commission or by a CLEC exercising contractual audit rights, BellSouth will agree to undergo a comprehensive audit of the aggregate level reports for both BellSouth and the CLEC(s) for each of the next five (5) years (2000-2005), to be conducted by an independent third party. The results of that audit will be made available to all parties subject to proper safeguards to protect proprietary information. This aggregate level audit includes the following specifications:

1. The cost shall be borne 50% by BellSouth and 50% by the CLEC or CLECs.

2. The independent third party auditor shall be selected with input from BellSouth, the PSC, if applicable, and the CLEC(s).

3. BellSouth, the PSC and the CLEC(s) shall jointly determine the scope of the audit."

As you can see, BellSouth's audit position focuses on doing a single comprehensive audit per year that addresses the needs of the entire CLEC community in aggregate and the Authority with BellSouth absorbing 50% of the cost.

This position provides the Authority with sufficient auditing capability to conclude that BellSouth is meeting its obligations under the Act.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes

<u>AFFIDAVIT</u>

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 David A. Coon – Director – Interconnection Services, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 00-00309 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 15 pages and 2 exhibit(s).

David A. Coon

David A. Coon

Sworn to and subscribed
before me on Nov 30, 2000

NOTARY PUBLIC

MICHEALE F. HOLCOMB
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2001

BELLSOUTH®

Exhibit DAC-1

Service Quality Measurement Plan (SQM)

Measurement Descriptions

Version

July, 2000

I. INTRODUCTION

The BellSouth Service Quality Measurement Plan (SQM) describes in detail the measurements produced to evaluate the quality of service delivered to BellSouth's customers both wholesale and retail. The SQM was developed to respond to the requirements of the Communications Act of 1996 Section 251 (96 Act) which required ILECs to provide non-discriminatory access to Competitive Local Exchange Carriers (CLEC) and its Retail Customers. The reports produced by the SQM provide regulators, CLECs and BellSouth the information necessary to monitor the delivery of non-discriminatory access.

This plan results from the many divergent forces evolving from the 96 Act. The 96 Act, the Georgia Public Service Commission (GPSC) Order (Docket 7892-U 12/30/97), LCUG 1-7.0, the FCC's NPRM (CC Docket 98-56 RM9101 04/17/98), the Louisiana Public Service Commission (LPSC) Order (Docket U-22252 Subdocket C 04/19/98), numerous arbitration cases, LPSC sponsored collaborative workshops (10/98-02/00), and proceedings in Alabama, Mississippi, and North Carolina have and continue to influence the SQM. **The SQM must reflect the Orders by the GPSC, LPSC and other PSCs as the orders are issued.**

However, in addition, the SQM and the reports flowing from it must change to reflect the dynamic requirements of the industry. New measurements are added as new products systems and processes are developed and fielded. New products and services are added as the markets for them develop and the processes stabilize. The measurements are also changed to reflect changes in systems, to correct errors, to respond to 3rd Party audit requirements, and PSC and/or customer requests.

This document is intended for use by someone with a basic knowledge of telecommunications industry, information technologies and a functional knowledge of the subject areas covered by the BellSouth Performance Measurement reports.

BellSouth
Service Quality Measurements Plan

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* These reports are subject to change due to regulatory requirements or to correct errors and etc.

OSS (Operations Support Systems)

Report/Measurement:

OSS-1. Average Response Time and Response Interval (Pre-Ordering/Ordering)

Definition:

Average response time and response intervals are the average times and number of requests responded to within certain intervals for accessing legacy data associated with appointment scheduling, service & feature availability, address verification, request for Telephone numbers (TNs), and Customer Service Records (CSRs).

Exclusions:

None

Business Rules:

The average response time for retrieving pre-order/order information from a given legacy system is determined by summing the response times for all requests submitted to the legacy systems during the reporting period and dividing by the total number of legacy system requests for that month. The response interval starts when the client application (LENS or TAG for CLECs and RNS for BST) submits a request to the legacy system and ends when the appropriate response is returned to the client application. The number of accesses to the legacy systems during the reporting period, which take less than 2.3 seconds and the number, which take more than 6 seconds are also captured.

Level of Disaggregation:

- **RSAG – Address** (Regional Street Address Guide-Address) – stores street address information used to validate customer addresses. CLECs and BST query this legacy system.
- **RSAG – TN** (Regional Street Address Guide-Telephone number) – contains information about facilities available and telephone numbers working at a give address. CLECs and BST query this legacy system.
- ATLAS (Application for Telephone Number Load Administration and Selection) – acts as a warehouse for storing telephone numbers that are available for assignment by the system. It enables CLECs and BST service reps to select and reserve telephone numbers. CLECs and BST query this legacy system.
- **COFFI** (Central Office Feature File Interface) – stores information about product and service offerings and availability. CLECs query this legacy system.
- DSAP (DOE Support Application) – provides due date information. CLECs and BST query this legacy system.
- HAL/CRIS (Hands-Off Assignment Logic/Customer Record Information System) – a system used to access the Business Office Customer Record Information System (BOCRIS). It allows BST servers, including LENS, access to legacy systems. CLECs query this legacy system.
- P/SIMS (Product/Services Inventory Management system) – provides information on capacity, tariffs, inventory and service availability. CLECs query this legacy system.
- OASIS (Obtain Available Services Information Systems) – Information on feature and rate availability. BST queries this legacy system.

Calculation:

Σ [Date & Time of Legacy Response) – (Date & Time of Request to Legacy)] / (Number of Legacy Requests During the Reporting Period)

Report Structure:

- Not CLEC Specific
- Not product/service specific
- Regional Level

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Legacy Contract (per reporting dimension) • Response Interval • Regional Scope	• Report month • Legacy Contract (per reporting dimension) • Response Interval • Regional Scope

Retail Analog/Benchmark:

See Appendix D

Revision Date: 05/05/00 (lg)

LEGACY SYSTEM ACCESS TIMES FOR RNS

System	Contract	Data	< 2.3 sec	> 6 sec	<= 6.3 sec	Avg. Sec	# of Calls
RSAG	RSAG-TN	Address	x	x	x	x	x
RSAG	RSAG-ADDR	Address	x	x	x	x	x
ATLAS	ATLAS-TN	TN	x	x	x	x	x
DSAP	DSAP-DDI	Schedule	x	x	x	x	x
CRIS	CRSACCTS	CSR	x	x	x	x	x
OASIS	OASISBSN	Feature/Service	x	x	x	x	x
OASIS	OASISCAR	Feature/Service	x	x	x	x	x
OASIS	OASISLPC	Feature/Service	x	x	x	x	x
OASIS	OASISMTN	Feature/Service	x	x	x	x	x
OASIS	OASISBIG	Feature/Service	x	x	x	x	x

LEGACY SYSTEM ACCESS TIMES FOR R0S

System	Contract	Data	< 2.3 sec	> 6 sec	<=6.3 sec	Avg. Sec	# of Calls
RSAG	RSAG-TN	Address	x	x	x	x	x
RSAG	RSAG-ADDR	Address	x	x	x	x	x
ATLAS	ATLAS-TN	TN	x	x	x	x	x
DSAP	DSAP-DDI	Schedule	x	x	x	x	x
CRIS	CRSOCSR	CSR	x	x	x	x	x
OASIS	OASISBIG	Feature/Service	x	x	x	x	x

LEGACY SYSTEM ACCESS TIMES FOR LENS

System	Contract	Data	< 2.3 sec	> 6 sec	<=6.3 sec	Avg. Sec	# of Calls
RSAG	RSAG-TN	Address	x	x	x	x	x
RSAG	RSAG-ADDR	Address	x	x	x	x	x
ATLAS	ATLAS-TN	TN	x	x	x	x	x
DSAP	DSAP-DDI	Schedule	x	x	x	x	x
HAL	HAL/CRIS	CSR	x	x	x	x	x
COFFI	COFFI/USOC	Feature/Service	x	x	x	x	x
P/SIMS	PSIMS/ORB	Feature/Service	x	x	x	x	x

LEGACY SYSTEM ACCESS TIMES FOR TAG

System	Contract	Data	< 2.3 sec	> 6 sec	<=6.3 sec	Avg. Sec	# of Calls
RSAG	RSAG-TN	Address	x	x	x	x	x
RSAG	RSAG-ADDR	Address	x	x	x	x	x
ATLAS	ATLAS-TN	TN	x	x	x	x	x
ATLAS	ATLAS-MLH	TN	x	x	x	x	x
ATLAS	ATLAS-DID	TN	x	x	x	x	x
DSAP	DSAP-DDI	Schedule	x	x	x	x	x
HAL	HAL/CRIS	CSR	x	x	x	x	x
CRIS	CRSEINIT	CSR	x	x	x	x	x
CRIS	CRSECSR	CSR	x	x	x	x	x

OSS (Operations Support Systems)

Report/Measurement:	
OSS-2. Interface Availability (Pre-Ordering)	
Definition:	
Percent of time OSS interface is functionally available compared to scheduled availability. Availability percentages for CLEC interface systems and for all Legacy systems accessed by them are captured. ("Functional Availability" is the amount of time in hours during the reporting period that the legacy systems are available to users. The planned System Scheduled Availability is the time in hours per day that the legacy system is scheduled to be available.) Scheduled availability is posted on the ICS Operations internet site: (www.interconnection.bellsouth.com/oss/osshour.html)	
Exclusions:	
None	
Business Rules:	
This measurement captures the availability percentages for the BST systems, which are used by CLECs during Pre-Ordering functions. Comparison to BST results allows conclusions as to whether an equal opportunity exists for the CLEC to deliver a comparable customer experience. Note: Only full outages are used in the calculation of Application Availability. A full outage is incurred when any of the following circumstances exist: • The application or system is down. • The application or system is inaccessible, for any reason, by the customers who normally access the application or system. • More than one work center cannot access the application or system for any reason. • When only one work center accesses an application or system and 40% or more of the clients in that work center cannot access the application. • When 40% of the functions the clients normally perform or 40% of the functionality that is normally provided by an application or system is unavailable.	
Level of Disaggregation:	
Regional Level	
Calculation:	
(Functional Availability) / (Scheduled Availability) X 100	
Report Structure:	
• Not CLEC Specific • Not product/service specific • Regional Level	
Data Retained Relating to CLEC Experience:	**Data Retained Relating to BST Performance:**
• Report month • Legacy Contract Type (per reporting dimension) • Regional Scope • Hours of Downtime	• Report month • Legacy Contract Type (per reporting dimension) • Regional Scope

OSS (Operations Support Systems) – (OSS-2. Interface Availability (Pre-Ordering) – Continued)

Retail Analog/Benchmark:
Benchmark – 99.5%

OSS Interface Availability

OSS Interface	Applicable to	% Availability
EDI	CLEC	x
HAL	CLEC	x
LENS	CLEC	x
LEO Mainframe	CLEC	x
LEO UNIX	CLEC	x
LESOG	CLEC	x
PSIMS	CLEC	x
TAG	CLEC	x
ATLAS/COFFI	CLEC/BST	x
BOCRIS	CLEC/BST	x
DSAP	CLEC/BST	x
RSAG	CLEC/BST	x
SOCS	CLEC/BST	X
SONGS	CLEC/BST	x

Revision Date: 07/13/00 (lg)

OSS (Operations Support Systems)

Report/Measurement:	
OSS-3. Interface Availability (Maintenance & Repair)	
Definition:	
The percentage of time the OSS Interface is functionally available compared to scheduled availability. Availability percentage for the CLEC and BST interface systems and for the legacy systems accessed by them are captured.	
Exclusions:	
None	
Business Rules:	
This measure is designed to compare the OSS availability versus scheduled availability of BST's legacy systems. Note: Only full outages are used in the calculation of Application Availability. A full outage is incurred when any of the following circumstances exist. • The application or system is down. • The application or system is inaccessible, for any reason, by the customers who normally access the application or system. • More than one work center cannot access the application or system for any reason. • When only one work center accesses an application or system and 40% or more of the clients in that work center cannot access the application. • When 40% of the functions the clients normally perform or 40% of the functionality that is normally provided by an application or system is unavailable.	
Calculation:	
OSS Interface Availability = (Actual System Functional Availability) / (Actual planned System Availability) X 100	
Report Structure:	
• Aggregate ➢ CLEC ➢ BST & CLEC • Regional Level	
Level of Disaggregation:	
Region	
Data Retained Relating to CLEC Experience:	**Data Retained Relating to BST Performance:**
• Availability of CLEC TAFI • Availability of LMOS HOST, MARCH, SOCS, CRIS, PREDICTOR, LNP and OSPCM • ECTA	• Availability of BST TAFI • Availability of LMOS HOST, MARCH, SOCS, CRIS, PREDICTOR, LNP and OSPCM
Retail Analog/Benchmark:	
Parity by design; Retail Analog ECTA Benchmark – 99.5% See Appendix D	

OSS Interface Availability (M&R)

OSS Interface	% Availability
BST TAFI	x
CLEC TAFI	x
CLEC ECTA	x
BST and CLEC	x
CRIS	x
LMOS HOST	x
LNP	x
MARCH	x
OSPCM	x
PREDICTOR	x
SOCS	x

Revision Date: 07/17/00 (see)

OSS (Operations Support Systems)

Report/Measurement:	
OSS-4. Response Interval (Maintenance & Repair)	
Definition:	
The response intervals are determined by subtracting the time a request is received on the BST side of the interface from the time the response is received from the legacy system. Percentages of requests falling into each interval category are reported, along with the actual number of requests falling into those categories.	
Exclusions:	
None	
Business Rules:	
This measure is designed to monitor the time required for the CLEC and BST interface system to obtain from BST's legacy systems the information required to handle maintenance and repair functions. The clock starts on the date and time when the request is received on the BST side of the interface and the clock stops when the response has been transmitted through that same point to the requester. NOTE: The OSS Response Interval BST Total Report is a combination of BST Residence and Business Total.	
Calculation:	
OSS Response Interval = (Query Response Date and Time for Category "X") – (Query Request Date and Time for Category "X") / (Number of Queries Submitted in the Reporting Period) where, "X" is 0-4, ≥ 4 to 10, ≥ 10, ≥ 30 seconds X 100	
Report Structure:	
• CLEC • BST Residence • BST Business by interface for each legacy system and function as appropriate. • BST total (Business + Residence)	
Level of Disaggregation:	
Region	
Data Retained Relating to CLEC Experience:	**Data Retained Relating to BST Performance:**
• CLEC Transaction Intervals	• BST Business and Residence transaction Intervals
Retail Analog/Benchmark:	
OSS Response Interval for CLEC's is comparable to OSS Response Interval for BST.	

System	BST & CLEC	Count < = 4	Count > 4, < = 10	Count < = 10	Count > 10	Count > 30
CRIS	X	X	X	X	X	X
DLETH	X	X	X	X	X	X
DLR	X	X	X	X	X	X
LMOS	X	X	X	X	X	X
LMOSupd	X	X	X	X	X	X
LNP	X	X	X	X	X	X
MARCH	X	X	X	X	X	X
OSPCM	X	X	X	X	X	X
Predictor	X	X	X	X	X	X
SOCS	X	X	X	X	X	X
NIW	X	X	X	X	X	X

Revision Date 07/17/00 (see)

ORDERING

Report/Measurement:
O-1. Percent Flow-Through Service Requests (Summary)
Definition:
The percentage of Local Service Requests (LSR) and LNP Local Service Requests (LNP LSRs) submitted electronically via the CLEC mechanized ordering process that flow through and reach a status for a FOC to be issued, without manual intervention.
Exclusions:
• Fatal Rejects • Auto Clarification • Manual Fallout • CLEC System Fallout
Business Rules:
The CLEC mechanized ordering process includes all LSRs, including supplements (subsequent versions) which are submitted through one of the three gateway interfaces (TAG, EDI, and LENS), that flow through and reach a status for a FOC to be issued, without manual intervention. These LSRs can be divided into two classes of service; Business and Residence, and two types of service; Resale, and Unbundled Network Elements (UNE). The CLEC mechanized ordering process does not include LSRs, which are, submitted manually (e.g., fax, and courier), or are not designed to flow through, i.e., Manual Fallout. **Definitions:** **<u>Fatal Rejects</u>:** Errors that prevent an LSR, submitted electronically by the CLEC, from being processed further. When an LSR is submitted by a CLEC, LEO/LNP Gateway will perform edit checks to ensure the data received is correctly formatted and complete. For example, if the PON field contains an invalid character, LEO/LNP Gateway will reject the LSR and the CLEC will receive a Fatal Reject. **<u>Auto-Clarification</u>:** errors that occur due to invalid data within the LSR, LESOG/LAUTO will perform data validity checks to ensure the data within the LSR is correct and valid. For example, if the address on the LSR is not valid according to RSAG, or if the LNP is not available for the NPA NXXX requested, the CLEC will receive an Auto-Clarification. **<u>Manual Fallout</u>:** Planned Fallout that occur by design. Certain LSRs are designed to fallout of the Mechanized Order Process due to their complexity. These LSRs are manually processed by the LCSC. When a CLEC submits an LSR, LESOG/LAUTO will determine if the LSR should be forwarded to LCSC for manual handling. Following are the categories for Manual Fallout: 1. Complex* 2. Expedites (requested by the CLEC) 3. Special pricing plans 4. Denials-restore and conversion, or disconnect and conversion orders 5. Partial migrations 6. Class of service invalid in certain states with some types of service 7. New telephone number not yet posted to BOCRIS 8. Low volume such as activity type "T" (move) 9. Pending order review required 10. More than 25 business lines 11. Restore or suspend for UNE combos 12. Transfer of calls option for the CLEC's end users 13. CSR inaccuracies such as invalid or missing CSR data in CRIS *Attached is a list of services, including complex services, and whether LSRs issued for the services are eligible to flow through. **Total System Fallout:** Errors that require manual review by the LSCS to determine if the error is caused by the CLEC, or is due to system functionality. If it is determined the error is caused by the CLEC, the LSR will be sent back to the CLEC for clarification. If it is determined the error is BST caused, the LCSC representative will correct the error, and the LSR will continue to be processed.

ORDERING (O-1. Percent Flow-Through Service Requests (Summary) – Continued)

Calculation:

Percent Flow Through – (The total number of LSRs that flow through LESOG/LAUTO and reach a status for a FOC to be issued) / (the number of LSRs passed from LEO/LNP Gateway to LESOG/LAUTO) - Σ[(the number of LSRs that fall out for manual processing) + (the number of LSRs that are returned to the CLEC for clarification) + (the number of LSRs that contain errors made by CLECs)] X 100.

Report Structure:

- CLEC Aggregate
  - Region

Level of Disaggregation:

- Geography
  - Region
- Product
  - Residence
  - Business
  - UNE
  - LNP

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Total number of LSRs received, by interface, by CLEC ➢ TAG ➢ EDI ➢ LENS • Total number of errors by type, by CLEC ➢ Fatal rejects ➢ Auto clarification ➢ CLEC caused system fallout • Total number of errors by error code • Total fallout for manual processing	• Report month • Total number of errors by type ➢ BST system error

Retail Analog/Benchmark:

Residence 90%
Business 80%
UNE 80%

Revision Date: 05/15/00 (tm)

BILLING

Report/Measurement:

B-1. Invoice Accuracy

Definition:

This measure provides the percentage of accuracy of the billing invoices rendered to CLECs during the current month.

Exclusions:

Adjustments not related to billing errors (e.g., credits for service outage, special promotion credits, adjustments to satisfy the customer)

Business Rules:

The accuracy of billing invoices delivered by BST to the CLEC must enable them to provide a degree of billing accuracy comparative to BST bills rendered to retail customers of BST. CLECs request adjustments on bills determined to be incorrect. The BellSouth Billing verification process includes manually analyzing a sample of local bills from each bill period. The bill verification process draws from a mix of different customer billing options and types of service. An end-to-end auditing process is performed for new products and services. Internal measurements and controls are maintained on all billing processes.

Calculation:

Invoice Accuracy = (Total Billed Revenues during current month) – (Absolute Value of Billing Related Adjustments during current month) / Total Billed Revenues during current month X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Level of Disaggregation:

- Product / Invoice Type
  - Resale
  - UNE
  - Interconnection
- Geographic Scope
  - Region

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:

• Report Month
• Invoice Type
• Total Billed Revenue Adjustments
	• Report month
	• Retail Type
	  ➢ CRIS
	  ➢ CABS
	• Total Billed Revenue
	• Billing Related Adjustments

Retail Analog/Benchmark:

CLEC Invoice Accuracy is comparable to BST Invoice Accuracy
See Appendix D

Revision Date: 05/03/00 (dg)

BILLING

Report/Measurement:

B-2. Mean Time to Deliver Invoices

Definition:

Bill Distribution is calculated as follows: CRIS BILLS-The number of workdays is reported for CRIS bills. This is calculated by counting the Bill Period date as the first work day. Weekends and holidays are excluded when counting workdays. J/N Bills are counted in the CRIS work day category for the purposes of the measurement since their billing account number (Q account) is provided from the CRIS system.

CABS BILLS-The number of calendar days is reported for CABS bills. This is calculated by counting the day following the Bill Period date as the first calendar day. Weekends and holidays are included when counting the calendar days.

Exclusions:

Any invoices rejected due to formatting or content errors.

Business Rules:

This report measures the mean interval for timeliness of billing records delivered to CLECs in an agreed upon format. CRIS-based invoices are measured in business days, and CABS-based invoices in calendar days.

Calculation:

Mean Time To Deliver Invoices = Σ [(Invoice Transmission Date) – (Close Date of Scheduled Bill Cycle)] / (Count of Invoices Transmitted in Reporting Period)

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Level of Disaggregation:

- Product / Invoice Type
  - Resale
  - UNE
  - Interconnection
- Geographic Scope
  - Region

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:

• Report month
• Invoice Type
• Invoice Transmission Count
• Date of Scheduled Bill Close
	• Report month
	• Retail Type
	  ➢ CRIS
	  ➢ CABS
	• Invoice Transmission Count
	• Date of Scheduled Bill Close

Retail Analog/Benchmark:

CRIS-based invoices will be released for delivery within six (6) business days.
CABS-based invoices will be released for delivery within eight (8) calendar days.
CLEC Average Delivery Intervals for both CRIS and CABS Invoices are comparable to BST Average delivery for both systems.
See Appendix D

Revision Date: 05/03/00 (dg)

BILLING

Report/Measurement:

B-3. Usage Data Delivery Accuracy

Definition:

This measurement captures the percentage of recorded usage that is delivered error free and in an acceptable format to the appropriate Competitive Local Exchange Carrier (CLEC). These percentages will provide the necessary data for use as a comparative measurement for BellSouth performance. This measurement captures Data Delivery Accuracy rather than the accuracy of the individual usage recording.

Exclusions:

None

Business Rules:

The accuracy of the data delivery of usage records delivered by BST to the CLEC must enable them to provide a degree of accuracy comparative to BST bills rendered to their retail customers. If errors are detected in the delivery process, they are investigated, evaluated and documented. Errors are corrected and the data retransmitted to the CLEC.

Calculation:

Usage Data Delivery Accuracy = Σ[(Total number of usage data packs sent during current month) – (Total number of usage data packs requiring retransmission during current month)] / (Total number of usage data packs send during current month) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Level of Disaggregation:

- Geographic Scope
  - Region

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:

• Report Month
• Record Type
  ➢ BellSouth Recorded
  ➢ Non BellSouth Recorded
	• Report month
	• Record Type

Retail Analog/Benchmark:

CLEC Usage Data Delivery Accuracy is comparable to BST Usage Data Delivery Accuracy
See Appendix D

Revision Date: 02/28/00 (dg)

BILLING

Report/Measurement:

B-4. Usage Data Delivery Completeness

Definition:

This measurement provides percentage of complete and accurately recorded usage data (usage recorded by BellSouth and usage recorded by other companies and sent to BST for billing) that is processed and transmitted to the CLEC within thirty (30) days of the message recording date. A parity measure is also provided showing completeness of BST messages processed and transmitted via CMDS. BellSouth delivers its own retail usage from recording location to billing location via CMDS as well as delivering billing data to other companies. Timeliness, Completeness and Mean Time to Deliver Usage measures are reported on the same report.

Exclusions:

None

Business Rules:

The purpose of these measurements is to demonstrate the level of quality of usage data delivered to the appropriate CLEC. Method of delivery is at the option of the CLEC.

Calculation:

Usage Data Delivery Completeness = Σ[(Total number of Recorded usage records delivered during current month that are within thirty (30) days of the message recording date) / Σ (Total number of Recorded usage records delivered during the current month) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Level of Disaggregation:

- Geographic Scope
  - Region

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report Month • Record Type ➢ BellSouth Recorded ➢ Non BellSouth Recorded	• Report month • Record Type

Retail Analog/Benchmark:

CLEC Usage Data Delivery Completeness is comparable to BST Usage Data Delivery Completeness
See Appendix D

Revision Date: 02/28/00 (dg)

BILLING

Report/Measurement:

B-5. Usage Data Delivery Timeliness

Definition:

This measurement provides a percentage of recorded usage data (usage recorded by BST and usage recorded by other companies and sent to BST for billing) that is delivered to the appropriate CLEC within six (6) calendar days from the receipt of the initial recording. A parity measure is also provided showing timeliness of BST messages processed and transmitted via CMDS. Timeliness, Completeness and Mean Time to Deliver Usage measures are reported on the same report.

Exclusions:

None

Business Rules:

The purpose of this measurement is to demonstrate the level of timeliness for processing and transmission of usage data delivered to the appropriate CLEC. The usage data will be mechanically transmitted or mailed to the CLEC data processing center once daily. The Timeliness interval of usage recorded by other companies is measured from the date BST receives the records to the date BST distributes to the CLEC. Method of delivery is at the option of the CLEC.

Calculation:

Usage Data Delivery Timeliness Current month = Σ(Total number of usage records sent within six (6) calendar days from initial recording/receipt) / Σ(Total number of usage records sent) X 100

Report Structure:

- CLEC Aggregate
- CLEC Specific
- BST Aggregate

Level of Disaggregation:

- Geographic Scope
  - ➢ Region

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:

• Report Month
• Record Type
  ➢ BellSouth Recorded
  ➢ Non-BellSouth Recorded
	• Report Monthly
	• Record Type

Retail Analog/Benchmark:

CLEC Usage Data Delivery Timeliness is comparable to BST Usage Data Delivery Timeliness
See Appendix D

Revision date: 02/28/00 (dg)

BILLING

Report/Measurement

B-6. Mean Time to Deliver Usage

Definition:

This measurement provides the average time it takes to deliver Usage Records to a CLEC. A parity measure is also provided showing timeliness of BST messages processed and transmitted via CMDS. Timeliness, Completeness and Mean Time to Deliver Usage measures are reported on the same report.

Exclusions:

None

Business Rules:

The purpose of this measurement is to demonstrate the average number of days it takes BST to deliver Usage data to the appropriate CLEC. Usage data is mechanically transmitted or mailed to the CLEC data processing center once daily. Method of delivery is at the option of the CLEC.

Calculation:

Mean Time to Deliver Usage = Σ (Volume of Records Delivered X estimated number of days to deliver) / Total Record Volume Delivered.

Note: Any usage record falling in the 30+ day interval will be added using an average figure of of 31.5 days.

Report Structure:

- CLEC Aggregate
- CLEC Specific
- BST Aggregate

Level of Disaggregation:

- Geographic Scope
  - Region

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report Month • Record Type ➢ BellSouth Recorded ➢ Non-BellSouth Recorded	• Report Monthly • Record Type

Retail Analog/Benchmark:

Mean Time to Deliver Usage to CLEC is comparable to Mean Time to Deliver Usage to BST

See Appendix D

Revision Date: 05/03/00 (dg)

ORDERING

Report/Measurement:

O-2. Percent Flow-Through Service Requests (Detail)

Definition:

A detailed list by CLEC of the percentage of Local Service Requests (LSR) and LNP Local Service Requests (LNP LSRs) submitted electronically via the CLEC mechanized ordering process that flow through and reach a status for a FOC to be issued, without manual or human intervention.

Exclusions:

- Fatal Rejects
- Auto Clarification
- Manual Fallout
- CLEC System Fallout

Business Rules:

The CLEC mechanized ordering process includes all LSRs, including supplements (subsequent versions) which are submitted through one of the three gateway interfaces (TAG, EDI, and LENS), that flow through and reach a status for a FOC to be issued, without manual intervention. These LSRs can be divided into two classes of service; Business and Residence, and three types of service; Resale, and Unbundled Network Elements (UNE) and specials. The CLEC mechanized ordering process does not include LSRs, which are, submitted manually (e.g., fax, and courier), or are not designed to flow through, i.e., Manual Fallout.

Definitions:

Fatal Rejects: Errors that prevent an LSR, submitted electronically by the CLEC, from being processed further. When an LSR is submitted by a CLEC, LEO/LNP Gateway will perform edit checks to ensure the data received is correctly formatted and complete. For example, if the PON field contains an invalid character, LEO/LNP Gateway will reject the LSR and the CLEC will receive a Fatal Reject.

Auto-Clarification: errors that occur due to invalid data within the LSR, LESOG/LAUTO will perform data validity checks to ensure the data within the LSR is correct and valid. For example, if the address on the LSR is not valid according to RSAG, or if the LNP is not available for the NPA NXXX requested, the CLEC will receive an Auto-Clarification.

Manual Fallout: Planned Fallout that occur by design. Certain LSRs are designed to fallout of the Mechanized Order Process due to their complexity. These LSRs are manually processed by the LCSC. When a CLEC submits an LSR, LESOG/LAUTO will determine if the LSR should be forwarded to LCSC for manual handling. Following are the categories for Manual Fallout:

1. Complex services*
2. Expedites (requested by the CLEC)
3. Special pricing plans
4. Denials-restore and conversion, or disconnect and conversion orders
5. Partial migrations
6. Class of service invalid in certain states with some types of service
7. New telephone number not yet posted to BOCRIS
8. Low volume such as activity type "T" (move)
9. Pending order review required
10. More than 25 business lines
11. Restore or suspend for UNE combos
12. Transfer of calls option for the CLEC's end users
13. CSR inaccuracies such as invalid or missing CSR data in CRIS

*Attached is a list of services, including complex services, and whether LSRs issued for the services are eligible to flow through.

Total System Fallout: Errors that require manual review by the LSCS to determine if the error is caused by the CLEC, or is due to system functionality. If it is determined the error is caused by the CLEC, the LSR will be sent back to the CLEC for clarification. If it is determined the error is BST caused, the LCSC representative will correct the error, and the LSR will continue to be processed.

ORDERING (O-2. Percent Flow-Through Service Requests (Detail) – Continued)

Calculation:

Percent Flow Through – (The total number of LSRs that flow through LESOG/LAUTO and reach a status for a FOC to be issued) / (the number of LSRs passed from LEO/LNP Gateway to LESOG/LAUTO) - Σ[(the number of LSRs that fall out for manual processing + the number of LSRs that are returned to the CLEC for clarification + the number of LSRs that contain errors made by CLECs)] X 100.

Report Structure:

- Provides the flow through percentage for each CLEC (by alias designation) submitting LSRs through the CLEC mechanized ordering process. The report provides the following:
  - CLEC (by alias designation)
  - Number of fatal rejects
  - Mechanized interface used
  - Total mechanized LSRs
  - Total manual fallout
  - Number of auto clarifications returned to CLEC
  - Number of validated LSRs
  - Number of BST caused fallout
  - Number of CLEC caused fallout
  - Number of Service Orders Issued
  - Base calculation
  - CLEC error excluded calculation

Level of Disaggregation:

- CLEC Specific (by alias designation to protect CLEC specific proprietary data)
- Geographic
  - Region
- Product
  - Residence
  - Business
  - UNE
  - LNP

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:

• Report month
• Total number of LSRs received, by interface, by CLEC
  ➢ TAG
  ➢ EDI
  ➢ LENS
• Total number of errors by type, by CLEC
  ➢ Fatal rejects
  ➢ Auto clarification
  ➢ CLEC errors
• Total number of errors by error code
• Total fallout for manual processing
	• Report month
	• Total number of errors by type
	  ➢ BST system error

Retail Analog/Benchmark:

Residence 90%
Business 80%
UNE 80%

Revision Date: 05/15/00 (tm)

ORDERING

Report/Measurement:

O-3. Flow-Through Error Analysis

Definition:

An analysis of each error type (by error code) that was experienced by the LSRs that did not flow through and reach a status for a FOC to be issued.

Exclusions:

Each Error Analysis is error code specific, therefore exclusions are not applicable.

Business Rules:

The CLEC mechanized ordering process includes all LSRs, including supplements (subsequent versions) which are submitted through one of the three gateway interfaces (TAG, EDI, and LENS), that flow through and reach a status for a FOC to be issued. The CLEC mechanized ordering process does not include LSRs, which are, submitted manually (e.g., fax, and courier).

Calculation:

Σ Of errors by type

Report Structure:

- Provides an analysis of each error type (by error code). The report is in descending order by count of each error code and provides the following:
  - Error Type (by error code)
  - Count of each error type
  - Percent of each error type
  - Cumulative percent
  - Error Description
  - CLEC Caused Count of each error code
  - Percent of aggregate by CLEC caused count
  - Percent of CLEC caused count
  - BST Caused Count of each error code
  - Percent of aggregate by BST caused count
  - Percent of BST by BST caused count.

Level of Disaggregation:

Region

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:

• Report month
• Total number of LSRs received
• Total number of errors by type (by error code)
  ➢ CLEC caused error
	• Report month
	• Total number of errors by type (by error code)
	  ➢ BST system error

Retail Analog/Benchmark:

Not Applicable

Revision Date: 02/22/00 (tm)

ORDERING

Report/Measurement:	
O-4. CLEC LSR Information	
Definition:	
A list, with the flow through activity, of LSRs, by cc, pon and ver, issued by each CLEC during the report period.	
Exclusions:	
Fatal Rejects	
Business Rules:	
The CLEC mechanized ordering process includes all LSRs, including supplements (subsequent versions) which are submitted through one of the three gateway interfaces (TAG, EDI, and LENS), that flow through and reach a status for a FOC to be issued. The CLEC mechanized ordering process does not include LSRs, which are, submitted manually (e.g., fax, and courier).	
Calculation:	
NA	
Report Structure:	
• Provides a list, with the flow through activity, of LSRs by cc, pon, and ver, issued by each CLEC during the report period with an explanation of the of the columns and content. This report is available on a CLEC specific basis. The report provides the following for each LSR. ➢ CC ➢ PON ➢ Ver ➢ Timestamp ➢ Type ➢ Err # ➢ Note or error description	
Level of Disaggregation:	
Region	
Data Retained Relating to CLEC Experience:	**Data Retained Relating to BST Experience:**
• Report month • Record of LSRs received by cc, pon, and ver • Record of timestamp, type, err # and note or error description for each LSR by cc, pon, and ver.	NA
Retail Analog/Benchmark:	
Not Applicable	

Revision Date: 5/2/00(tm)

LSR Flow-Through Matrix

PRODUCT	F/T[5]	COMPLEX SERVICE	COMPLEX ORDER	PLANNED FALLOUT FOR MANUAL HANDLING [1]	EDI	TAG [2]	LENS 99 [4]	LENS [3]	COMMENTS
2 wire analog DID trunk port	No	UNE	Yes	NA	N	N	N	N	
2 wire analog port	Yes	UNE	No	No	Y	Y	N	N	
2 wire ISDN digital line side port	No	UNE	Yes	NA	N	N	N	N	
2 wire ISDN digital loop	No	UNE	Yes	Yes	Y	Y	N	N	
3 Way Calling	Yes	No	No	No	Y	Y	Y	Y	
4 wire analog voice grade loop	Yes	UNE	Yes	No	Y	Y	N	N	
4 wire DS0 & PRI digital loop	No	UNE	Yes	NA	N	N	N	N	
4 wire DS1 & PRI digital loop	No	UNE	Yes	NA	N	N	N	N	
4 wire ISDN DSI digital trunk ports	No	UNE	Yes	Yes	N	N	N	N	
Accupulse	No	Yes	Yes	NA	N	N	N	N	
ADSL	No	UNE	Yes	NA	N	N	N	N	
Area Plus	Yes	No	No	No	Y	Y	Y	Y	
Basic Rate ISDN	No	Yes	Yes	Yes	Y	Y	N	N	
Call Block	Yes	No	No	No	Y	Y	Y	Y	
Call Forwarding-Variable	Yes	No	No	No	Y	Y	Y	Y	
Call Return	Yes	No	No	No	Y	Y	Y	Y	
Call Selector	Yes	No	No	No	Y	Y	Y	Y	
Call Tracing	Yes	No	No	No	Y	Y	Y	Y	
Call Waiting	Yes	No	No	No	Y	Y	Y	Y	
Call Waiting Deluxe	Yes	No	No	No	Y	Y	Y	Y	
Caller ID	Yes	No	No	No	Y	Y	Y	Y	
CENTREX	No	Yes	Yes	NA	N	N	N	N	
DID WITH PBX ACT W	No	Yes	Yes	Yes	Y	N	Y	N	
DID ACT W	No	Yes	Yes	Yes	Y	N	Y	N	
Digital Data Transport	No	UNE	Yes	NA	N	N	N	N	
Directory Listing Indentions	No	No	No	Yes	Y	Y	Y	Y	
Directory Listings Captions	No	No	Yes	Yes	Y	Y	Y	N	
Directory Listings (simple)	Yes	No	No	No	Y	Y	Y	Y	
DS3	No	UNE	Yes	NA	N	N	N	N	
DS1 Loop	Yes	UNE	Yes	No	Y	Y	N	N	

DSO Loop	Yes	UNE	Yes	No	Y	Y	N	N	
Enhanced Caller ID	Yes	No	No	No	Y	Y	Y	Y	
ESSX	No	Yes	Yes	NA	N	N	N	N	
Flat Rate/Business	Yes	No	No	No	Y	Y	Y	Y	
Flat Rate/Residence	Yes	No	No	No	Y	Y	Y	Y	
FLEXSERV	No	Yes	Yes	NA	N	N	N	N	
Frame Relay	No	Yes	Yes	NA	N	N	N	N	
FX	No	Yes	Yes	NA	N	N	N	N	
Ga. Community Calling	Yes	No	No	No	Y	Y	Y	Y	
HDSL	No	UNE	Yes	NA	N	N	N	N	
Hunting MLH	No	C/S [6]	C/S	Yes	Y	Y	N	N	
Hunting Series Completion	Yes	C/S	C/S	No	Y	Y	Y	Y	
INP to LNP Conversions	No	UNE	Yes	Yes	Y	Y	N	N	
LightGate	No	Yes	Yes	NA	N	N	N	N	
Local Number Portability	Yes	UNE	Yes	No	Y	Y	N	N	
LNP with Complex Listing	No	UNE	Yes	Yes	Y	Y	N	N	
LNP with Partial Migration	No	UNE	Yes	Yes	Y	Y	N	N	
LNP with Complex Services	No	UNE	Yes	Yes	Y	Y	N	N	
Loop+INP	No	UNE	No	Yes	Y	Y	N	N	
Loop+LNP	Yes	UNE	No	No	Y	Y	N	N	
Measured Rate/Bus.	Yes	No	No	No	Y	Y	Y	Y	
Measured Rate/Res.	Yes	No	No	No	Y	Y	Y	Y	
Megalink	No	Yes	Yes	NA	N	N	N	N	
Megalink-T1	No	Yes	Yes	NA	N	N	N	N	
Memory Call	Yes	No	No	No	Y	Y	Y	Y	
Memory Call Ans. Svc.	Yes	No	No	No	Y	Y	Y	Y	
Multiserv	No	Yes	Yes	NA	N	N	N	N	
Native Mode LAN Interconnection (NMLI)	No	Yes	Yes	NA	N	N	N	N	
Off-Prem Stations	No	Yes	Yes	NA	N	N	N	N	
Optional Calling Plan	Yes	No	No	No	Y	Y	Y	Y	
Package/Complete Choice and area plus	Yes	No	No	No	Y	Y	Y	Y	
Pathlink Primary Rate ISDN	No	Yes	Yes	NA	N	N	N	N	
Pay Phone Provider	No	No	No	NA	N	N	N	N	
PBX Standalone ACT A,C, D	No	Yes	Yes	Yes	Y	Y	Y	N	
PBX Trunks	No	Yes	Yes	Yes	Y	Y	Y	N	
Port/Loop Combo	Yes	UNE	No	No	Y	Y	Y	N	
Port/Loop PBX	No	No	No	Yes	Y	Y	N	N	
Preferred Call Forward	Yes	No	No	No	Y	Y	Y	Y	

RCF Basic	Yes	No	No	No	Y	Y	Y	Y	
Remote Access to CF	Yes	No	No	No	Y	Y	Y	Y	
Repeat Dialing	Yes	No	No	No	Y	Y	Y	Y	
Ringmaster	Yes	No	No	No	Y	Y	Y	N	
Smartpath	No	Yes	Yes	NA	N	N	N	N	
SmartRING	No	Yes	Yes	NA	N	N	N	N	
Speed Calling	Yes	No	No	No	Y	Y	Y	Y	
Synchronet	No	Yes	Yes	Yes	Y	Y	N	N	
Tie Lines	No	Yes	Yes	NA	N	N	N	N	
Touchtone	Yes	No	No	No	Y	Y	Y	Y	
Unbundled Loop-Analog 2W, SL1, SL2	Yes	UNE	No	No	Y	Y	Y	N	
WATS	No	Yes	Yes	NA	N	N	N	N	
XDSL Extended LOOP	No	UNE	Yes	NA	N	N	N	N	

Note [1]: Planned Fallout for Manual Handling denotes those services that are electronically submitted and are not intended to flow through due to the complexity of the service.

Note [2]: The TAG column includes those LSR submitted via RoboTAG.

Note [3]: The LENS column denotes the ordering status of services prior to OSS 99.

Note [4]: The LENS 99 column denotes the ordering status of services post OSS 99.

Note [5]: For all services that indicate 'No' for flow-through, the following reasons, in addition to errors or complex services, also prompt manual handling: Expedites from CLECs, special pricing plans, denials – restore and conversion or disconnect and conversion both required, partial migrations (although conversions-as-is flow through), class of service invalid in certain states with some TOS – e.g. gov't, or cannot be changed when changing main TN on C activity, low volume – e.g. activity type T=move, pending order review required, more than 25 business lines, restore or suspend for UNE combos, CSR inaccuracies such as invalid or missing CSR data in CRIS, Directory listings, transfer of calls option for CLEC end user— new TN not yet posted to BOCRIS. many are unique to the CLEC environment.

Note [6]: Services with C/S in the Complex Service and/or the Complex Order columns can be either complex or simple

ORDERING

Report/Measurement:

O-5. Percent Rejected Service Requests

Definition:

Percent Rejected Service Request is the percent of total Local Service Requests (LSRs) received which are rejected due to error or omission. An LSR is considered valid when it is submitted by the CLEC and passes edit checks to insure the data received is correctly formatted and complete.

Exclusions:

Service Requests canceled by the CLEC prior to being rejected/clarified.

Business Rules:

Fully Mechanized: An LSR is considered "rejected" when it is submitted electronically but does not pass LEO edit checks in the ordering systems (EDI, LENS, TAG, LEO, LESOG) and is returned to the CLEC without manual intervention. There are two types of "Rejects" in the Mechanized category:

- A Fatal Reject occurs when a CLEC attempts to electronically submit an LSR but required fields are either not populated or incorrectly populated and the request is returned to the CLEC before it is considered a valid LSR. In LEO, Fatal Rejects are included in the "Other" category for Regional reports only.

- An Auto Clarification occurs when a valid LSR is electronically submitted but rejected from LESOG because it does not pass further edit checks for order accuracy.

Partially Mechanized: A valid LSR, which is electronically submitted (via EDI, LENS, TAG) but cannot be processed electronically and "falls out" for manual handling. It is then put into "clarification" and sent back (rejected) to the CLEC.

Total Mechanized: Combination of Fully Mechanized and Partially Mechanized LSRs electronically submitted by the CLEC.

Non-Mechanized: LSRs which are faxed or mailed to the LCSC for processing and "clarified" (rejected) back to the CLEC by the BST service representative.

Interconnection Trunks: Interconnection Trunks are ordered on Access Service Requests (ASRs). ASRs are submitted to and processed by the Interconnection Purchasing Center (IPC). Trunk data is reported as a separate category.

Calculation:

Percent Rejected Service Requests = (Total Number of Rejected Service Requests in the reporting period) / (Total Number of Service Requests Received in the reporting period) X 100.

Report Structure:

- Fully Mechanized, Partially Mechanized, Total Mechanized, Non-Mechanized
- CLEC Specific
- CLEC Aggregate

Level of Disaggregation:

- Product Reporting Levels
  - Resale Residence
  - Resale Business
  - Resale – Design (Special)
  - Other
  - UNE
  - UNE Loop with NP
  - Interconnection Trunks
- Geographic Scope
  - State, Region and further geographic disaggregation as required by State Commission Order
- Product Specific % Rejected
- Total % Rejected

ORDERING (O-5. Percent Rejected Service Requests – Continued)

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Total number of LSRs • Total number of Rejects • State and Region • Total Number of ASRs (Trunks)	
Retail Analog/Benchmark:	
See Appendix D	

Revision Date: 07/27/00 (lg)

ORDERING

Report/Measurement:
O-6. Reject Interval
Definition:
Reject Interval is the average reject time from receipt of an LSR to the distribution of a Reject. An LSR is considered valid when it is submitted by the CLEC and passes edit checks to insure the data received is correctly formatted and complete.
Exclusions:
• Service Requests canceled by CLEC prior to being rejected/clarified. • Designated Holidays are excluded from the interval calculation. • The following hours for Non-mechanized LSRs are excluded from the interval calculation*: - Residence Resale Group - from 10:00 PM Saturday until 7:00 AM Monday. - Business Resale, Complex, UNE Groups - from 8:00 PM Friday until 8:00 AM Monday. * The hours excluded will be altered to reflect changes in the Center operating hours.
Business Rules:
• **Fully Mechanized:** The elapsed time from receipt of a valid electronically submitted LSR (date and time stamp in EDI, LENS or TAG) until the LSR is rejected (date and time stamp or reject in LEO). Auto Clarifications are considered in the Fully Mechanized category. • **Partially Mechanized:** The elapsed time from receipt of a valid electronically submitted LSR (date and time stamp in EDI, LENS or TAG) until it falls out for manual handling. The stop time on partially mechanized LSRs is when the LCSC Service Representative clarifies the LSR back to the CLEC via LEO. • **Total Mechanized:** Combination of Fully Mechanized and Partially Mechanized LSRs which are electronically submitted by the CLEC. • **Non-Mechanized:** The elapsed time from receipt of a valid LSR (date and time stamp of FAX or date and time mailed LSR is received in the LCSC) until notice of the reject (clarification) is returned to the CLEC via LON. • **Interconnection Trunks:** Interconnection Trunks are ordered on Access Service Requests (ASRs). ASRs are submitted to and processed by the Interconnection Purchasing Center (IPC). Trunk data is reported as a separate category.
Calculation:
Reject Interval = Σ[(Date and Time of Service Request Rejection) – (Date and Time of Service Request Receipt)] / (Number of Service Requests Rejected in Reporting Period)
Report Structure:
• CLEC Specific • CLEC Aggregate • Fully Mechanized, Partially Mechanized, Total Mechanized, Non-Mechanized, Trunks

ORDERING – (O-6. Reject Interval – Continued)

Level of Disaggregation:

- Product Reporting Levels
  - Resale – Residence
  - Resale – Business
  - Resale – Design (Special)
  - Other
  - UNE
  - UNE Loop with NP
  - Interconnection Trunks
    - < 10 Circuits/Lines
    - > 10 Circuits/Lines
- Geographic Scope
  - State, Region and further geographic disaggregation as required by State Commission Order
- Mechanized:
  - 0 - < 4 minutes
  - 4 - < 8 minutes
  - 8 - < 12 minutes
  - 12 - < 60 minutes
  - 0 - < 1 hour
  - 1 - < 8 hours
  - 8 - < 24 hours
  - >24 hours
- Non-mechanized:
  - 0 - < 1 hour
  - 1 - < 4 hours
  - 4 - < 8 hours
  - 8 - < 12 hours
  - 12 - < 16 hours
  - 16 - < 20 hours
  - 20 - < 24 hours
  - > 24 hours.
- Trunks:
  - < 5 days
  - > 5-8 days
  - > 8-12 days
  - >12-14 days
  - >14-17 days
  - >17-20 days
  - > 20 days
- Average Interval for mechanized reports in hours, non-mechanized and Trunk reports in days.

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Reject Interval • Total Number of LSRs • Total number of Rejects • State and Region • Total Number of ASRs (Trunks)	

Retail Analog/Benchmark:

See Appendix D

Revision Date: 06/20/00 (lg)

ORDERING

Report/Measurement:

O-7. Firm Order Confirmation Timeliness

Definition:

Interval for Return of a Firm Order Confirmation (FOC Interval) is the average response time from receipt of valid LSR to distribution of a Firm Order Confirmation.

Exclusions:

- Rejected LSRs
- Designated Holidays are excluded from the interval calculation.
- The following hours for Non-mechanized LSRs are excluded from the interval calculation*:
  - Residence Resale Group - from 10:00 PM Saturday until 7:00 AM Monday.
  - Business Resale, Complex, UNE Groups - from 8:00 PM Friday until 8:00 AM Monday.

* The hours excluded will be altered to reflect changes in the Center operating hours.

Business Rules:

- **<u>Fully Mechanized</u>:** The elapsed time from receipt of a valid electronically submitted LSR (date and time stamp in EDI, LENS or TAG) until the LSR is processed, appropriate service orders are generated and a Firm Order Confirmation is returned to the CLEC.

- **<u>Partially Mechanized</u>:** The elapsed time from receipt of a valid electronically submitted LSR which falls out for manual handling until appropriate service orders are issued by a BST service representative via Direct Order Entry (DOE) or Service Order Negotiation Generation System (SONGS) to SOCS and a Firm Order Confirmation is returned to the CLEC.

- **<u>Total Mechanized</u>:** Combination of Fully Mechanized and Partially Mechanized LSRs which are electronically submitted by the CLEC.

- **<u>Non-Mechanized</u>:** The elapsed time from receipt of a valid paper LSR (date and time stamp of FAX or date and time paper LSRs received in LCSC) until appropriate service orders are issued by a BST service representative via Direct Order Entry (DOE) or Service Order Negotiation Generation System (SONGS) to SOCS and a Firm Order Confirmation is sent to the CLEC via LON.

- **<u>Interconnection Trunks</u>:** Interconnection Trunks are ordered on Access Service Requests (ASRs). ASRs are submitted to and processed by the Interconnection Purchasing Center (IPC). Trunk data is reported as a separate category.

Calculation:

Firm Order Confirmation Timeliness = Σ[(Date and Time of Firm Order Confirmation) – (Date and Time of Service Request Receipt)] / (Number of Service Requests Confirmed in Reporting Period)

Report Structure:

- Fully Mechanized, Partially Mechanized, Total Mechanized, Non-Mechanized
- CLEC Specific
- CLEC Aggregate

Level of Disaggregation:

- Product Reporting Levels
  - Resale – Residence
  - Resale – Business
  - Resale – Design (Special)
  - Other
  - UNE
  - UNE Loop with NP
  - Interconnection Trunks
    - < 10 Circuits/Lines
    - > 10 Circuits/Lines

ORDERING – (O-7. Firm Order Confirmation Timeliness – Continued)

Level of Disaggregation: (Continued)

- Geographic Scope
  - State, Region and further geographic disaggregation (MSA) as required by State Commission Order
- Mechanized:
  - 0 - < 15 minutes
  - 15 - < 30 minutes
  - 30 - < 45 minutes
  - 45 - < 60 minutes
  - 60 - < 90 minutes
  - 90 - < 120 minutes
  - 120 - < 240 minutes
  - 4 - < 8 hours
  - 8 - < 12 hours
  - 12 - < 16 hours
  - 16 - < 20 hours
  - 20 - < 24 hours
  - 24 - < 48 hours
  - > 48 hours
- Non-mechanized:
  - 0 - < 4 hours
  - 4 - < 8 hours
  - 8 - < 12 hours
  - 12 - < 16 hours
  - 16 - < 20 hours
  - 20 - < 24 hours
  - 24 - < 48 hours
  - > 48 hours
- Trunks:
  - 0 - 5 days
  - 6 - 8 days
  - 9 – 11 days
  - 12 –14 days
  - 15 –17 days
  - 18 –20 days
  - 20 days
- Average Interval in Days

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Interval for FOC • Total number of LSRs • State and Region • Total Number of ASRs (Trunks)	

Retail Analog/Benchmark:

See Appendix D

Revision Date: 06/20/00 (lg)

ORDERING

Report/Measurement:

O-8. Speed of Answer in Ordering Center

Definition:

Measures the average time a customer is in queue.

Exclusions:

None

Business Rules:

The clock starts when the appropriate option is selected (i.e., 1 for Resale Consumer, 2 for Resale Multiline, and 3 for UNE-LNP, etc.) and the call enters the queue for that particular group in the LCSC. The clock stops when a BST service representative in the LCSC answers the call. The speed of answer is determined by measuring and accumulating the elapsed time from the entry of a CLEC call into the BellSouth automatic call distributor (ACD) until the a service representative in BST's Local Carrier Service Center (LCSC) answers the CLEC call.

Calculation:

(Total seconds in queue)) / (Total number of calls answered in the Reporting Period)

Report Structure:

Aggregate
- CLEC – Local Carrier Service Center
- BST
  - Business Service Center
  - Residence Service Center

Note: Combination of Residence Service Center and Business Service Center data under development

Level of Disaggregation:

Aggregate
- CLEC – Local Carrier Service Center
- BST
  - Business Service Center
  - Residence Service Center

Note: Combination of Residence Service Center and Business Service Center data under development

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Mechanized tracking through LCSC Automatic Call Distributor	• Mechanized tracking through BST Retail center support systems

Retail Analog/Benchmark:

For CLEC, Speed of Answer in Ordering Center (LCSC) is comparable to Speed of Answer in BST Business Offices.
See Appendix D

Revision Date: 06/20/00 (lg)

ORDERING – (LNP)

Report/Measurement:

O-9. LNP-Percent Rejected Service Requests

Definition:

Percent Rejected Service Request is the percent of total Local Service Requests (LSRs) which are rejected due to error or omission. An LSR is considered valid when it is electronically submitted by the CLEC and passes LNP Gateway edit checks to insure the data received is correctly formatted and complete, i.e., fatal rejects are excluded.

Exclusions:

- Service Requests canceled by the CLEC
- Fatal Rejects
- Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable.
- Non Mechanized LSR's

Business Rules:

An LSR is considered "rejected" when it is submitted electronically but does not pass edit checks in the ordering systems (EDI, TAG, LNP Gateway, LAUTO) and is returned to the CLEC without manual intervention.

Fully Mechanized: There are two types of "Rejects" in the Fully Mechanized category:

- A Fatal Reject occurs when a CLEC attempts to electronically submit an LSR (via EDI or TAG) but required fields are not populated correctly and the request is returned to the CLEC.

  Fatal rejects are reported in a separate column, and for informational purposes ONLY. They are not considered in the calculation of the percent of total LSRs rejected or the total number of rejected LSRs.

- An Auto Clarification is a valid LSR which is electronically submitted (via EDI or TAG), but is rejected from LAUTO because it does not pass further edit checks for order accuracy. Auto Clarifications are returned without manual intervention.

Partially Mechanized: A valid LSR which electronically submitted (via EDI or TAG), but cannot be processed electronically due to a CLEC error and "falls out" for manual handling. It is then put into "clarification", and sent back (rejected) to the CLEC.

Total Mechanized: Combination of Fully Mechanized and Partially Mechanized rejects.

Calculation:

[(Number of Service Requests Rejected in the Reporting Period) / (Number of Service Requests Received in the Reporting Period)] x 100

Report Structure:

- Fully Mechanized, Partially Mechanized, Total Mechanized
- CLEC Specific
- CLEC Aggregate

Level of Disaggregation:

- Product Reporting Levels
  - LNP
  - UNE Loop with LNP
- Geographic Scope
  - State, Region

Retail Analog/Benchmark:

See Appendix D

Revision Date: 05/15/00 (lg)

ORDERING – (LNP)

Report/Measurement:

O-10. LNP-Reject Interval Distribution & Average Reject Interval

Definition:

Reject Interval is the average reject time from receipt of an LSR to the distribution of a Reject. An LSR is considered valid when it is electronically submitted by the CLEC and passes LNP Gateway edit checks to insure the data received is correctly formatted and complete, i.e., fatal rejects are excluded.

Exclusions:

- Service Requests canceled by the CLEC
- Fatal Rejects
- Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable.
- Non Mechanized LSR's

Business Rules:

The Reject interval is determined for each rejected LSR processed during the reporting period. The Reject interval is the elapsed time from when BST receives LSR until that LSR is rejected back to the CLEC. Elapsed time for each LSR is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the associated total number of rejected LSRs to produce the reject interval distribution.

An LSR is considered "rejected" when it is submitted electronically but does not pass edit checks in the ordering systems (EDI, TAG, LNP Gateway, LAUTO) and is returned to the CLEC without manual intervention.

__Fully Mechanized__: There are two types of "Rejects" in the Fully Mechanized category:

- A Fatal Reject occurs when a CLEC attempts to electronically submit an LSR but required fields are not populated correctly and the request is returned to the CLEC.

  Fatal rejects are reported in a separate column, and for informational purposes ONLY. They are not considered in the calculation of the percent of total LSRs rejected or the total number of rejected LSRs.

- An Auto Clarification is a valid LSR which is electronically submitted (via EDI or TAG), but is rejected from LAUTO because it does not pass further edit checks for order accuracy. Auto Clarifications are returned without manual intervention.

__Partially Mechanized__: A valid LSR which electronically submitted (via EDI or TAG), but cannot be processed electronically due to a CLEC error and "falls out" for manual handling. It is then put into "clarification", and sent back to the CLEC.

__Total Mechanized__: Combination of Fully Mechanized and Partially Mechanized rejects.

Calculation:

Average Reject Interval:

Σ[(Date & Time of Service Request Rejection) – (Date & Time of Service Request Receipt)] / (Total Number of Service Requests Rejected in Reporting Period)

Reject Interval Distribution:

[Σ(Service Requests Rejected in "X" minutes/hours) / (Total Number of Service Requests Rejected in Reporting Period)] X 100

Report Structure:

- Fully Mechanized, Partially Mechanized, Total Mechanized
- CLEC Specific
- CLEC Aggregate

ORDERING – (O-10. LNP-Reject Interval Distribution & Average Reject Interval – Continued)

Level of Disaggregation:
• Reported in intervals: 0-4 minutes > 4-8 minutes > 8-12 minutes >12-60 minutes 0-1hours > 1-8 hours > 8-24 hours > 24 hours • Product Reporting Levels ➢ LNP ➢ UNE Loop with LNP • Geographic Scope ➢ State, Region • Average Interval in Days
Retail Analog/Benchmark:
See Appendix D

Revision Date: 05/15/00 (lg)

ORDERING – (LNP)

Report/Measurement:

O-11. LNP-Firm Order Confirmation Timeliness Interval Distribution & Firm Order Confirmation Average Interval

Definition:

Interval for Return of a Firm Order Confirmation (FOC Interval) is the average response time from receipt of a valid LSR to distribution of a firm order confirmation.

Exclusions:

- Rejected LSRs (Clarifications or Fatal Rejects)
- Order Activities of BST or the CLEC associated with interval or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable.

Business Rules:

The Firm Order Confirmation interval is determined for each FOC'd LSR processed during the reporting period. The Firm Order Confirmation interval is the elapsed time from when BST receives an LSR until that LSR is confirmed back to the CLEC. Elapsed time for each LSR is accumulated for each reporting dimensions. The accumulated time for each reporting dimension is then divided by the associated total number of orders completed to produce the Firm Order Confirmation timeliness interval distribution.

- **Mechanized**: The elapsed time from receipt of a valid LSR until the LSR is processed and appropriate service orders are generated in SOCS without manual intervention.
- **Partially Mechanized**: The elapsed time from receipt of an electronically submitted LSR which falls for manual handling by the LCSC personnel until appropriate service orders are issued by a BST service representative via Direct Order Entry (DOE) or Service Order Negotiation Generation system (SONGS).
- **Total Mechanized**: Combination of Fully Mechanized and Partially Mechanized FOCs.

Calculation:

Average Reject Interval:

Σ[(Date & Time of Firm Order Confirmation) – (Date & Time of Service Request Receipt)] / (Total Number of Service Requests Confirmed in Reporting Period)

FOC Interval Distribution:

Σ[(Service Requests Confirmed in "X" minutes/hours in the Reporting Period) / (Total Service Requests Confirmed in the Reporting Period)] X 100

Report Structure:

- Fully Mechanized, Partially Mechanized, Total Mechanized
- CLEC Specific
- CLEC Aggregate

ORDERING – (O-11. LNP-Firm Order Confirmation Timeliness Interval Distribution & Firm Order Confirmation Average Interval – Continued)

Level of Disaggregation:

- Reported in intervals
  - 0-15 minutes
  - > 15-30 minutes
  - > 30-45 minutes
  - > 45-60 minutes
  - > 60-90 minutes
  - > 90-120 minutes
  - >120-240 minutes
  - > 4-8 hours
  - > 8-12 hours
  - > 12-16 hours
  - > 16-20 hours
  - > 20-24 hours
  - > 24-48 hours
  - > 48 hours
- Product Reporting Levels
  - LNP
  - UNE Loop with LNP
- Geographic Scope
- State, Region

Retail Analog/Benchmark:

See Appendix D

Revision Date: 05/15/00 (lg)

Provisioning Disaggregation

Product Reporting Levels

- Resale and Retail
  - Pots – Residence
  - Pots – Business
  - Design
  - PBX (Louisiana SQM)
  - CENTREX (Louisiana SQM)
  - ISDN (Louisiana SQM) (**Note:** ISDN included in POTS for Georgia Only)
- Unbundled Network Elements
  - UNE Design
  - UNE Non-Design
  - UNE 2 Wire Loop (Louisiana SQM)
  - UNE Loop Other (Louisiana SQM)
  - UNE Other Design (Louisiana SQM)
  - UNE Other Non-Design (Louisiana SQM)
  - Unbundled Ports (Louisiana SQM)
  - Combos, Switching, Local Transport, DSL (under development)
- Trunks
  - Local Interconnection Trunks
- Geographic Scope
  - State, Region and further geographic disaggregation as required by State Commission Order (e.g., Metropolitan Service Area – MSA)

The following measure is the exception for all states:
Coordinated Customer Conversion
Hot Cut Timeliness(under development)
Coordinated Customer Conversion - % Provisioning Troubles Received Within 7 days of a completed Service Order (under development)

Which is disaggregated as follows:
UNE LOOPS with INP
UNE LOOPS without INP

PROVISIONING

Report/Measurement:
P-1. Mean Held Order Interval & Distribution Intervals
Definition:
When delays occur in completing CLEC orders, the average period that CLEC orders are held for BST reasons, pending a delayed completion, should be no worse for the CLEC when compared to BST delayed orders. Calculation of the interval is the total days orders are held and pending but not completed that have passed the currently committed due date; divided by the total number of held orders. This report is based on orders still pending, held and past their committed due date at the close of the reporting period. The distribution interval is based on the number of orders held and pending but not completed over 15 and 90 days. (Orders reported in the >90 day interval are also included in the >15 day interval)
Exclusions:
• Order Activities of BST associated with internal or administrative use of local services. • Disconnect (D) & From (F) orders • Orders with appointment code of 'A' for Rural orders.
Business Rules:
<u>**Mean Held Order Interval**</u>: This metric is computed at the close of each report period. The held order interval is established by first identifying all orders, at the close of the reporting interval, that both have not been reported as completed in SOCS and have passed the currently committed due date for the order. For each such order, the number of calendar days between the earliest committed due date on which BellSouth had a company missed appointment and the close of the reporting period is established and represents the held order interval for that particular order. The held order interval is accumulated by the standard groupings, unless otherwise noted, and the reason for the order being held. The total number of days accumulated in a category is then divided by the number of held orders within the same category to produce the mean held order interval. The interval is by calendar days with no exclusions for Holidays or Sundays. CLEC Specific reporting is by type of held order (facilities, equipment, other), total number of orders held, and the total and average days. <u>**Held Order Distribution Interval**</u>: This measure provides data to report total days held and identifies these in categories of >15 days and > 90 days. (orders counted in >90 days are also included in > 15 days).
Calculation:
<u>**Mean Held Order Interval**</u>: Σ(Reporting Period Close Date –Earliest Committed Order Due Date with a BellSouth Missed Appointment) / (Number of Past Due Orders Held and Pending But Not Completed and past the committed due date) <u>**Held Order Distribution Interval**</u>: (# of Orders Held for ≥90 days) / (Total # of Past Due Orders Held and Pending But Not Completed) X 100 (# of Orders Held for ≥15 days) / (Total # of Past Due Orders Held and Pending But Not Completed) X 100
Report Structure:
• CLEC Specific • CLEC Aggregate • BST Aggregate
Level of Disaggregation:
Circuit breakout < 10, > = 10

PROVISIONING – (P-1. Mean Held Order Interval & Distribution Intervals – Continued)

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • CLEC Order Number and PON (PON) • Order Submission Date (TICKET_ID) • Committed Due Date (DD) • Service Type (CLASS_SVC_DESC) • Hold Reason • Total line/circuit count • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report month • BST Order Number • Order Submission Date • Committed Due Date • Service Type • Hold Reason • Total line/circuit count • Geographic Scope

Retail Analog/Benchmark:
CLEC Residence Resale/BST Residence Retail CLEC Business Resale/BST Business Retail CLEC Non-UNE Design/BST Design Interconnection Trunks-CLEC/Interconnection Trunks – BST UNEs-(See Appendix D)

Revision Date: 07/15/00 (taf)

PROVISIONING

Report/Measurement:	
P-2. Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	
Definition:	
When BST can determine in advance that a committed due date is in jeopardy for facility delay, it will provide advance notice to the CLEC. The interval is from the date/time the notice is released to the CLEC/BST systems until 5pm on the commitment date of the order. The Percent of Orders is the percentage of orders given jeopardy notices for facility delay in the count of orders confirmed in the report period.	
Exclusions:	
• Orders held for CLEC end user reasons • Disconnect (D) & From (F) orders	
Business Rules:	
When BST can determine in advance that a committed due date is in jeopardy for facility delay, it will provide advance notice to the CLEC. The number of committed orders in a report period is the number of orders that have a due date in the reporting period.	
Calculation:	
Average Jeopardy Interval: Σ[(Date and Time of Scheduled Due Date on Service Order) – (Date and Time of Jeopardy Notice)]/[Number of Orders Notified of Jeopardy in Reporting Period). **Percent of Orders Given Jeopardy Notice:** Σ[(Number of Orders Given Jeopardy Notices in Reporting Period) / (Number of Orders Confirmed (due) in Reporting Period)	
Report Structure:	
• CLEC Specific • CLEC Aggregate • BST Aggregate	
Data Retained Relating to CLEC Experience:	**Data Retained Relating to BST Performance:**
• Report month • CLEC Order Number and PON • Date and Time Jeopardy Notice sent • Committed Due Date • Service Type NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report month • BST Order Number • Date and Time Jeopardy Notice sent • Committed Due Date • Service Type
Retail Analog/Benchmark:	
See Appendix D	

Revision Date: 07/15/00 (taf)

PROVISIONING

Report/Measurement:

P-3. Percent Missed Installation Appointments

Definition:

"Percent missed installation appointments" monitors the reliability of BST commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customer as compared to BST. This measure is the percentage of total orders processed for which BST is unable to complete the service orders on the committed due dates and reported for both BST and End User Misses.

Exclusions:

- Canceled Service Orders
- Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.)
- Disconnect (D) & From (F) orders
- End User Misses on Interconnection Trunks

Business Rules:

Percent Missed Installation Appointments (PMI) is the percentage of orders with completion dates in the reporting period that are past the original committed due date. Missed Appointments caused by end-user reasons will be included and reported separately. The "due date" is any time on the confirmed due date. Which means there cannot be a cutoff time for commitments, as certain types of orders are requested to be worked after standard business hours. Also, during Daylight Savings Time, field technicians are scheduled until 9PM in some areas and the customer is offered a greater range of intervals from which to select.

Calculation:

Percent Missed Installation Appointments = Σ (Number of Orders with Completion date in Reporting Period past the Original Committed Due Date) / (Number of Orders Confirmed in Reporting) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

__Report Explanation__: The difference between End User MA and Total MA is the result of BST caused misses. Here, Total MA is the total % of orders missed either by BST or CLEC end user. The End User MA represents the percentage of orders missed by the CLEC or their end user.

Level of Disaggregation:

- Reported in categories of <10 lines/circuits; > = 10 lines/circuits
- Dispatch/No Dispatch

Data Retained Relating to CLEC Experience:

- Report month
- CLEC Order Number and PON (PON)
- Committed Due Date (DD)
- Completion Date (CMPLTN DD)
- Status Type
- Status Notice Date
- Standard Order Activity
- Geographic Scope

NOTE: Code in parentheses is the corresponding header found in the raw data file.

Data Retained Relating to BST Performance:

- Report month
- BST Order Number
- Committed Due Date (DD)
- Completion Date (CMPLTN DD)
- Status Type
- Status Notice Date
- Standard Order Activity
- Geographic Scope

Retail Analog/Benchmark:

CLEC Residence Resale/BST Residence Retail
CLEC Business Resale/BST Business Retail
CLEC Non-UNE Design/BST Design
Interconnection Trunks-CLEC/Interconnection Trunks – BST
UNEs-(See Appendix D)

PROVISIONING

Report/Measurement:

P-4. Average Completion Interval (OCI) & Order Completion Interval Distribution

Definition:

The "average completion interval" measure monitors the interval of time it takes BST to provide service for the CLEC or its' own customers. The "Order Completion Interval Distribution" provides the percentages of orders completed within certain time periods. This report measures how well BellSouth meets the interval offered to customers on service orders.

Exclusions:

- Canceled Service Orders
- Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.)
- Disconnect (D&F) listing orders
- "L" Appointment coded orders (where the customer has requested a later than offered interval)

Business Rules:

The actual completion interval is determined for each order processed during the reporting period. The completion interval is the elapsed time from when BST issues a FOC or SOCS date time stamp receipt of an order from the CLEC to BST's actual order completion date. This includes all delays for BST's CLEC/End Users. The clock starts when a valid order number is assigned by SOCS and stops when the technician or system completes the order in SOCS. Elapsed time for each order is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the associated total number of orders completed. Orders that are worked on zero due dates are calculated with a .33 day interval (8 hours) in order to report a portion of a day interval. These orders are issued and worked/completed on the same day. They can be either flow through orders (no field work-non-dispatched) or field orders (dispatched).

The interval breakout for UNE and Design is: 0-5 = 0-4.99, 5-10 = 5-9.99, 10-15 = 10-14.99, 15-20 = 15-19.99 20-25 = 20-24.99, 25-30 = 25-29.99, > = 30 = 30 and greater.

Calculation:

Average Completion Interval:

Σ[(Completion Date) – (Order Issue Date)]/ Σ (Count of Orders Completed in Reporting Period)

Order Completion Interval Distribution:

Σ (Service Orders Completed in "X" days) / (Total Service Orders Completed in Reporting Period) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Level of Disaggregation:

- ISDN Orders included in Non Design – GA Only
- Dispatch/No Dispatch categories applicable to all levels except trunks.
- Residence & Business reported in day intervals = 0,1,2,3,4,5,5+
- UNE and Design reported in day intervals = 0-5, 5-10, 10-15, 15-20, 20-25, 25-30, > = 30
- All Levels are reported <10 line/circuits; > = 10 line/circuits

PROVISIONING –
(P-4. Average Completion Interval (OCI) & Order Completion Interval Distribution – Continued)

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • CLEC Company Name • Order Number (PON) • Submission Date & Time (TICKET_ID) • Completion Date (CMPLTN_DT) • Service Type (CLASS_SVC_DESC) • Geographic Scope **NOTE:** Code in parentheses is the corresponding header found in the raw data file.	• Report month • BST Order Number • Order Submission Date & Time • Order Completion Date & Time • Service Type • Geographic Scope
Retail Analog/Benchmark:	
CLEC Residence Resale / BST Residence Retail CLEC Business Resale / BST Business Retail CLEC Non-UNE Design / BST Design Interconnection Trunks-CLEC / Interconnection Trunks-BST UNEs-(See Appendix D)	

Revision Date: 07/15/00 (taf)

PROVISIONING

Report/Measurement:

P-5. Average Completion Notice Interval

Definition:

The Completion Notice Interval is the elapsed time between the BST reported completion of work and the issuance of a valid completion notice to the CLEC.

Exclusions:

- Non-mechanized Orders
- Partially Mechanized Orders
- Cancelled Service Orders
- Order Activities of BST associated with internal or administrative use of local services.
- D&F orders

Business Rules:

Measurement on interval of completion date and time entered by a field technician on dispatched orders, and 5PM start time on the due date for non-dispatched orders; to the release of a notice to the CLEC/BST of the completion status. The field technician notifies the CLEC the work was complete and then he/she enters the completion time stamp information in his/her computer. This information switches through to the SOCS systems either completing the order or rejecting the order to the Work Management Center (WMC). If the completion is rejected, it is manually corrected and then completed by the WMC. The notice is returned on each individual order submitted and as the notice is sent electronically, it can only be switched to those orders that were submitted by the CLEC electronically. The start time is the completion stamp either by the field technician or the 5PM due date stamp; the end time is the time stamp the notice was submitted to the CLEC/BST system.

Calculation:

Σ (Date and Time of Notice of Completion) – (Date and Time of Work Completion) / (Number of Orders with Notice of Completion in Reporting Period)

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Level of Disaggregation:

- Reporting intervals in Hours; 0-1, 1-2, 2-4, 4-8, 8-12, 12-24, > 24, plus Overall Average Hour Interval
- Reported in categories of <10 line/circuits; > = 10 line/circuits

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • CLEC Order Number (so_nbr) • Work Completion Date (cmpltn_dt) • Work Completion Time • Completion Notice Availability Date • Completion Notice Availability Time • Service Type • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report month • BST Order Number (so_nbr) • Work Completion Date (cmpltn-dt) • Work Completion Time • Completion Notice Availability Date • Completion Notice Availability Time • Service Type • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.

Retail Analog/Benchmark:

CLEC Residence Resale/BST Residence Retail
CLEC Business Resale/BST Business Retail
CLEC Non-UNE Design/BST Design
Interconnection Trunks-CLEC/Interconnection Trunks – BST
UNEs-(See Appendix D)

Revision Date: 07/15/00 (taf)

PROVISIONING

Report/Measurement:	
P-6. Coordinated Customer Conversions Interval	
Definition:	
This report measures the average time it takes BST to disconnect an unbundled loop from the BST switch and cross connect it to a CLEC's equipment. This measurement applies to service orders with and without LNP, and where the CLEC has requested BST to provide a coordinated cutover.	
Exclusions:	
• Any order canceled by the CLEC will be excluded from this measurement. • Delays due to CLEC following disconnection of the unbundled loop • Unbundled Loops where there is no existing subscriber loop and loops where coordination is not requested.	
Business Rules:	
Where the service order includes LNP, the interval includes the total time for the cutover including the translation time to place the line back in service on the ported line. The interval is calculated for the entire cutover time for the service order and then divided by items worked in that time to give the average per item interval for each service order.	
Calculation:	
Σ [(Completion Date and Time for Cross Connection of an Coordinated Unbundled Loop)- (Disconnection Date and Time of an Coordinated Unbundled Loop)] / Total Number of Unbundled Loop with Coordinated Conversions (items) for the reporting period.	
Report Structure:	
• CLEC Specific • CLEC Aggregate	
Level of Disaggregation:	
Reported in intervals <=5 minutes; >5,< =15 minutes; >15 minutes, plus Overall Average interval	
Data Retained Relating to CLEC Experience	**Data Retained Relating to BST Experience**
• Report Month • CLEC Order Number • Committed Due Date (DD) • Service Type (CLASS_SVC_DESC) • Cutover Start Time • Cutover Completion time • Portability start and completion times (INP orders) • Total Conversions (Items) **NOTE:** Code in parentheses is the corresponding header found in the raw data file.	• No BST Analog Exists
Retail Analog/Benchmark:	
Benchmark – See Appendix D	

Revision Date: 07/15/00 (taf)

PROVISIONING

Report/Measurement:

P-6A. Coordinated Customer Conversions – Hot Cut Timeliness % within Interval and Average Interval

Definition:

This category measures whether BST begins the cutover of an unbundled loop on a time specific order at the CLEC requested time. It is measures the percentage of orders worked within 15 minutes of the requested start time of the order and the average interval.

Exclusions:

- Any order canceled by the CLEC will be excluded from this measurement.
- Delays caused by the CLEC
- Unbundled Loops where there is no existing subscriber loop and loops where coordination is not requested.
- All unbundled loops on multiple loop orders after the first loop.

Business Rules:

This report measures whether BST begins the cutover of an unbundled loop on a coordinated and/or a time specific order at the CLEC requested start time. The cut is considered on time if it starts 15 minutes before or after the requested start time. Using the scheduled time and the actual cutover start time, the measurement will calculate the % within interval and the average interval. If a cut involves multiple lines, the cut will be considered "on time" if the first line is cut within the interval. ≤ 15 minutes includes intervals that began 15 minutes or less before the scheduled cut time and cuts that began 15 minutes or less after the scheduled cut time; >15 minutes, ≤30 minutes includes cuts within 15:00 – 30:00 minutes either prior to or after the scheduled cut time; >30 minutes includes cuts greater than 30:00 minutes either prior to or after the scheduled cut time.

Calculation:

% within Interval – [Total Number of Coordinated Unbundled Loop Orders for the interval] / Total Number of Coordinated Unbundled Loop Orders for the reporting period X 100.

Average Interval - [Σ (Scheduled Date and Time for Cross Connection of a Coordinated Unbundled Loop Order) – (Actual Start Date and Time of a Coordinated Unbundled Loop Order)] / Total Number of Coordinated Unbundled Loop Orders for the reporting period.

Report Structure:

- CLEC Specific
- CLEC Aggregate

Level of Disaggregation:

Reported in intervals of early, on time and late cuts %≤ 15 minutes; % >15 minutes, ≤30 minutes; % >30 minutes, plus Overall Average Interval

- Product Reporting Level
  - SL1 Time Specific
  - SL1 Non-Time Specific
  - SL2 Time Specific
  - Coordinated Cuts (SL2 Non-Time Specific)

Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
• Report Month • CLEC Order Number (so_nbr) • Committed Due Date (DD) • Service Type (CLASS_SVC_DESC) • Cutover Scheduled Start Time • Cutover Actual Start Time • Total Conversions Orders **NOTE:** Code in parentheses is the corresponding header found in the raw data file.	• No BST Analog Exists

Retail Analog/Benchmark:
Benchmark – 95% Within + or – 15 minutes of Scheduled Start Time

Revision Date: 07/11/00 (BF)

PROVISIONING

Report/Measurement:	
P-6B. Coordinated Customer Conversions - % Provisioning Troubles Received Within 7 days of a completed Service Order (Under Development)	
Definition:	
Percent Provisioning Troubles received within 7 days of a completed service order associated with a Coordinated Customer Conversion. Measures the quality and accuracy of Coordinated Customer Conversion Activities.	
Exclusions:	
• Any order canceled by the CLEC • Troubles caused by Customer Provided Equipment	
Business Rules:	
Measures the quality and accuracy of completed service orders associated with Coordinated Customer Conversions. The first trouble report received on a circuit ID within 7 days following a service order completion is counted in this measure. Subsequent trouble reports are measured in Repeat Report Rate. Reports are calculated searching in the prior report period for completed Coordinated Customer Conversion service orders and following 30 days after the completion of the service order for a trouble report issue date.	
Calculation:	
% Provisioning Troubles within 7 days of service order completion =Σ(Trouble reports on all completed Coordinated Customer Conversion Circuits ≤ 7 days following service order(s) completion) / (All Coordinated Customer Conversion service order circuits completed in the previous report calendar month) X 100.	
Report Structure:	
• CLEC Specific • CLEC Aggregate •	
Level of Disaggregation:	
• Design • Non-Design	
Data Retained Relating to CLEC Experience	**Data Retained Relating to BST Experience**
• Report Month • CLEC Order Number (so_nbr) • PON • Order Submission Date(TICKET_ID) • Order Submission Time(TICKET_ID) • Status Type • Status Notice Date • Standard Order Activity • Geographic Scope • Total conversion circuits **NOTE:** Code in parentheses is the corresponding header found in the raw data file.	• No BST Analog exists
Retail Analog/Benchmark:	
≤ 5% of total circuits	

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PROVISIONING

Report/Measurement:

P-7. % Provisioning Troubles within 30 days of Service Order Completion

Definition:

Percent Provisioning Troubles within 30 days of Service Order Completion measures the quality and accuracy of Service order activities.

Exclusions:

- Canceled Service Orders
- Order Activities of BST or the CLEC associated with internal or administrative use of local services (R Orders, Test Orders, etc.)
- D & F orders
- Trouble reports caused and closed out to Customer Provided Equipment (CPE)

Business Rules:

Measures the quality and accuracy of completed orders. The first trouble report from a service order after completion is counted in this measure. Subsequent trouble reports are measured in Repeat Report Rate. Reports are calculated searching in the prior report period for completed service orders and following 30 days after completion of the service order for a trouble report issue date.
D & F orders are excluded as there is no subsequent activity following a disconnect.

Calculation:

% Provisioning Troubles within 30 days of Service Order Activity = Σ (Trouble reports on all completed orders ≤ 30 days following service order(s) completion) / (All Service Orders completed in the previous report calendar month) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Level of Disaggregation:

- Reported in categories of <10 line/circuits; > = 10 line/circuits
- Dispatch / No Dispatch

Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
• Report Month • CLEC Order Number and PON • Order Submission Date(TICKET_ID) • Order Submission Time (TICKET_ID) • Status Type • Status Notice Date • Standard Order Activity • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report Month • BST Order Number • Order Submission Date • Order Submission Time • Status Type • Status Notice Date • Standard Order Activity • Geographic Scope

Retail Analog/Benchmark:

CLEC Residence Resale / BST Residence Retail
CLEC Business Resale / BST Business Retail
CLEC Non-UNE Design / BST Design
Interconnection Trunks-CLEC / Interconnection Trunks –BST
UNEs-(See Appendix D)

Revision Date: 0725/00 (taf)

PROVISIONING

Report/Measurement :

P-8. Total Service Order Cycle Time (TSOCT)

Definition:

This report measures the total service order cycle time from receipt of a valid service order request to the completion of the service order.

Exclusions:

- Canceled Service Orders
- Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.)
- D (Disconnect) and F (From) orders. (From is disconnect side of a move order when the customer moves to a new address).
- "L" Appointment coded orders (where the customer has requested a later than offered interval)
- Orders with CLEC/Subscriber caused delays or CLEC/Subscriber requested due date changes.

Business Rules:

The interval is determined for each order processed during the reporting period. This measurement combines two reports: FOC (Firm Order Confirmation) with Average Order Completion Interval.

This interval starts with the receipt of a valid service order request and stops when the technician or system completes the order in SOCS. Elapsed time for each order is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the associated total number of orders completed. Orders that are worked on zero due dates are calculated with a .33 day interval (8 hours) in order to report a portion of a day interval. These orders are issued and worked/completed on same day. They can be either flow through orders (no field work-non-dispatched) or field orders(dispatched).

Reporting is by Fully Mechanized, Partially Mechanized and Non-Mechanized receipt of LSRs.

Calculation :

Total Service Order Cycle Time: Σ(Completion Date of Service Order) - (Date of Service Request Receipt) / (Count of Orders Completed in Reporting Period)

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate
- Fully Mechanized; Partially Mechanized; Non-Mechanized

Level of Disaggregation:

- Reported in categories of < 10 line/circuits; > = 10 line/circuits
- Dispatch/No Dispatch categories applicable to all levels except trunks.
- Intervals 0-5, 5-10, 10-15, 15-20, 20-25, 25-30, > = 30 Days

Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
• Report Month • Interval for FOC • CLEC Company Name (OCN) • Order Number (PON) • Submission Date & Time (TICKET_ID) • Completion Date (CMPLTN_DT) • Service Type (CLASS_SVC_DESC) • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report Month • BST Order Number • Order Submission Date & Time • Order Completion Date & Time • Service Type • Geographic Scope

Retail Analog/Benchmark

See Appendix D

Revision Date: 07/15/00 (taf)

PROVISIONING

Report/Measurement:	
P-9. Service Order Accuracy GEORGIA ONLY	
Definition:	
The "service order accuracy" measurement measures the accuracy and completeness of a sample of BST service orders by comparing what was ordered and what was completed.	
Exclusions:	
• Cancelled Service Orders • Order Activities of BST associated with internal or administrative use of local services • D & F orders	
Business Rules:	
A manual sampling of service orders, completed during a monthly reporting period, is compared to the original account profile and the order that the CLEC sent to BST. An order is "completed without error" if all service attributes and account detail changes (as determined by comparing the original order) completely and accurately reflect the activity specified on the original order and any supplemental CLEC order. For both small and large sample sizes, when a Service Request cannot be matched with a corresponding Service Order, it will not be counted. For small sample sizes an effort will be made to replace the service request.	
Calculation:	
Percent Service Order Accuracy = Σ (Orders Completed without Error) / Σ (Orders Completed in Reporting Period) x 100	
Report Structure:	
CLEC Aggregate	
Level of Disaggregation:	
• Reported in categories of <10 line/circuits; > = 10 line/circuits • Dispatch / No Dispatch	
Data Retained Relating to CLEC Experience	**Data Retained Relating to BST Experience**
• Report Month • CLEC Order Number and PON • Local Service Request (LSR) • Order Submission Date • Committed Due Date • Service Type • Standard Order Activity	• Being investigated at this time
Retail Analog/Benchmark:	
(Under Investigation)	

Revision Date: 07/15/00 (taf)

PROVISIONING

Report/Measurement:
P-10. LNP-Percent Missed Installation Appointments
Definition:
"Percent missed installation appointments" monitors the reliability of BST commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customer as compared to BST. This measure is the percentage of total orders processed for which BST is unable to complete the service orders on the committed due dates and reported for both BST and End User Misses.
Exclusions:
• Canceled Service Orders • Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable.
Business Rules:
Percent Missed Installation Appointments (PMI) is the percentage of total orders processed for which BST is unable to complete the service orders on the committed due dates. Missed Appointments caused by end-user reasons will be included and reported in a separate category. The "due date" is any time on the confirmed due date, which means there cannot be a cutoff time for commitments as certain types of orders are requested to be worked after standard business hours. Also, during Daylight Savings Time, field technicians are scheduled until 9PM in some areas and the customer is offered a greater range of intervals from which to select.
Calculation:
LNP Percent Missed Installation Appointments = Σ (Number of Orders with Completion date in Reporting Period past the Original Committed Due Date) / (Number of Orders Confirmed in Reporting) X 100
Report Structure:
• Mechanized (service orders generated by LSRs submitted via EDI or TAG) • CLEC Specific • CLEC Aggregate **Report explanation:** Total Missed Appointments is the total % of orders missed either by BST or the CLEC end user. End User MA represents the percentage of orders missed by the CLEC end user. The difference between End User Missed Appointments and Total Missed Appointments is the result of BST caused misses.
Level of Disaggregation:
• Product Reporting Levels ➢ LNP ➢ UNE Loop Associated w/LNP • Geographic Scope ➢ State, Region
Retail Analog/Benchmark:
See Appendix D

Revision Date: 07/15/00 (taf)

PROVISIONING – (LNP)

Report/Measurement :

P-11. LNP-Average Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution

Definition:

Disconnect Timeliness is defined as the interval between the time the LNP Gateway receives the 'Number Ported' message from NPAC (signifying the CLEC 'Activate') until the time that the Disconnect service order for an LSR is completed in SOCS. This interval effectively measures BST responsiveness by isolating it from impacts that are caused by CLEC related activities.

Exclusions:

- Canceled Service Orders
- Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable.

Business Rules:

The Disconnect Timeliness interval is determined for each Disconnect service order processed on an LSR during the reporting period. The Disconnect Timeliness interval is the elapsed time from when BST receives the 'Number Ported' message for an LSR's disconnect order from NPAC (signifying the CLEC 'Activate') until the Disconnect service order is completed in SOCS. Elapsed time for each order is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the total number of selected disconnect orders which have been completed.

Calculation :

Average Disconnect Timeliness Interval:

Σ[(Disconnect Service Order Completion Date & Time) - ('Number Ported' Message Received Date & Time)] / Σ (Total Number of Disconnect Service Orders Completed in Reporting Period)

Disconnect Timeliness Interval Distribution:

[Σ (Disconnect Service Orders Completed in "X" days) / (Total Disconnect Service Orders Completed in Reporting Period)] X 100

Report Structure:

- Mechanized (service orders generated by LSRs submitted via EDI or TAG)
- CLEC Specific
- CLEC Aggregate

Level of Disaggregation:

- Reported in day intervals = 0,1,2,3,4, 5, >5 days
- Product Reporting Levels
  - LNP
- Geographic Scope
  - State, Region

Retail Analog/Benchmark:

See Appendix D

Revision Date: 05/15/00 (taf)

PROVISIONING

Report/Measurement :
P-12. LNP-Total Service Order Cycle Time
Definition:
Total Service Order Cycle Time measures the interval from receipt of a valid service order request to the completion of the final service order associated with that service request.
Exclusions:
• Canceled Service Orders • Order Activities of BST or the CLEC associated with internal or administrative use of local services (Record Orders, Test Orders, etc.) where identifiable • "L" appointment coded orders (indicating the customer has requested a later than offered interval) • "S" missed appointment coded orders (indicating subscriber missed reasons), except for "SP" codes (indicating subscriber prior due date requested).
Business Rules:
The interval is determined for each service request processed during the reporting period. This measurement combines two reports: FOC (Firm Order Confirmation) with Average Order Completion Interval. This interval starts with the receipt of a valid service request and stops when the technician or system completes all the related service orders for the LSR in SOCS. Elapsed time for each service request is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the associated total number of service requests completed to produce the total service order cycle time.
Calculation :
Average Total Service Order Cycle Time: Σ[(Service Order Completion Date) - (Service Request Receipt Date)] / Σ (Total Number Service Requests Completed in Reporting Period) **Total Service Order Cycle Time Interval Distribution:** Σ (Total Number of Service Requests Completed in "X" minutes/hours) / (Total Number of Service Requests Received in Reporting Period)] X 100
Report Structure:
• Mechanized (service orders generated by LSRs submitted via EDI or TAG) • CLEC Specific • CLEC Aggregate • "W" Appointment Code Only (Company Offered)
Level of Disaggregation:

• Reported in day intervals 0 - 5, 5 - 10, 10 - 15, 15 - 20, 20 - 25, 25 - 30, >30 days
• Product Reporting Levels
  ➢ LNP
  ➢ UNE Loop with LNP
• Geographic Scope
  ➢ State, Region

Retail Analog/Benchmark:
See Appendix D

Revision Date: 07/15/00 (taf)

Maintenance and Repair Level of Disaggregation

Product Reporting Levels

- Resale / Retail
  - ➢ Pots – Residence
  - ➢ Pots – Business
  - ➢ Design
  - ➢ PBX (Louisiana SQM)
  - ➢ CENTREX (Louisiana SQM)
  - ➢ ISDN (Louisiana SQM) (**Note:** ISDN Trouble included in POTS for Georgia Only)
- Unbundled Network Elements
  - ➢ UNE Design
  - ➢ UNE Non-Design
  - ➢ UNE 2 Wire Loop (Louisiana SQM)
  - ➢ UNE Loop Other (Louisiana SQM)
  - ➢ Unbundled Ports (Louisiana SQM)
  - ➢ UNE Other Non-Design
  - ➢ Combos, Switching, Local Transport, DSL (under development)
- Trunks
  - ➢ Local Interconnection Trunks
- Dispatch/No Dispatch categories applicable to all levels
- Geographic Scope
  - ➢ State, Region and further geographic disaggregation as required by State Commission Order (e.g., Metropolitan Service Area – MSA)

MAINTENANCE & REPAIR

Report/Measurement:

M&R-1. Missed Repair Appointments

Definition:

The percent of trouble reports not cleared by the committed date and time.

Exclusions:

- Trouble tickets canceled at the CLEC request.
- BST trouble reports associated with internal or administrative service.
- Customer Provided Equipment (CPE) troubles or CLEC Equipment Trouble.

Business Rules:

The negotiated commitment date and time is established when the repair report is received. The cleared time is the date and time that BST personnel clear the trouble and closes the trouble report in his/her Computer Access Terminal (CAT) or workstation. If this is after the Commitment time, the report is flagged as a "Missed Commitment" or a missed repair appointment. When the data for this measure is collected for BST and a CLEC, it can be used to compare the percentage of the time repair appointments are missed due to BST reasons. (No access reports are not part of this measure because they are not a missed appointment.)

Note: Appointment intervals vary with force availability in the POTS environment. Specials and Trunk intervals are standard interval appointments of no greater than 24 hours.

Calculation:

Percentage of missed Repair Appointments = Σ (Count of Customer Troubles Not Cleared by the Quoted Commitment Date and Time) / Σ (Total Trouble reports closed in Reporting Period) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • CLEC Company Name • Submission Date & Time (TICKET_ID) • Completion Date (CMPLTN_DT) • Service Type (CLASS_SVC_DESC) • Disposition and Cause (CAUSE_CD & CAUSE_DESC) • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report month • BST Company Code • Submission Date & Time • Completion Date • Service Type • Disposition and Cause (Non-Design /Non-Special Only) • Trouble Code (Design and Trunking Services) • Geographic Scope

Retail Analog/Benchmark:

CLEC Residence Resale/BST Residence Retail
CLEC Business Resale/BST Business Retail
CLEC Design-Resale/BST Design-Retail
CLEC PBX, Centrex, and ISDN Resale/BST PBX, Centrex, and ISDN Retail
CLEC Trunking-Resale / BST Trunking-Retail
UNEs-(See Appendix D)

Revision Date: 05/15/00 (see)

MAINTENANCE & REPAIR

Report/Measurement:

M&R-2. Customer Trouble Report Rate

Definition:

Initial and repeated customer direct or referred troubles closed within a calendar month per 100 lines/circuits in service.

Exclusions:

- Trouble tickets canceled at the CLEC request.
- BST trouble reports associated with internal or administrative service.
- Customer Provided Equipment (CPE) troubles or CLEC Equipment Trouble.

Business Rules:

Customer Trouble Report Rate is computed by accumulating the number of maintenance initial and repeated trouble reports closed during the reporting period. The resulting number of trouble reports are divided by the total "number of service" lines, ports or combination that exist for the CLECs and BST respectively at the end of the report month.

Calculation:

Customer Trouble Report Rate = (Count of Initial and Repeated Trouble Reports closed in the Current Period) / (Number of Service Access Lines in service at End of the Report Period) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Data Retained Relating to CLEC Experience:

- Report month
- CLEC Company Name
- Ticket Submission Date & Time (TICKET_ID)
- Ticket Completion Date (CMPLTN_DT)
- Service Type (CLASS_SVC_DESC)
- Disposition and Cause (CAUSE_CD & CAUSE_DESC)
- # Service Access Lines in Service at the end of period
- Geographic Scope

NOTE: Code in parentheses is the corresponding header found in the raw data file.

Data Retained Relating to BST Performance:

- Report month
- BST Company Code
- Ticket Submission Date & Time
- Ticket Completion Date
- Service Type
- Disposition and Cause (Non-Design /Non-Special Only)
- Trouble Code (Design and Trunking Services)
- # Service Access Lines in Service at the end of period
- Geographic Scope

Retail Analog/Benchmark:

CLEC Residence Resale/BST Residence Retail
CLEC Business Resale/BST Business Retail
CLEC Design-Resale/BST Design-Retail
CLEC PBX, Centrex, and ISDN Resale/BST PBX, Centrex, and ISDN Retail
CLEC Trunking-Resale / BST Trunking-Retail
UNEs-(See Appendix D)

Revision Date: 07/17/00 (see)

MAINTENANCE & REPAIR

Report/Measurement:

M&R-3. Maintenance Average Duration

Definition:

The Average duration of Customer Trouble Reports from the receipt of the Customer Trouble Report to the time the trouble report is cleared.

Exclusions:

- Trouble tickets canceled at the CLEC request.
- BST trouble reports associated with internal or administrative service.
- Customer Provided Equipment (CPE) troubles or CLEC Equipment Trouble.
- Trouble reports greater than 10 days

Business Rules:

For Average Duration the clock starts on the date and time of the receipt of a correct repair request. The clock stops on the date and time the service is restored and the BST or CLEC customer is notified (when the technician completes the trouble ticket on his/her CAT or work systems).

Calculation:

Maintenance Average Duration = Σ(Date and Time of Service Restoration) – (Date and Time Trouble Ticket was Opened) / Σ(Total Closed Troubles in the reporting period)

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Data Retained Relating to CLEC Experience:	**Data Retained Relating to BST Performance:**
• Report month • Total Tickets (LINE_NBR) • CLEC Company Name • Ticket Submission Date & Time (TICKET_ID) • Ticket Completion Date (CMPLTN_DT) • Service Type (CLASS_SVC_DESC) • Disposition and Cause (CAUSE_CD & CAUSE_DESC) • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report month • Total Tickets • BST Company Code • Ticket Submission Date • Ticket Submission Time • Ticket Completion Date • Ticket Completion Time • Total Duration Time • Service Type • Disposition and Cause (Non-Design /Non-Special Only) • Trouble Code (Design and Trunking Services) • Geographic Scope

Retail Analog/Benchmark:

CLEC Residence Resale/BST Residence Retail
CLEC Business Resale/BST Business Retail
CLEC Design-Resale/BST Design-Retail
CLEC PBX, Centrex, and ISDN Resale/BST PBX, Centrex, and ISDN Retail
CLEC Trunking-Resale / BST Trunking-Retail
UNEs-(See Appendix D)

Revision Date: 05/25/00 (see)

MAINTENANCE & REPAIR

Report/Measurement:

M&R-4. Percent Repeat Troubles within 30 Days

Definition:

Closed trouble reports on the same line/circuit as a previous trouble report received within 30 calendar days as a percent of total troubles closed.

Exclusions:

- Trouble tickets canceled at the CLEC request.
- BST trouble reports associated with internal or administrative service.
- Customer Provided Equipment (CPE) troubles or CLEC Equipment Trouble.

Business Rules:

Includes Customer trouble reports received within 30 days of an original Customer trouble report

Calculation:

Percent Repeat Troubles within 30 Days = (Count of closed Customer Troubles where more than one trouble report was logged for the same service line within a continuous 30 days of the reporting period) / (Total Trouble Reports Closed in Reporting Period) X 100

Report Structure:

- CLEC Specific
- CLEC Aggregate
- BST Aggregate

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Total Tickets (LINE_NBR) • CLEC Company Name • Ticket Submission Date & Time (TICKET_ID) • Ticket Completion Date (CMPLTN_DT) • Total and Percent Repeat Trouble Reports within 30 Days (TOT_REPEAT) • Service Type • Disposition and Cause (CAUSE_CD & CAUSE_DESC) • Geographic Scope NOTE: Code in parentheses is the corresponding header found in the raw data file.	• Report month • Total Tickets • BST Company Code • Ticket Submission Date • Ticket Submission Time • Ticket Completion Date • Ticket Completion Time • Total and Percent Repeat Trouble Reports within 30 Days • Service Type • Disposition and Cause (Non-Design /Non-Special Only) • Trouble Code (Design and Trunking Services) • Geographic Scope

Retail Analog/Benchmark:

CLEC Residence Resale/BST Residence Retail
CLEC Business Resale/BST Business Retail
CLEC Design-Resale/BST Design-Retail
CLEC PBX, Centrex, and ISDN Resale/BST PBX, Centrex, and ISDN Retail
CLEC Trunking-Resale / BST Trunking-Retail
UNEs-(See Appendix D)

Revision Date: 07/17/00 (see)

MANTENANCE & REPAIR

Report/Measurement:

M&R-5. Out of Service (OOS) > 24 Hours

Definition:

For Out of Service Troubles (no dial tone, cannot be called or cannot call out) the percentage of Total OOS Troubles cleared in excess of 24 hours. (All design services are considered to be out of service).

Exclusions:

- Trouble Reports canceled at the CLEC request
- BST Trouble Reports associated with administrative service
- Customer Provided Equipment (CPE) Troubles or CLEC Equipment Troubles.

Business Rules:

Customer Trouble reports that are out of service and cleared in excess of 24 hours. The clock begins when the trouble report is created in LMOS and the trouble is counted if the elapsed time exceeds 24 hours.

Calculation:

Out of Service (OOS) > 24 hours = (Total Cleared Troubles OOS > 24 Hours) / Total OOS Troubles in Reporting Period) X 100

Report Structure:

- CLEC Specific
- BST Aggregate
- CLEC Aggregate

Data Retained Relating to CLEC Experience	**Data Retained Relating to BST Experience**
• Report Month • Total Tickets • CLEC Company Name • Ticket Submission Date & Time (TICKET_ID) • Ticket Completion Date (CMPLTN_DT • Percentage of Customer Troubles out of • Service > 24 Hours (OOS>24_FLAG) • Service type (CLASS_SVC_DESC) • Disposition and Cause (CAUSE_CD & CAUSE-DESC) • Geographic Scope **NOTE:** Code in parentheses is the corresponding header found in the raw data file.	• Report Month • Total Tickets • BST Company Code • Ticket Submission Date • Ticket Submission time • Ticket Completion Date • Ticket Completion Time • Percent of Customer Troubles out of Service > 24 Hours • Service type • Disposition and Cause (Non – Design/Non-Special only) • Trouble Code (Design and Trunking Services) • Geographic Scope

Retail Analog/Benchmark:

CLEC Residence-Resale / BST Residence- Retail
CLEC Business- Resale / BST Business-Retail
CLEC Design-Resale / BST Design-Retail
CLEC PBX, Centrex and ISDN Resale / BST PBX, Centrex and ISDN Retail
CLEC Trunking-Resale /BST Trunking- Retail
UNEs – (See Appendix D)

Revision Date: 05/12/00 (see)

MAINTENANCE & REPAIR

Report/Measurement:	
M&R-6. Average Answer Time – Repair Centers	
Definition:	
This measures the average time a customer is in Queue when calling a BellSouth Repair Center.	
Exclusions:	
None	
Business Rules:	
The clock starts when a CLEC Representative or BellSouth customer makes a choice on the Repair Center's menu and is put in queue for the next repair attendant. The clock stops when the repair attendant answers the call. (abandoned calls are not included) (NOTE: The Total Column is a combined BST Residence and Business number)	
Level of Disaggregation:	
Region. CLEC/BST Service Centers and BST Repair Centers are regional.	
Calculation:	
Average Answer Time for BST's Repair Centers = (Time BST Repair Attendant Answers Call) – (Time of entry into queue until ACD Selection) / (Total number of calls by reporting period)	
Report Structure:	
• CLEC Aggregate • BST Aggregate	
Data Retained Relating to CLEC Experience	**Data Retained Relating to BST Experience**
• CLEC Average Answer Time	• BST Average Answer Time
Retail Analog/Benchmark:	
For CLEC, Average Answer Times in UNE Center and BRMC are comparable to the Average Answer Times in the BST Repair Centers.	

Revision Date: 05/25/00 (see)

OPERATOR SERVICES AND DIRECTORY ASSISTANCE

Report/Measurement:
OS-1. Speed to Answer Performance/Average Speed to Answer - Toll
Definition:
Measurement of the average time in seconds calls wait before answered by a toll operator.
Exclusions:
None
Business Rules:
The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.
Calculation:
Total queue time ÷ total calls answered (Note: Total queue time includes time that answered calls wait in queue as well as time abandoned calls wait in queue prior to abandonment.)
Report Structure:
• Reported for the aggregate of BST and CLECs ➢ State
Level of Disaggregation:
None
Data Retained (on Aggregate Basis):
• For the items below, BST's Performance Measurement Analysis Platform (PMAP) receives a final computation; therefore, no raw data file is available in PMAP • Month • Call Type (Toll) • Average Speed of Answer
Retail Analog/Benchmark:
Parity by Design See Appendix D

Revision Date: 07/19/00 (tg)

OPERATOR SERVICES AND DIRECTORY ASSISTANCE

Report/Measurement:

OS-2. Speed to Answer Performance/Percent Answered with "X" Seconds – Toll

Definition:

Measurement of the percent of toll calls that are answered in less than "X" seconds. The number of seconds represented by "X" is thirty, except where a different regulatory benchmark has been set for the Average Speed to Answer by a State Commission.

Exclusions:

None

Business Rules:

The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.

Calculation:

The Percent Answered within "X" Seconds measurement for toll is derived by using the BellCore Statistical Answer Conversion Tables, to convert the Average Speed to Answer measure into a percent of calls answered within "X" seconds. The BellCore Conversion Tables are specific to the defined parameters of work time, number of operators, max queue size and call abandonment rates.

Report Structure:

- Reported for the aggregate of BST and CLECs
  - State

Level of Disaggregation:

None

Data Retained (on Aggregate Basis):

- For the items below, BST's Performance Measurement Analysis Platform (PMAP) receives a final computation; therefore, no raw data file is available in PMAP
- Month
- Call Type (Toll)
- Average Speed of Answer

Retail Analog/Benchmark:

Parity by Design
See Appendix D

Revision Date: 07/19/00 (tg)

OPERATOR SERVICES AND DIRECTORY ASSISTANCE

Report/Measurement:
DA-1. Speed to Answer Performance/Average Speed to Answer – Directory Assistance (DA)
Definition:
Measurement of the average time in seconds calls wait before answered by a DA operator.
Exclusions:
None
Business Rules:
The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.
Calculation:
Total queue time ÷ total calls answered (Note: Total queue time includes time that answered calls wait in queue as well as time abandoned calls wait in queue prior to abandonment.)
Report Structure:
• Reported for the aggregate of BST and CLECs ➢ State
Level of Disaggregation:
None
Data Retained (on Aggregate Basis)
• For the items below, BST's Performance Measurement Analysis Platform (PMAP) receives a final computation; therefore, no raw data file is available in PMAP • Month • Call Type (DA) • Average Speed of Answer
Retail Analog/Benchmark
Parity by Design See Appendix D

Revision Date: 07/19/00 (tg)

OPERATOR SERVICES AND DIRECTORY ASSISTANCE

Report/Measurement:
DA-2. Speed to Answer Performance/Percent Answered within "X" Seconds – Directory Assistance (DA)
Definition:
Measurement of the percent of DA calls that are answered in less than "X" seconds. The number of seconds represented by "X" is twenty, except where a different regulatory benchmark has been set for the Average Speed to Answer by a State Commission.
Exclusions:
None
Business Rules:
The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.
Calculation:
The Percent Answered within "X" Seconds measurement for DA is derived by using the BellCore Statistical Answer Conversion Tables, to convert the Average Speed to Answer measure into a percent of calls answered within "X" seconds. The BellCore Conversion Tables are specific to the defined parameters of work time, number of operators, max queue size and call abandonment rates.
Report Structure:
• Reported for the aggregate of BST and CLECs   ➢ State
Level of Disaggregation:
None
Data Retained (on Aggregate Basis)
• For the items below, BST's Performance Measurement Analysis Platform (PMAP) receives a final computation; therefore, no raw data file is available in PMAP. • Month • Call Type (DA) • Average Speed of Answer
Retail Analog/Benchmark
Parity by Design See Appendix D

Revision Date: 07/19/00 (tg)

E911

Report/Measurement:
E-1. Timeliness
Definition:
Measures the percent of batch orders for E911 database updates (to CLEC resale and BST retail records) processed successfully within a 24-hour period.
Exclusions:
• Any resale order canceled by a CLEC • Facilities-based CLEC orders
Business Rules:
The 24-hour processing period is calculated based on the date and time processing starts on the batch orders and the date and time processing stops on the batch orders. Mechanical processing starts when SCC (BST's E911 vendor) receives E911 files containing batch orders extracted from BST's Service Order Control System (SOCS). Processing stops when SCC loads the individual records to the E911 database. The system makes no distinction between CLEC resale records and BST retail records.
Calculation:
E911 Timelines = Σ (Number of batch orders processed within 24 hours $\div$Total number of batch orders submitted) x 100
Report Structure:
• Reported for the aggregate of CLEC resale updates and BST retail updates ➢ State ➢ Region
Level of Disaggregation:
None
Data Retained
• Report month • Aggregate data
Retail Analog/Benchmark:
Parity by Design See Appendix D

Revision Date: 05/10/00 (tg)

E911

Report/Measurement:
E-1. Accuracy
Definition:
Measures the percent of E911 telephone number (TN) record updates (to CLEC resale and BST retail records) processed successfully for E911.
Exclusions:
• Any resale order canceled by a CLEC • Facilities-based CLEC orders
Business Rules:
Accuracy is based on the number of records processed without error at the conclusion of the processing cycle. Mechanical processing starts when SCC (BST's E911 vendor) receives E911 files containing telephone number (TN) records extracted from BST's Service Order Control System (SOCS). The system makes no distinction between CLEC resale records and BST retail records.
Calculation:
E911 Accuracy = Σ (Number of record individual updates processed with no errors $\div$Total number of individual record updates) x 100
Report Structure:
• Reported for the aggregate of CLEC resale updates and BST retail updates ➢ State ➢ Region
Level of Disaggregation:
None
Data Retained
• Report month • Aggregate data
Retail Analog/Benchmark:
Parity by Design See Appendix D

Revision Date: 05/10/00 (tg)

E911

Report/Measurement:

E-3. Mean Interval

Definition:

Measures the mean interval processing of E911 batch orders (to update CLEC resale and BST retail records).

Exclusions:

- Any resale order canceled by a CLEC
- Facilities-based CLEC orders

Business Rules:

The processing period is calculated based on the date and time processing starts on the batch orders and the date and time processing stops on the batch orders. Data is posted is 4-hour increments up to and beyond 24 hours. The system makes no distinction between CLEC resale records and BST retail records.

Calculation:

E911 Mean Interval = Σ (Date and time of batch order completion – Date and time of batch order submission) ÷ (Number of batch orders completed)

Report Structure:

- Reported for the aggregate of CLEC resale updates and BST retail updates
  - State
  - Region

Level of Disaggregation:

None

Data Retained

- Report month
- Aggregate data

Retail Analog/Benchmark:

Parity by Design
See Appendix D

Revision Date: 05/15/00 (tg)

TRUNK GROUP PERFORMANCE

Report/Measurement:

TGP-1. Trunk Group Performance-Aggregate

Definition:

The Trunk Group Performance report displays, over a reporting cycle, aggregate, weighted average trunk group blocking data for each hour of each day of the reporting cycle, for both CLEC affecting and BST affecting trunk groups.

Exclusions:

- Trunk Groups for which valid data is not available for an entire study period
- Duplicate trunk group information

Business Rules:

The purpose of the Trunk Group Performance Report is to provide trunk blocking measurements on CLEC and BST trunk groups for comparison only. It is not the intent of the report that it be used for network management and/or engineering.

Monthly Weighted Average Blocking:

- The reporting cycle includes both business and non-business days in a calendar month.
- Monthly average blocking values are calculated for each trunk group for each of the 24 time consistent hours across a reporting cycle.

Aggregate Monthly Blocking:

- Used to compare aggregate blocking across trunk groups which terminate traffic at CLEC points of presence versus BellSouth switches.
- Aggregate monthly blocking data is calculated for each hour of the day across all trunk groups assigned to a category.

Trunk Categorization:

- This report displays, over a reporting cycle, aggregate, average blocking data for each hour of a day. Therefore, for each reporting cycle, 24 blocking data points are generated for two aggregate groups of selected trunk groups. These groups are CLEC affecting and BellSouth affecting trunk groups. In order to assign trunk groups to each aggregate group, all trunk groups are first assigned to a category. A trunk group's end points and the type of traffic that is transmitted on it define a category. Selected categories of trunk groups are assigned to the aggregate groups so that trunk reports can be generated. The categories to which trunk groups have been assigned for this report are as follows.

CLEC Affecting Categories:

	Point A	**Point B**
Category 1:	BellSouth End Office	BellSouth Access Tandem
Category 3:	BellSouth End Office	CLEC Switch
Category 4:	BellSouth Local Tandem	CLEC Switch
Category 5:	BellSouth Access Tandem	CLEC Switch
Category 10:	BellSouth End Office	BellSouth Local Tandem
Category 16:	BellSouth Tandem	BellSouth Tandem

BellSouth Affecting Categories:

	Point A	**Point B**
Category 9:	BellSouth End Office	BellSouth End Office

TRUNK GROUP PERFORMANCE – (TGP-1. Trunk Group Performance-Aggregate - Continued)

Calculation:

Monthly Average Blocking:

- For each hour of the day, each day's raw data are summed across all valid measurements days in a report cycle for blocked and attempted calls.
- The sum of the blocked calls is divided by the total number of calls attempted in a reporting period.

Aggregate Monthly Blocking:

- For each hour of the day, the monthly sums of the blocked and attempted calls from each trunk group are separately aggregated over all trunk groups within each assigned category.
- The total blocked calls is divided by the total call attempts within a group to calculate an aggregate monthly blocking for each assigned group.
- The result is an aggregate monthly average blocking value for each of the 24 hours by group.
- The difference between the CLEC and BellSouth affecting trunk groups are also calculated for each hour.

Report Structure:

- CLEC Aggregate
- BST Aggregate
  - State

Level of Disaggregation:

Trunk Group

Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
• Report Month • Total Trunk Groups • Number of Trunk Groups by CLEC • Hourly blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group	• Report Month • Total Trunk Groups • Aggregate Hourly blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group

Retail Analog/Benchmark:

Any 2 hour period in 24 hours where CLEC blockage exceeds BST blockage by more then 0.5% = a miss using trunk groups 1,3,4,5,10,16 for CLECs and 9 for BST.

Revision Date: 6/23/00 (tm)

TRUNK GROUP PERFORMANCE

Report/Measurement:

TGP-2. Trunk Group Performance-CLEC Specific

Definition:

The Trunk Group Performance report displays, over a reporting cycle, aggregate, weighted average trunk group blocking data for each hour of each day of the reporting cycle, for both CLEC affecting and BST affecting trunk groups.

Exclusions:

- Trunk Groups for which valid data is not available for an entire study period
- Duplicate trunk group information

Business Rules:

The purpose of the Trunk Group Performance Report is to provide trunk blocking measurements on CLEC and BST trunk groups for comparison only. It is not the intent of the report that it be used for network management and/or engineering.

Monthly Weighted Average Blocking:

- The reporting cycle includes both business and non-business days in a calendar month.
- Monthly average blocking values are calculated for each trunk group for each of the 24 time consistent hours across a reporting cycle.

Aggregate Monthly Blocking:

- Used to compare aggregate blocking across trunk groups which terminate traffic at CLEC points of presence versus BellSouth switches.
- Aggregate monthly blocking data is calculated for each hour of the day across all trunk groups assigned to a category.

Trunk Categorization:

- This report displays, over a reporting cycle, aggregate, average blocking data for each hour of a day. Therefore, for each reporting cycle, 24 blocking data points are generated for two aggregate groups of selected trunk groups. These groups are CLEC affecting and BellSouth affecting trunk groups. In order to assign trunk groups to each aggregate group, all trunk groups are first assigned to a category. A trunk group's end points and the type of traffic that is transmitted on it define a category. Selected categories of trunk groups are assigned to the aggregate groups so that trunk reports can be generated. The categories to which trunk groups have been assigned for this report are as follows.

CLEC Affecting Categories:

	Point A	Point B
Category 1:	BellSouth End Office	BellSouth Access Tandem
Category 3:	BellSouth End Office	CLEC Switch
Category 4:	BellSouth Local Tandem	CLEC Switch
Category 5:	BellSouth Access Tandem	CLEC Switch
Category 10:	BellSouth End Office	BellSouth Local Tandem
Category 16:	BellSouth Tandem	BellSouth Tandem

BellSouth Affecting Categories:

	Point A	Point B
Category 9:	BellSouth End Office	BellSouth End Office

TRUNK GROUP PERFORMANCE – (TGP-1. Trunk Group Performance-Aggregate – Continued)

Calculation:

Monthly Average Blocking:
- For each hour of the day, each day's raw data are summed across all valid measurements days in a report cycle for blocked and attempted calls.
- The sum of the blocked calls is divided by the total number of calls attempted in a reporting period.

Aggregate Monthly Blocking:
- For each hour of the day, the monthly sums of the blocked and attempted calls from each trunk group are separately aggregated over all trunk groups within each assigned category.
- The total blocked calls is divided by the total call attempts within a group to calculate an aggregate monthly blocking for each assigned group.
- The result is an aggregate monthly average blocking value for each of the 24 hours by group.
- The difference between the CLEC and BellSouth affecting trunk groups are also calculated for each hour.

Report Structure:
- CLEC Specific
  - State

Level of Disaggregation:

Trunk Group

Data Retained Relating to CLEC Experience	Data Retained Relating to BST Experience
• Report Month • Total Trunk Groups • Number of Trunk Groups by CLEC • Hourly blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group	• Report Month • Total Trunk Groups • Aggregate Hourly blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group

Retail Analog/Benchmark:

Any 2 hour period in 24 hours where CLEC blockage exceeds BST blockage by more then 0.5% = a miss using trunk groups 1,3,4,5,10,16 for CLECs and 9 for BST.

Revision Date: 6/23/00 (tm)

TRUNK GROUP PERFORMANCE

Report/Measurement:

TGP-3. Trunk Group Service Report

Definition:

A report of the percent blocking above the Measured Blocking Threshold (MBT) on all final trunk groups between CLEC Points of Termination and BST end offices or tandems.

Exclusions:

- Trunk groups for which valid traffic data is not available
- High use trunk groups

Business Rules:

Traffic trunking data measurements are validated and processed by the Network Information Warehouse (NIW), on an hourly basis for Business and non-business Days . The traffic load sets, including offered load and observed blocking ratio (calls blocked divided by calls attempted), are averaged for the entire report period, and the busy hour is selected. The busy hour average data for each trunk group is captured for reporting purposes. Although all trunk groups are available for reporting, the report highlights those trunk groups with blocking greater than the Measured Blocking Threshold (MBT) and the number of consecutive monthly reports that the trunk group blocking has exceeded the MBT. The MBT for CTTG is 2% and the MBT for all other trunk groups is 3%.

Calculation:

Measured blocking = (Total number of blocked calls) / (Total number of attempted calls) X 100

Report Structure:

- BST Aggregate
  - CTTG
  - Local
- CLEC Aggregate
  - BST Administered CLEC Trunk
  - CLEC Administered CLEC Trunk
- CLEC Specific
  - BST Administered CLEC Trunk
  - CLEC Administered CLEC Trunk

Level of Disaggregation:

State

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Total trunk groups • Total trunk groups for which data is available • Trunk groups with blocking greater than the MBT • Percent of trunk groups with blocking greater than the MBT	• Report month • Total trunk groups • Total trunk groups for which data is available • Trunk groups with blocking greater than the MBT • Percent of trunk groups with blocking greater than the MBT

Retail Analog/Benchmark:

CLEC Trunk Blockage/BST Trunk Blockage
See Appendix D

Revision Date: 07/26/00 (tm)

TRUNK GROUP PERFORMANCE

Report/Measurement:

TGP-4. Trunk Group Service Detail

Definition:

A detailed list of all final trunk groups between CLEC Points of Presence and BST end offices or tandems, and the actual blocking performance when the blocking exceeds the Measured Blocking Threshold (MBT) for the trunk groups.

Exclusions:

- Trunk groups for which valid traffic data is not available
- High use trunk groups

Business Rules:

Traffic trunking data measurements are validated and processed by the Network Information Warehouse (NIW), on an hourly basis for Business and non-business Days . The traffic load sets, including offered load and observed blocking ratio (calls blocked divided by calls attempted), are averaged for the entire reportperiod, and the busy hour is selected. The busy hour average data for each trunk group is captured for reporting purposes. Although all trunk groups are available for reporting, the report highlights those trunk groups with blocking greater than the Measured Blocking Threshold (MBT) and the number of consecutive monthly reports that the trunk group blocking has exceeded the MBT. The MBT for CTTG is 2% and the MBT for all other trunk groups is 3%.

Calculation:

Measured blocking = (Total number of blocked calls) / (Total number of attempted calls) X 100

Report Structure:

- BST Specific/CLEC Specific
  - Traffic Identity
  - TGSN
  - Tandem
  - End Office
  - Description
  - Observed Blocking
  - Busy Hour
  - Number Trunks
  - Valid study days
  - Number reports
  - Remarks

Level of Disaggregation:

State

Data Retained Relating to CLEC Experience:	Data Retained Relating to BST Performance:
• Report month • Total trunk groups • Total trunk groups for which data is available • Trunk groups with blocking greater than the MBT • Percent of trunk groups with blocking greater than the MBT • Traffic identify, TGSN, end points, description, busy hour, valid study days, number reports	• Report month • Total trunk groups • Total trunk groups for which data is available • Trunk groups with blocking greater than the MBT • Percent of trunk groups with blocking greater than the MBT • Traffic identify, TGSN, end points, description, busy hour, valid study days, number reports

Retail Analog/Benchmark:

CLEC Trunk Blockage/BST Blockage
See Appendix D

Revision Date: 07/26/00 (tm)

COLLOCATION

Report/Measurement:
C-1. Average Response Time
Definition:
Measures the average time (counted in business days) from the receipt of a complete and accurate collocation application (including receipt of application fees) to the date BellSouth responds in writing.
Exclusions:
• Any application cancelled by the CLEC
Business Rules:
The clock starts on the date that BST receives a complete and accurate collocation application accompanied by the appropriate application fee. The clock stops on the date that BST returns a response. The clock will restart upon receipt of changes to the original application request.
Calculation:
Average Response Time = Σ[(Request Response Date) – (Request Submission Date)] / Count of Responses Returned within Reporting Period.
Report Structure:
• Individual CLEC (alias) aggregate • Aggregate of all CLECs
Level of Disaggregation:
• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA) • Virtual-Initial • Virtual-Augment • Virtual-Combined • Physical-Initial • Physical-Augment • Physical-Combined • Caged/Cageless (under development)
Data Retained
• Report period • Aggregate data
Retail Analog/Benchmark:
See Appendix D

Revision Date: 07/19/00 (tg)

COLLOCATION

Report/Measurement:
C-2. Average Arrangement Time
Definition:
Measures the average time (counted in calendar days) from the receipt of a complete and accurate Bone Fide firm order (including receipt of appropriate fee) to the date BST completes the collocation arrangement and notifies the CLEC.
Exclusions:
• Any Bona Fide firm order cancelled by the CLEC • Time for BST to obtain permits (applies in AL, GA, KY, LA, MS, NC, SC and TN)
Business Rules:
The clock starts on the date that BST receives a complete and accurate Bone Fide firm order accompanied by the appropriate fee. The clock stops upon submission of the permit request and restarts upon receipt of the approved permit. Changes (affecting the provisioning interval or capital expenditures) that are submitted while provisioning is in progress may alter the completion date. The clock stops on the date that BST completes the collocation arrangement and notifies the customer.
Calculation:
Average Arrangement Time = Σ[(Date Collocation Arrangement is Complete) – (Date Order for Collocation Arrangement Submitted)] / Total Number of Collocation Arrangements Completed during Reporting Period.
Report Structure:
• Individual CLEC (alias) aggregate • Aggregate of all CLECs
Level of Disaggregation:
• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA) • Virtual-Initial • Virtual-Augment • Virtual-Combined • Physical-Initial • Physical-Augment • Physical-Combined • Cage/Cageless (under development)
Data Retained
• Report period • Aggregate data
Retail Analog/Benchmark:
See Appendix D

Revision Date: 07/19/00 (tg)

COLLOCATION

Report/Measurement:
C-3. Percent of Due Dates Missed
Definition:
Measures the percent of missed due dates for collocation arrangements.
Exclusions:
• Any Bona Fide firm order cancelled by the CLEC • Time for BST to obtain permits
Business Rules:
Percent Due Dates Missed is the percent of total collocation arrangements which BST is unable to complete by end of the ILEC committed due date. The clock starts on the date that BST receives a complete and accurate Bona Fide firm order accompanied by the appropriate fee. The arrangement is considered a missed due date if it is not completed on or before the committed due date.
Calculation:
% of Due Dates Missed = Σ (Number of Completed Orders that were not completed w/I ILEC Committed Due Date during Reporting Period) / Number of Orders Completed in Reporting Period) X 100.
Report Structure:
• Individual CLEC (alias) aggregate • Aggregate of all CLECs
Level of Disaggregation:
• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA) • Virtual-Initial • Virtual-Augment • Virtual-Combined • Physical-Initial • Physical-Augment • Physical-Combined • Cage/Cageless (under development)
Data Retained
• Report period • Aggregate data
Retail Analog/Benchmark:
See Appendix D < 10% Missed Due Dates

Revision Date: 07/19/00 (tg)

Appendix A: Reporting Scope*

Standard Service Groupings	***Pre-Order, Ordering*** ➢ Residence Resale ➢ Business Resale ➢ Special ➢ Local Interconnection Trunks ➢ UNE ➢ UNE Design ➢ UNE - Loops w/LNP ***Provisioning*** Resale and Retail ➢ Pots – Residence ➢ Pots – Business ➢ Design ➢ PBX (Louisiana SQM) ➢ CENTREX (Louisiana SQM) ➢ ISDN (Louisiana SQM) (**Note:** ISDN included in POTS for Georgia Only) Unbundled Network Elements ➢ UNE Design ➢ UNE Non-Design ➢ UNE 2 Wire Loop (Louisiana SQM) ➢ UNE Loop Other (Louisiana SQM) ➢ Unbundled Ports (Louisiana SQM) ➢ Combos, Switching, Local Transport, DSL (under development) ***Maintenance and Repair*** Resale / Retail ➢ Pots – Residence ➢ Pots – Business ➢ Design ➢ PBX (Louisiana SQM) ➢ CENTREX (Louisiana SQM) ➢ ISDN (Louisiana SQM) (**Note:** ISDN Trouble included in Non-Design for Georgia Only) Unbundled Network Elements ➢ UNE Design (Georgia and Regional SQM) ➢ UNE Non-Design (Georgia and Regional SQM) ➢ UNE 2 Wire Loop (Louisiana SQM) ➢ UNE Loop Other (Louisiana SQM) ➢ Unbundled Ports (Louisiana SQM) ➢ UNE Other Non-Design ➢ Combos, Switching, Local Transport, DSL (under development)

Appendix A: Reporting Scope*

Standard Service Groupings	***Maintenance and Repair/Provisioning*** Trunks ➢ Local Interconnection Trunks Georgraphic Scope ➢ State, Region and further geographic disaggregation as required by State Commission Order (e.g., Metropolitan Service Area – MSA) **Local Interconnection Trunk Group Blockage** ➢ BST CTTG Trunk Groups ➢ CLEC Trunk Groups
Standard Service Order Activities *These are the generic BST/CLEC service order activities which are included in the Pre-Ordering, Ordering, and Provisioning sections of this document. It is not meant to indicate specific reporting categories.*	➢ New Service Installations ➢ Service Migrations Without Changes ➢ Service Migrations With Changes ➢ Move and Change Activities ➢ Service Disconnects (Unless noted otherwise)
Pre-Ordering Query Types: **Maintenance Query Types:**	➢ Address ➢ Telephone Number ➢ Appointment Scheduling ➢ Customer Service Record ➢ Feature Availability TAFI - *Note TAFI Access the system list below: ➢ CRIS ➢ DLR ➢ LMOSupd ➢ March ➢ Predictor ➢ Oleth ➢ LMOS ➢ LNP ➢ NIW ➢ OSPCM ➢ SOCS
Report Levels	➢ CLEC RESH ➢ CLEC MSA ➢ CLEC State ➢ CLEC Region ➢ Aggregate CLEC State ➢ Aggregate CLEC Region ➢ BST MSA ➢ BST State ➢ BST Region

* Scope is report, data source and system dependent, and, therefore, will differ with each report.

Appendix B: Glossary of Acronyms and Terms

A	**ACD**	Automatic Call Distributor - A service that provides status monitoring of agents in a call center and routes high volume incoming telephone calls to available agents while collecting management information on both callers and attendants.
	AGGREGATE	Sum total of all items in like category, e.g. CLEC aggregate equals the sum total of all CLECs' data for a given reporting level.
	ALEC	Alternative Local Exchange Company = FL CLEC
	ASR	Access Service Request - A request for access service terminating delivery of carrier traffic into a Local Exchange Carrier's network.
	ATLAS	Application for Telephone Number Load Administration System - The BellSouth Operations System used to administer the pool of available telephone numbers and to reserve selected numbers from the pool for use on pending service requests/service orders.
	ATLASTN	ATLAS software contract for Telephone Number
	AUTO CLARIFICATION	The number of LSRs that were electronically rejected from LESOG and electronically returned to the CLEC for correction.
B	**BILLING**	The process and functions by which billing data is collected and by which account information is processed in order to render accurate and timely billing.
	BOCRIS	Business Office Customer Record Information System - A front-end presentation manager used by BellSouth organizations to access the CRIS database.
	BRC	Business Repair Center – The BellSouth Business Systems trouble receipt center which serves large business and CLEC customers.
	BST	BellSouth Telecommunications, Inc.
C	**CKTID**	A unique identifier for elements combined in a service configuration
	CLEC	Competitive Local Exchange Carrier
	CLP	Competitive Local Provider = NC CLEC
	CMDS	Centralized Message Distribution System - BellCore administered national system used to transfer specially formatted messages among companies.
	COFFI	Central Office Feature File Interface - A BellSouth Operations System database which maintains Universal Service Order Code (USOC) information based on current tariffs.

Appendix B: Glossary of Acronyms and Terms – Continued

C	**COFIUSOC**	COFFI software contract for feature/service information
	CRIS	Customer Record Information System - The BellSouth proprietary corporate database and billing system for non-access customers and services.
	CRSACCTS	CRIS software contract for CSR information
	CSR	Customer Service Record
	CTTG	Common Transport Trunk Group - Final trunk groups between BST & Independent end offices and the BST access tandems.
D	**DESIGN**	Design Service is defined as any Special or Plain Old Telephone Service Order which requires BellSouth Design Engineering Activities
	DISPOSITION & CAUSE	Types of trouble conditions, e.g. No Trouble Found, Central Office Equipment, Customer Premises Equipment, etc.
	DLETH	Display Lengthy Trouble History - A history report that gives all activity on a line record for trouble reports in LMOS
	DLR	Detail Line Record - All the basic information maintained on a line record in LMOS, e.g. name, address, facilities, features etc.
	DOE	Direct Order Entry System - An internal BellSouth service order entry system used by BellSouth Service Representatives to input business service orders in BellSouth format.
	DSAP	DOE (Direct Order Entry) Support Application - The BellSouth Operations System which assists a Service Representative or similar carrier agent in negotiating service provisioning commitments for non-designed services and UNEs.
	DSAPDDI	DSAP software contract for schedule information
	DSL	Digital Subscriber Line
E	**E911**	Provides callers access to the applicable emergency services bureau by dialing a 3-digit universal telephone number.
	EDI	Electronic Data Interchange - The computer-to-computer exchange of inter and/or intra company business documents in a public standard format.
F	**FATAL REJECT**	The number of LSRs that were electronically rejected from LEO, which checks to see of the LSR has all the required fields correctly populated
	FLOW-THROUGH	In the context of this document, LSRs submitted electronically via the CLEC mechanized ordering process that flow through to the BST OSS without manual or human intervention.
	FOC	Firm Order Confirmation - A notification returned to the CLEC confirming that the LSR has been received and accepted, including the specified commitment date.

Appendix B: Glossary of Acronyms and Terms - Continued

G		
H	HAL	"Hands Off" Assignment Logic - Front end access and error resolution logic used in interfacing BellSouth Operations Systems such as ATLAS, BOCRIS, LMOS, PSIMS, RSAG and SOCS.
	HALCRIS	HAL software contract for CSR information
I	ISDN	Integrated Services Digital Network
	IPC	Interconnection Purchasing Center
K		
L	LCSC	Local Carrier Service Center - The BellSouth center which is dedicated to handling CLEC LSRs, ASRs, and Preordering transactions along with associated expedite requests and escalations.
	LEGACY SYSTEM	Term used to refer to BellSouth Operations Support Systems (see OSS)
	LENS	Local Exchange Negotiation System - The BellSouth LAN/web server/OS application developed to provide both preordering and ordering electronic interface functions for CLECs.
	LEO	Local Exchange Ordering - A BellSouth system which accepts the output of EDI, applies edit and formatting checks, and reformats the Local Service Requests in BellSouth Service Order format.
	LESOG	Local Exchange Service Order Generator - A BellSouth system which accepts the service order output of LEO and enters the Service Order into the Service Order Control System using terminal emulation technology.
	LMOS	Loop Maintenance Operations System - A BellSouth Operations System that stores the assignment and selected account information for use by downstream OSS and BellSouth personnel during provisioning and maintenance activities.
	LMOS HOST	LMOS host computer
	LMOSupd	LMOS updates
	LNP	Local Number Portability - In the context of this document, the capability for a subscriber to retain his current telephone number as he transfers to a different local service provider.
	LOOPS	Transmission paths from the central office to the customer premises.
	LSR	Local Service Request – A request for local resale service or unbundled network elements from a CLEC.
M	MAINTENANCE & REPAIR	The process and function by which trouble reports are passed to BellSouth and by which the related service problems are resolved.
	MARCH	A BellSouth Operations System which accepts service orders, interprets the coding contained in the service order image, and constructs the specific switching system Recent Change command messages for input into end office switches.

Appendix B: Glossary of Acronyms and Terms – Continued

N	**NC**	"No Circuits" - All circuits busy announcement
O	**OASIS**	Obtain Availability Services Information System - A BellSouth front-end processor, which acts as an interface between COFFI and RNS. This system takes the USOCs in COFFI and translates them to English for display in RNS.
	OASISBSN	OASIS software contract for feature/service
	OASISCAR	OASIS software contract for feature/service
	OASISLPC	OASIS software contract for feature/service
	OASISMTN	OASIS software contract for feature/service
	OASISNET	OASIS software contract for feature/service
	OASISOCP	OASIS software contract for feature/service
	ORDERING	The process and functions by which resale services or unbundled network elements are ordered from BellSouth as well as the process by which an LSR or ASR is placed with BellSouth.
	OSPCM	Outside Plant Contract Management System - Provides Scheduling Information.
	OSS	Operations Support System - A support system or database which is used to mechanize the flow or performance of work. The term is used to refer to the overall system consisting of hardware complex, computer operating system(s), and application which is used to provide the support functions.
	OUT OF SERVICE	Customer has no dial tone and cannot call out.
P	**POTS**	Plain Old Telephone Service
	PREDICTOR	The BellSouth Operations system which is used to administer proactive maintenance and rehabilitation activities on outside plant facilities, provide access to selected work groups (e.g. RRC & BRC) to Mechanized Loop Testing and switching system I/O ports, and provide certain information regarding the attributes and capabilities of outside plant facilities.
	PREORDERING	The process and functions by which vital information is obtained, verified, or validated prior to placing a service request.
	PROVISIONING	The process and functions by which necessary work is performed to activate a service requested via an LSR or ASR and to initiate the proper billing and accounting functions.
	PSIMS	Product/Service Inventory Management System - A BellSouth database Operations System which contains availability information on switching system features and capabilities and on BellSouth service availability. This database is used to verify the availability of a feature or service in an NXX prior to making a commitment to the customer.
	PSIMSORB	PSIMS software contract for feature/service

Appendix B: Glossary of Acronyms and Terms – Continued

Q		
R	**RNS**	Regional Negotiation System - An internal BellSouth service order entry system used by BellSouth Consumer Services to input service orders in BellSouth format.
	RRC	Residence Repair Center - The BellSouth Consumer Services trouble receipt center which serves residential customers.
	RSAG	Regional Street Address Guide - The BellSouth database, which contains street addresses validated to be accurate with state and local governments.
	RSAGADDR	RSAG software contract for address search
	RSAGTN	RSAG software contract for telephone number search
S	**SOCS**	Service Order Control System - The BellSouth Operations System which routes service order images among BellSouth drop points and BellSouth Operations Systems during the service provisioning process.
	SOIR	Service Order Interface Record - any change effecting activity to a customer account by service order that impacts 911/E911.
T	**TAFI**	Trouble Analysis Facilitation Interface - The BellSouth Operations System that supports trouble receipt center personnel in taking and handling customer trouble reports.
	TAG	Telecommunications Access Gateway – TAG was designed to provide an electronic interface, or machine-to-machine interface for the bi-directional flow of information between BellSouth's OSSs and participating CLECs.
	TN	Telephone Number
	TOTAL MANUAL FALLOUT	The number of LSRs which are entered electronically but require manual entering into a service order generator.
U	**UNE**	Unbundled Network Element
V	**VSEEM**	Voluntary Self Effectuating Enforcement Mechanism
W	**WTN**	A unique identifier for elements combined in a service configuration
X		
Y		
Z		
Σ		Sum of:

Appendix C

BELLSOUTH'S AUDIT POLICY:

BellSouth currently provides many CLECs with certain audit rights as a part of their individual interconnection agreements. However, it is not reasonable for BellSouth to undergo an audit of the SQM for every CLEC with which it has a contract. BellSouth has developed a proposed Audit Plan for use by the parties to an audit. If requested by a Public Service Commission or by a CLEC exercising contractual audit rights, BellSouth will agree to undergo a comprehensive audit of the aggregate level reports for both BellSouth and the CLEC(s) for each of the next five (5) years (2000 – 2005), to be conducted by an independent third party. The results of that audit will be made available to all the parties subject to proper safeguards to protect proprietary information. This aggregate level audit includes the following specifications:

1. The cost shall be borne 50% by BellSouth and 50% by the CLEC or CLECs.

2. The independent third party auditor shall be selected with input from BellSouth, the PSC, if applicable, and the CLEC(s).

3. BellSouth, the PSC and the CLEC(s) shall jointly determine the scope of the audit.

BellSouth reserves the right to make changes to this audit policy as growth and changes in the industry dictate.

VERSION CHANGE HISTORY

*Table of Contents

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Provisioning		New measurement added – P-6B. Coordinated Customer Conversions - %Provisioning Troubles Received Within 7 days of a completed Service Order	TOC
July, 2000	Change Management		New measurements added – Change Management Notices Sent on Time and % Change Management Notices – Delay 8 Plus Days	TOC

***NOTE:** The changes in this version of the SQM have been made primarily as a result of the 3rd party Audit by KPMG being conducted at the request of the GA PSC. None of the changes materially change the calculations or output of the SQM Reports.

VERSION CHANGE HISTORY

***Operational Support Systems (OSS)**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	**Report**	**Section Revised**	**Revisions**	**SQM Date**
July, 2000		Title	OSS-1. Average Response Time and Response Interval (Pre-Ordering/Ordering)	
July, 2000	Avg. Response Time & Response Interval (Pre-Ordering/ Ordering)		Changes made to the Legacy Systems Access Times Charts	
July, 2000	Interface Availability (Maintenance & Repair)	Business Rules	This measure is designed to compare the OSS availability versus scheduled availability of BST's legacy systems. Note: Only full outages are used in the calculation of Application Availability. A full outage is incurred when any of the following circumstances exist. • The application or system is down. • The application or system is inaccessible, for any reason, by the customers who normally access the application or system. • More than one work center cannot access the application or system for any reason. • When only one work center accesses an application or system and 40% or more of the clients in that work center cannot access the application. • When 40% of the functions the clients normally perform or 40% of the functionality that is normally provided by an application or system is unavailable.	
July, 2000	Response Interval (Maintenance & Repair)	Calculation	OSS Response Interval = (Query Response Date and Time for Category "X") – (Query Request Date and Time for Category "X") / (Number of Queries Submitted in the Reporting Period) where, "X" is 0-4, ≥ 4 to 10, ≥ 10, ≥ 30 seconds X 100	

VERSION CHANGE HISTORY

**Flow Through (Ordering)*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Date
July, 2000	LSR Flow Through Matrix		Deleted INP Rectype B and INP Rectype C Added Loop+INP and Loop+LNP Moved INP to LNP Conversions Changed Hunting Series Completion F/T column from No to Yes	

VERSION CHANGE HISTORY

*Ordering

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Date
July, 2000	Percent Rejected Service Requests	Data Retained Relating to . . .	**CLEC Experience** • Report month • Total number of LSRs • Total number of Rejects • ~~Total Number of Errors~~ • State and Region • Total Number of ASRs (Trunks)	
July, 2000	Reject Interval	Exclusions	• Service Requests canceled by CLEC prior to being rejected/clarified. • Designated Holidays are excluded from the interval calculation. • The following hours for Non-mechanized LSRs are excluded from the interval calculation*: - Residence Resale Group - from 10:00 PM ~~EST~~ Saturday until 7:00 AM ~~EST~~ Monday. - Business Resale, Complex, UNE Groups - from 8:00 PM ~~EST~~ Friday until 8:00 AM ~~EST~~ Monday. ~~- IPC - 4:30 PM CST Friday until 8:00 AM CST Monday.~~	
July, 2000	Reject Interval	Report Structure	• CLEC Specific • CLEC Aggregate • Fully Mechanized, Partially Mechanized, Total Mechanized, Non-Mechanized, Trunks	
July, 2000	Reject Interval	Level of Disaggregation	Added "more than or equal to" symbols to the minutes and hours for Mechanized and Non-mechanized numbers.	
July, 2000	Firm Order Confirmation Timeliness	Exclusions	• Rejected LSRs • Designated Holidays are excluded from the interval calculation. • The following hours for Non-mechanized LSRs are excluded from the interval calculation*: - Residence Resale Group - from 10:00 PM ~~EST~~ Saturday until 7:00 AM ~~EST~~ Monday. - Business Resale, Complex, UNE Groups - from 8:00 PM ~~EST~~ Friday until 8:00 AM ~~EST~~ Monday. ~~- IPC - 4:30 PM CST Friday until 8:00 AM CST Monday.~~	
July, 2000	Firm Order Confirmation Timeliness	Level of Disaggregation	Added "more than or equal to" symbols to the minutes and hours for Mechanized and Non-mechanized numbers.	
July, 2000	Speed of Answer in Ordering Center	Calculation	(Total seconds ~~time~~ in queue) / (Total ~~N~~number of ~~C~~calls answered in the Reporting Period)	

VERSION CHANGE HISTORY

***Provisioning**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Provisioning	Disaggregation (first page)	• Unbundled Network Elements ➢ UNE Design ➢ UNE Non-Design ➢ UNE 2 Wire Loop (Louisiana SQM) ➢ UNE Loop Other (Louisiana SQM) ➢ UNE Other Design (Louisiana SQM) ➢ UNE Other Non-Design (Louisiana SQM)	
July, 2000	Provisioning	Disaggregation (first page)	The following measure is the exception for all states: Coordinated Customer Conversion Hot Cut Timeliness(under development) Coordinated Customer Conversion - % Provisioning Troubles Received Within 7 days of a completed Service Order (under development)	
July, 2000	Mean Held Order Interval & Distribution Intervals	Definition	When delays occur in completing CLEC orders, the average period that CLEC orders are held for BST reasons, pending a delayed completion, should be no worse for the CLEC when compared to BST delayed orders. Calculation of the interval is the total days orders are held and pending but not completed that have passed the currently committed due date; divided by the total number of held orders. This report is based on orders still pending, held and past their committed due date at the close of the reporting period. The distribution interval is based on the number of orders held and pending but not completed over 15 and 90 days. (Orders reported in the >90 day interval are also included in the >15 day interval)	
July, 2000	Mean Held Order Interval & Distribution Intervals	Exclusion	• Order Activities of BST associated with internal or administrative use of local services. • **Disconnect (D) & From (F) orders** • Orders with appointment code of 'A' for Rural orders.	
July, 2000	Mean Held Order Interval & Distribution Intervals	Business Rules	**Mean Held Order Interval:** ....For each such order, the number of calendar days between the earliest committed due date on which BellSouth had a company missed appointment and the close of the reporting period is established and represents the held order interval for that particular order.	
July, 2000	Mean Held Order Interval & Distribution Intervals	Calculation	**Mean Held Order Interval:** Σ(Reporting Period Close Date –Earliest Committed Order Due Date with a BellSouth Missed Appointment) / (Number of Past Due Orders Held and Pending But Not Completed and past the committed due date)	
July, 2000	Avg. Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Exclusions	• Orders held for CLEC end user reasons • ~~Orders submitted to BST through non-mechanized methods~~ • **Disconnect (D) & From (F) orders**	
July, 2000	Percent Missed Installation Appointments	Business Rules	Percent Missed Installation Appointments (PMI) is the percentage of orders with completion dates in the reporting period that are past the original committed due date. ~~total orders processed for which BST is unable to complete the service orders on the confirmed due dates.~~	
July, 2000	Percent Missed Installation Appointments	Calculation	Percent Missed Installation Appointments = Σ (Number of Orders ~~Not Complete by committed Due Date~~ with Completion date in Reporting Period past the Original Committed Due Date) / (Number of Orders Confirmed in Reporting) X 100	

VERSION CHANGE HISTORY

***Provisioning**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Avg. Completion Interval (OCI) & Order Completion Interval Distribution	Business Rules	The accumulated time for each reporting dimension is then divided by the associated total number of orders completed. Orders that are worked on zero due dates are calculated with a .33 day interval (8 hours) in order to report a portion of a day interval. These orders are issued and worked/completed on the same day. They can be either flow through orders (no field work-non-dispatched) or field orders (dispatched).	
July, 2000	Avg. Completion Interval (OCI) & Order Completion Interval Distribution	Calculation	**Average Completion Interval:** Σ[(Completion Date ~~& Time~~) – (Order Issue Date ~~& Time~~)]/ Σ (Count of Orders Completed in Reporting Period)	
July, 2000	Avg. Completion Notice Interval	Exclusions	• Non-mechanized Orders • Partially Mechanized Orders • Cancelled Service Orders • Order Activities of BST associated with internal or administrative use of local services. • D&F orders	
July, 2000	Avg. Completion Notice Interval	Calculation	Σ (Date and Time of Notice of Completion) – (Date and Time of Work Completion) / (Number of Orders ~~Completed in~~ with Notice of Completion in Reporting Period)	
July, 2000	Coordinated Customer Conversions	Title	P-6. Coordinated Customer Conversions Interval	
July, 2000	Coordinated Customer Conversions – Hot Cut Timeliness % within Interval & Average Interval	Business Rules	. . . . ≤ 15 minutes includes intervals that began 15 minutes or less before the scheduled cut time and cuts that began 15 minutes or less after the scheduled cut time; >15 minutes, ≤30 minutes includes cuts within 16-30 minutes either prior to or after the scheduled cut time; >30 minutes includes cuts greater than 31 minutes either prior to or after the scheduled cut time.	
July, 2000	Coordinated Customer Conversions – Hot Cut Timeliness % within Interval & Average Interval	Level of Disaggregation	Reported in intervals of early, on time and late cuts %≤ 15 minutes; % >15 minutes, ≤30 minutes; % >30 minutes, plus Overall Average Interval	
July, 2000	Coordinated Customer Conversions - % Provisioning Troubles Received Within 7 days of a completed Service Order	All Sections	New Measurements	

VERSION CHANGE HISTORY
****Provisioning***

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	% Provisioning Troubles within 30 days of Service Order Completion	Title	P-7. % Provisioning Troubles within 30 days of Service Order ~~Activity~~ Completion	
July, 2000	% Provisioning Troubles within 30 days of Service Order Completion	Definition	Percent Provisioning Troubles within 30 days of ~~Installation~~ Service Order Completion measures the quality and accuracy of ~~installation activities.~~ Service order activities.	
July, 2000	% Provisioning Troubles within 30 days of Service Order Completion	Exclusions	• Trouble reports caused and closed out to Customer Provided Equipment (CPE)	
July, 2000	Total Service Order Cycle Time (TSOCT)	Business Rules	. . . . . Orders that are worked on zero due dates are calculated with a .33 day interval (8 hours) in order to report a portion of a day interval. These orders are issued and worked/completed on same day. They can be either flow through orders (no field work-non-dispatched) or field orders(dispatched).	
July, 2000	Total Service Order Cycle Time (TSOCT)	Calculation	*Total Service Order Cycle Time* Σ(Completion Date ~~and Time~~ of Service Order) ~~(SOCS HIST-CD DATE)~~ - (Date ~~and Time~~ of Service Request Receipt) / (Count of Orders Completed in Reporting Period)	
July, 2000	Total Service Order Cycle Time (TSOCT)	Report Structure	• Fully Mechanized; Partially Mechanized; Non-Mechanized	
July, 2000	Service Order Accuracy	Definition	The "service order accuracy" measurement measures the accuracy and completeness of a sample of BST service orders by comparing what was ordered and what was completed.	
July, 2000	Service Order Accuracy	Business Rules	. . . . . . For both small and large sample sizes, when a Service Request cannot be matched with a corresponding Service Order, it will not be counted. For small sample sizes an effort will be made to replace the service request.	
July, 2000	LNP-Percent Missed Installation Appointments	Calculation	LNP Percent Missed Installation Appointments = Σ (Number of Orders ~~Not Complete by committed Due Date~~ with Completion date in Reporting Period past the Original Committed Due Date) / (Number of Orders Confirmed in Reporting) X 100	
July, 2000	LNP-Total Service Order Cycle Time	Calculation	**Average Total Service Order Cycle Time:** Σ[(Service Order Completion Date ~~& Time~~) - (Service Request Receipt Date ~~& Time~~)] / Σ (Total Number Service Requests Completed in Reporting Period)	

VERSION CHANGE HISTORY

Maintenance & Repair

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Customer Trouble Rpt Rate	Definition	Initial and repeated customer direct or referred troubles ~~reported~~ closed within a calendar month per 100 lines/circuits in service.	
July, 2000	Customer Trouble Rpt Rate	Business Rules	Customer Trouble Report Rate is computed by accumulating the number of maintenance initial and repeated trouble reports closed during the reporting period.	
July, 2000	Customer Trouble Rpt Rate	Calculation	Customer Trouble Report Rate = (Count of Initial and Repeated Trouble Reports closed in the Current Period) / (Number of Service Access Lines in service at End of the Report Period) X 100	
July, 2000	Percent Repeat Troubles within 30 Days	Definition	Closed trouble reports on the same line/circuit as a previous trouble report received within 30 calendar days as a percent of total troubles closed. ~~reported~~	
July, 2000	Percent Repeat Troubles within 30 Days	Calculation	Percent Repeat Troubles within 30 Days = (Count of closed Customer Troubles where more than one trouble report was logged for the same service line within a continuous 30 days of the reporting period) / (Total Trouble Reports Closed in Reporting Period) X 100	

VERSION CHANGE HISTORY

******Billing***

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page

July, 2000
No Changes

VERSION CHANGE HISTORY

*OS/DA

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Speed to Answer Performance/Avg Speed to Answer - Toll	Business Rules	The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.	
July, 2000	Speed to Answer Performance/Avg Speed to Answer - Toll	Calculation	Total queue time ÷ total calls answered (Note: Total queue time includes time that answered calls wait in queue as well as time abandoned calls wait in queue prior to abandonment.)	
July, 2000	Speed to Answer Performance/Percent Answered with "X" Seconds – Toll	Business Rules	The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.	
July, 2000	Speed to Answer Performance/Avg Speed to Answer – Directory Assistance (DA)	Business Rules	The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.	
July, 2000	Speed to Answer Performance/Avg Speed to Answer – Directory Assistance (DA)	Calculation	Total queue time ÷ total calls answered (Note: Total queue time includes time that answered calls wait in queue as well as time abandoned calls wait in queue prior to abandonment.)	
July, 2000	Speed to Answer Performance/Percent Answered within "X" Seconds – Directory Assistance (DA)	Business Rules	The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is abandoned or transferred to BellSouth personnel assigned to handle calls for assistance. The system makes no distinction between CLEC customers and BST customers.	

VERSION CHANGE HISTORY

E911

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page

July, 2000
No Changes

VERSION CHANGE HISTORY

Trunk Group Performance

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Trunk Group Performance-Aggregate	Definition	~~A report of aggregate blocking information for CLEC trunk groups and BellSouth trunk groups.~~ The Trunk Group Performance report displays, over a reporting cycle, aggregate, weighted average trunk group blocking data for each hour of each day of the reporting cycle, for both CLEC affecting and BST affecting trunk groups.	**TGP-1. Pg. 2**
July, 2000	Trunk Group Performance-Aggregate	Business Rules	• ~~Aggregate blocking results are created using the statistical analysis package and are output into Excel with a separate table for each geographic area.~~ • ~~For each geographic area, plots are generated for; a) the monthly blocking by hour for each affecting group (BellSouth or CLEC), and b) the difference between BellSouth blocking data and CLEC blocking data is calculated and plotted.~~ • ~~The TCBH blocking is calculated by determining the monthly average blocking for each hour for each trunk. The hour with the highest usage is selected as the TCBH and the blocking for that hour is reported.~~ The purpose of the Trunk Group Performance Report is to provide trunk blocking measurements on CLEC and BST trunk groups for comparison only. It is not the intent of the report that it be used for network management and/or engineering. **Monthly Weighted Average Blocking:** • The reporting cycle includes both business and non-business days in a calendar month. • Monthly average blocking values are calculated for each trunk group for each of the 24 time consistent hours across a reporting cycle. **Aggregate Monthly Blocking:** • Used to compare aggregate blocking across trunk groups which terminate traffic at CLEC points of presence versus BellSouth switches. • Aggregate monthly blocking data is calculated for each hour of the day across all trunk groups assigned to a category.	
July, 2000	Trunk Group Performance-Aggregate	Calculation	**The calculation information has been replaced with the following information:** **Monthly Average Blocking:** • For each hour of the day, each day's raw data are summed across all valid measurements days in a report cycle for blocked and attempted calls. • The sum of the blocked calls is divided by the total number of calls attempted in a reporting period. **Aggregate Monthly Blocking:** • For each hour of the day, the monthly sums of the blocked and attempted calls from each trunk group are separately aggregated over all trunk groups within each assigned category. • The total blocked calls is divided by the total call attempts within a group to calculate an aggregate monthly blocking for each assigned group. • The result is an aggregate monthly average blocking value for each of the 24 hours by group. The difference between the CLEC and BellSouth affecting trunk groups are also calculated for each hour.	
July, 2000	Trunk Group Performance-Aggregate	Report Structure	• CLEC Aggregate • BST Aggregate ➢ State	

VERSION CHANGE HISTORY
**Trunk Group Performance*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Trunk Group Performance-Aggregate	Data Retained Relating to . . .	**CLEC Experience** • Hourly ~~average~~ blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group **BST Experience** • Aggregate Hourly ~~average~~ blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group	
July, 2000	Trunk Group Performance-CLEC Specific	Definition	A report of aggregate blocking information for CLEC trunk groups and BellSouth trunk groups. The Trunk Group Performance report displays, over a reporting cycle, aggregate, weighted average trunk group blocking data for each hour of each day of the reporting cycle, for both CLEC affecting and BST affecting trunk groups.	
July, 2000	Trunk Group Performance-CLEC Specific	Business Rules	• ~~Aggregate blocking results are created using the statistical analysis package and are output into Excel with a separate table for each geographic area.~~ • ~~For each geographic area, plots are generated for; a) the monthly blocking by hour for each affecting group (BellSouth or CLEC), and b) the difference between BellSouth blocking data and CLEC blocking data is calculated and plotted.~~ • ~~The TCBH blocking is calculated by determining the monthly average blocking for each hour for each trunk. The hour with the highest usage is selected as the TCBH and the blocking for that hour is reported.~~ The purpose of the Trunk Group Performance Report is to provide trunk blocking measurements on CLEC and BST trunk groups for comparison only. It is not the intent of the report that it be used for network management and/or engineering. **Monthly Weighted Average Blocking:** • The reporting cycle includes both business and non-business days in a calendar month. • Monthly average blocking values are calculated for each trunk group for each of the 24 time consistent hours across a reporting cycle. **Aggregate Monthly Blocking:** • Used to compare aggregate blocking across trunk groups which terminate traffic at CLEC points of presence versus BellSouth switches. • Aggregate monthly blocking data is calculated for each hour of the day across all trunk groups assigned to a category.	

VERSION CHANGE HISTORY

***Trunk Group Performance**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Trunk Group Performance-CLEC Specific	Calculation	**The calculation information has been replaced with the following information:** **Monthly Average Blocking:** • For each hour of the day, each day's raw data are summed across all valid measurements days in a report cycle for blocked and attempted calls. • The sum of the blocked calls is divided by the total number of calls attempted in a reporting period. **Aggregate Monthly Blocking:** • For each hour of the day, the monthly sums of the blocked and attempted calls from each trunk group are separately aggregated over all trunk groups within each assigned category. • The total blocked calls is divided by the total call attempts within a group to calculate an aggregate monthly blocking for each assigned group. • The result is an aggregate monthly average blocking value for each of the 24 hours by group. • The difference between the CLEC and BellSouth affecting trunk groups are also calculated for each hour.	
July, 2000	Trunk Group Performance-CLEC Specific	Data Retained Relating to . . .	**CLEC Experience** • Hourly ~~average~~ blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group **BST Experience** • Aggregate Hourly ~~average~~ blocking per trunk group • Hourly usage per trunk group • Hourly call attempts per trunk group	
July, 2000	Trunk Group Service Report	Business Rules	Traffic trunking data measurements are validated and processed by the ~~Total Network Data System/Trunking (TNDS/TK); a Telcordia (BellCore) supported application~~ Network Information Warehouse (NIW), on an hourly basis for ~~Average~~ Business and non-business Days ~~(Monday through Friday)~~. The traffic load sets, including offered load and observed blocking ratio (calls blocked divided by calls attempted), are averaged for ~~a 20 day~~ the entire report period, and the busy hour is selected. The busy hour average data for each trunk group is captured for reporting purposes.	
July, 2000	Trunk Group Service Detail	Business Rules	Traffic trunking data measurements are validated and processed by the ~~Total Network Data System/Trunking (TNDS/TK); a Telcordia (BellCore) supported application~~ Network Information Warehouse (NIW), on an hourly basis for ~~Average~~ Business and non-business Days ~~(Monday through Friday)~~. The traffic load sets, including offered load and observed blocking ratio (calls blocked divided by calls attempted), are averaged for ~~a 20 day~~ the entire report period, and the busy hour is selected. The busy hour average data for each trunk group is captured for reporting purposes.	

VERSION CHANGE HISTORY

**Collocation*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000	Average Response Time	Level of Disaggregation	• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA) • Virtual-Initial • Virtual-Augment • Virtual-Combined • Physical-Initial • Physical-Augment • Physical-Combined • Caged/Cageless (under development)	
July, 2000	Average Arrangment Time	Definition	Measures the average time (counted in calendar days) from the receipt of a complete and accurate Bone Fide firm order (including receipt of appropriate fee) to the date BST completes the collocation arrangement and notifies the CLEC.	
July, 2000	Average Arrangment Time	Exclusions	• Any Bona Fide firm order cancelled by the CLEC • Time for BST to obtain permits (applies in AL, GA, KY, LA, MS, NC, SC and TN) • ~~Time during which the collocation contract is being negotiated~~	
July, 2000	Average Arrangment Time	Level of Disaggregation	• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA) Virtual-Initial Virtual-Augment Virtual-Combined Physical-Initial Physical-Augment Physical-Combined • Cage/Cageless (under development)	
July, 2000	Percent of Due Dates Missed	Exclusions	• Any Bona Fide firm order cancelled by the CLEC • Time for BST to obtain permits • ~~Time during which the collocation contract is being negotiated~~	
July, 2000	Percent of Due Dates Missed	Calculation	% of Due Dates Missed = Σ (Number of Completed Orders that were not completed w/I ILEC Committed Due Date during Reporting Period) / Number of Orders Completed in Reporting Period) X 100.	
July, 2000	Percent of Due Dates Missed	Level of Disaggregation	• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA) Virtual-Initial Virtual-Augment Virtual-Combined Physical-Initial Physical-Augment Physical-Combined • Cage/Cageless (under development)	

VERSION CHANGE HISTORY

Change Management

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
July, 2000		% Change Management Notices Sent on Time	New Measurement	
July, 2000		% Change Management Notices – Delay 8 Plus Days	New Measurement	

VERSION CHANGE HISTORY

******Format Changes***

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	
May, 00	All Reports	Title	**BellSouth** **Service Quality Measurements ~~Performance Report~~ Plan**	

***NOTE:** ~~The changes in this version of the SQM have been made as a result of the Collaborative Process in Louisiana between BellSouth and the Joint CLECs (AT&T, MCIWorldCom, Sprint and Cox). This process and the associated workshops are being conducted by the Louisiana Public Service Commission in Docket U-22252-C. No other Commission has fostered or approved these changes. None of the changes materially change the calculations or output of the SQM Reports.~~

The changes in this version of the SQM have been made primarily as a result of the 3rd party Audit by KPMG being conducted at the request of the GA PSC. None of the changes materially change the calculations or output of the SQM Reports.

VERSION CHANGE HISTORY

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This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	All Reports	Category	Added the abbreviation of each measurement name	TOC
May, 00	All Reports	Title of the Measurement Column	Change Measurement Description from ~~Function~~	TOC
May, 00	All Reports	Version Date	~~Version: 02/19/00~~ May, 2000	TOC
May, 00	Ordering	All Section	Add new measurement title: O-4. CLEC LSR Information	TOC
May, 00	Ordering	Measurement#	~~O-4~~/O-5, ~~O-5~~/O-6, ~~O-6~~/O-7, ~~O-7~~/O-8, ~~O-8~~/O-9, ~~O-9~~/O-10, ~~O-10~~/O-11	TOC
May, 00	Provisioning	All Section	Add new measurement title: P-6A. Coordinated Customer Conversions Hot Cut Timeliness % within Interval and Average Interval	TOC
May, 00	Provisioning	Title	P-4. Average Completion Interval (OCI) & Order Completion Interval Distribution	TOC
May, 00	Provisioning	Title	P-8. Total Service Order Cycle Time (TSOCT)	TOC
May, 00	OS/DA	Title	OS-1. Speed to Answer Performance/Average Speed to Answer (Toll) OS-2. Speed to Answer Performance/Percent Answered within "X"Seconds (Toll) DA-3. Speed to Answer Performance/Average Speed to Answer (DA) DA-4. Speed to Answer Performance/Percent Answered within "XSeconds (DA)	TOC

VERSION CHANGE HISTORY

Operational Support Systems (OSS)

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Date
May, 00	Average Response Time and Response Interval **(Pre-Ordering)**	Business Rules	The average response time for retrieving pre-order/order information from a given legacy system is determined by summing the response times for all requests submitted to the legacy systems during the reporting period and dividing by the total number of legacy system requests for that month. The response interval starts when the client application (LENS or TAG for CLECs and RNS for BST) submits a request to the legacy system and ends when the appropriate response is returned to the client application. The number of ~~legacy~~ accesses to the legacy systems during the reporting period, which take less than 2.3 seconds and the number, which take more than 6 second are also captured.	**OSS-1 Pg. 1**
May, 00	Average Response Time and Response Interval **(Pre-Ordering)**	Level of Disaggregation	• **HAL/CRIS** (Hands-Off Assignment Logic/Customer Record Information System) – a system used to access the Business Office Customer Record Information System (BOCRIS). It allows BST servers, including LENS, access to legacy systems. CLECs query this legacy system.	**OSS-1 Pg. 1**
May, 00	Interface Availability **(Pre-Ordering)**	Report Structure	• ~~Not CLEC Specific~~ • ~~Not product/service specific~~ • ~~Regional Level~~ • Aggregate ➢ CLEC ➢ BST & CLEC • Regional Level	**OSS-2 Pg. 3**
May, 00	Interface Availability **(Pre-Ordering)**	Retail Analog/Benchmark	~~Benchmark – 99.5%~~ See Appendix D	**OSS-2 Pg. 3**
May, 00	Interface Availability **(Pre-Ordering)**	Chart	Alphabetice and separated to match the current PMAP reports on the web.	**OSS-2 Pg. 3**
May, 00	Interface Availability **(Maintenance & Repair)**	Report Structure	• ~~Not CLEC Specific~~ • ~~Not product/service specific~~ • ~~Regional Level~~ • Aggregate ➢ CLEC ➢ BST & CLEC • Regional Level	**OSS-3 Pg. 4**
May, 00	Interface Availability **(Maintenance & Repair)**	Data Retained (CLEC Expt.)	• ECTA ~~(Under Development)~~	**OSS-3 Pg. 4**
May, 00	Response Interval **(Maintenance & Repair)**	Definition	The response intervals are determined by subtracting the time a request is received on the BST side of the interface from the time the response is received from the legacy system. Percentages of requests falling into each interval category are reported, along with the actual number of requests falling into those categories.	**OSS-4 Pg. 5**
May, 00	Response Interval **(Maintenance & Repair)**	Business Rules	.... The clock starts on the date and time when the request is received on the BST side of the interface and the clock stops when the response has been transmitted through that same point to the requester. **NOTE:** The OSS Response Interval BST Total Report is a combination of BST Residence and Business Total.	**OSS-4 Pg. 5**

VERSION CHANGE HISTORY

**Flow Through (Ordering)*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Date
May, 00	Percent Flow-Through Svc. Requests (Summary)	Business Rules	**Fatal Rejects:** Errors that prevent an LSR, submitted electronically by the CLEC, from being processed further. . . . . . . **Total System Fallout:** . . . . . . If it is determined the error is caused by the CLEC, the LSR will be sent back to the CLEC for ~~as~~ clarification.	**O-1. Pg. 1**
May, 00	Percent Flow-Through Svc. Requests (Detail)	Business Rules	**Fatal Rejects:** Errors that prevent an LSR, submitted electronically by the CLEC, from being processed further. . . . . . . **Total System Fallout:** . . . . . . If it is determined the error is caused by the CLEC, the LSR will be sent back to the CLEC for ~~as~~ clarification.	**O-2. Pg. 3**
May, 00	CLEC LSR Information	All	New Report **(Due to the new report, it has re-numbered the remaining Ordering Measurements that follows)**	**O-4. Pg. 6**
May, 00	LSR Flow Through Matrix		2 wire analog DID trunk port - ~~YES~~ NA (Planned Fallout for Manual Handling) 2 wire ISDN digital line side port - ~~YES~~ NA (Planned Fallout for Manual Handling) 2 wire ISDN digital loop – ~~NA~~ Yes (Planned Fallout for Manual Handling) 3 Way Calling – ~~NA~~ No (Planned Fallout for Manual Handling) 4 wire analog voice grade loop - ~~NA~~ No (Planned Fallout for Manual Handling) 4 wire DS0 & PRI digital loop - ~~YES~~ NA (Planned Fallout for Manual Handling) 4 wire DS1 & PRI digital loop - ~~YES~~ NA (Planned Fallout for Manual Handling) ADSL - ~~YES~~ NA (Planned Fallout for Manual Handling) DS1 Loop - ~~YES~~ No (Planned Fallout for Manual Handling) DS0 Loop - ~~YES~~ No (Planned Fallout for Manual Handling) ~~Hunting Series Completion DM10~~ Hunting Series Completion - ~~YES~~ No (Planned Fallout for Manual Handling) Port/Loop Combo – ~~N~~ Y ~~Yes – LENS, April, 2000~~ (LENS 99 & Comment) RCF Basic – ~~NA~~ No, ~~N~~ Y, ~~N~~ Y, ~~N~~ Y, ~~N~~ Y (Pl.Ma.Han., EDI, TAG, LENS99 LENS) Synchronet – ~~NA~~ Yes Unbundled Loop-Analog 2W, SL1, SL2– ~~N~~ Y ~~Yes-LENS,Apr.00~~ (LENS99, Comm.)	**Matrix Pg. 7-9**

VERSION CHANGE HISTORY

*_Ordering_

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Percent Rejected Service Requests	Business Rules	**Fully Mechanized:** (EDI, LENS, TAG, LEO, LESOG) **Partially Mechanized:** A valid LSR, which is electronically submitted (via EDI, LENS, TAG) but cannot be processed electronically and "falls out" for manual handling. It is then put into "clarification and ~~(rejected)~~ sent back (rejected) to the CLEC. **Total Mechanized:** Combination of Fully Mechanized and Partially Mechanized LSRs ~~which were~~ electronically submitted by the CLEC. **Non-Mechanized:** LSRs which are faxed or mailed to the LCSC for processing and ~~is~~ "clarified" (rejected) back to the CLEC by the BST service representative. **Interconnection Trunks:** Interconnection Trunks are ordered on Access Service Requests (ASRs). ASRs are submitted to and processed by the Interconnection Purchasing Center (IPC). Trunk data is reported as a separate category.	**O-5. Pg. 10**
May, 00	Percent Rejected Service Requests	Level of Disaggregation	• Product Reporting Levels **ADD:** ➢ Other • Product Specific % Rejected • Total % Rejected	**O-5. Pg. 10**
May, 00	Reject Interval	Exclusions	• ~~Weekend hours for Partially Mechanized and Non Mechanized LSRs.~~ • Designated Holidays. • The following hours for Non-mechanized LSRs*: - Residence Resale Group - from 10:00 PM EST Saturday until 7:00 AM EST Monday. - Business Resale, Complex, UNE Groups - from 8:00 PM EST Friday until 8:00 AM EST Monday. - IPC – 4:30 PM CST Friday until 8:00 AM CST Monday. * The hours excluded will be altered to reflect changes in the Center operating hours.	**O-6. Pg. 12**
May, 00	Reject Interval	Business Rules	**Interconnection Trunks:** Interconnection Trunks are ordered on Access Service Requests (ASRs). ASRs are submitted to and processed by the Interconnection Purchasing Center (IPC). Trunk data is reported as a separate category.	**O-6. Pg. 12**
May, 00	Reject Interval	Report Structure	• Fully Mechanized, Partially Mechanized, Total Mechanized, Non-Mechanized, ~~Trunks~~	**O-6. Pg. 12**
May, 00	Reject Interval	Level of Disaggregation	Reformatted and clarified intervals	**O-6. Pg. 13**
May, 00	Firm Order Confirmation Timeliness	Definition	Interval for Return of a Firm Order Confirmation (FOC Interval) is the average ~~response~~ time from receipt of valid LSR to distribution of a Firm Order Confirmation.	**O-7. Pg. 14**

VERSION CHANGE HISTORY

*Ordering

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Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Firm Order Confirmation Timeliness	Exclusions	• ~~Weekend hours for Partially Mechanized and Non-Mechanized LSRs.~~ • Designated Holidays • The following hours for Non-mechanized LSRs*: - Residence Resale Group – from 10:00 PM EST Saturday until 7:00 AM EST Monday. - Business Resale, Complex, UNE Groups - from 8:00 PM EST Friday until 8:00 AM EST Monday. - IPC – 4:30 PM CST Friday until 8:00 AM CST Monday. * The hours excluded will be latered to reflect changes in the Center operating hours.	**O-7. Pg. 14**
May, 00	Firm Order Confirmation Timeliness	Business Rules	**Interconnection Trunks:** Interconnection Trunks are ordered on Access Service Requests (ASRs). ASRs are submitted to and processed by the Interconnection Purchasing Center (IPC). Trunk data is reported as a separate category.	**O-7. Pg. 14**
May, 00	Firm Order Confirmation Timeliness	Level of Disaggregation	Reformatted and clarified intervals	**O-7. Pg. 15**
May, 00	Speed of Answer in Ordering Center	Report Structure	• ~~CLEC Aggregate~~ • ~~BST Aggregate~~ Aggregate • CLEC – Local Carrier Service Center • BST - Business Service Center - Residence Service Center Note: Combination of Residence Service Center and Business Service Center data under development	**O-8. Pg. 16**
May, 00	Speed of Answer in Ordering Center	Level of Disaggregation	• ~~CLEC Aggregate~~ • ~~BST Aggregate~~ Aggregate • CLEC – Local Carrier Service Center • BST - Business Service Center - Residence Service Center Note: Combination of Residence Service Center and Business Service Center data under development)	**O-8. Pg. 16**
May, 00	Ordering	LNP - Titles	~~LNP-8.~~ O-9. LNP – ~~LNP-9.~~ O-10. LNP- ~~LNP-10.~~ O-11. LNP-	**Pg. 17, 18, 20**
May, 00	(LNP) Percent Rejected Service Requests	Exclusions	• Non Mechanized LSR's	**O-9 Pg. 17**
May, 00	(LNP) Percent Rejected Service Requests	Business Rules	**Partially Mechanized**: A valid LSR which electronically submitted (via EDI or TAG), but cannot be processed electronically due to a CLEC error and "falls out" for manual handling. It is then put into "clarification", and sent back (rejected) to the CLEC.	**O-9 Pg. 17**

VERSION CHANGE HISTORY

Ordering

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Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	(LNP) Reject Interval Distribution & Average Reject Interval	Exclusions	• Non Mechanized LSR's	**O-10. Pg. 18**
May, 00	(LNP) Reject Interval Distribution & Average Reject Interval	Level of Disaggregation	Reformatted and clarified intervals	**O-10. Pg. 19**
May, 00	(LNP) Firm Order Confirmation Timeliness Interval Distribution & Firm Order Confirmation Average Interval	Level of Disaggregation	Reformatted and clarified intervals	**O-11. Pg. 21**

VERSION CHANGE HISTORY

***_Provisioning_**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Provisioning	LNP - Titles	~~LNP - 10.~~ P-10. LNP – ~~LNP-11.~~ P-11. LNP- ~~LNP-12.~~ P-12. LNP-	Pg.14, 15, 16
May, 00	Provisioning	Page One	• Unbundled Network Elements ➢ Combos, Switching, Local Transport, DSL (under development) The following measure is the exception for all states: Coordinated Customer Conversion Hot Cut Timeliness (under development)	Pg. 1
May, 00	Mean Held Order	Definition	. . . . Calculation of the interval is the number of orders held and pending but not completed that have passed the currently committed due date. The distribution interval is based on the number of orders held and pending but not completed over 15 and 90 days. (Orders reported in the >90 day interval are also included in the >15 day interval)	P-1. Pg. 2
May, 00	Mean Held Order	Calculation	**Mean Held Order Interval**: Σ(Reporting Period Close Date – Committed Order Due Date) / (Number of Past Due Orders Held and Pending and Past The Committed Due Date) ~~for all orders pending and past the committed due date.~~ **Held Order Distribution Interval**: (# of Orders Held for ≥90 days) / (Total # of Past Due Orders Held and Pending But Not Completed) X 100 (# of Orders Held for ≥15 days) / (Total # of Past Due Orders Held and Pending But Not Completed) X 100	P-1. Pg. 2
May, 00	Average Jeopardy Notice	Definition	When BST can determine in advance that a committed due date is in jeopardy for facility delay, it will provide advance notice to the CLEC. The interval is from the date/time the notice is released to the CLEC/BST systems until 5pm on the commitment date of the order. The Percent of Orders is the percentage of orders given jeopardy notices for facility delay in the count of orders confirmed in the report period.	P-2. Pg. 4
May, 00	Average Jeopardy Notice	Business Rules	When BST can determine in advance that a committed due date is in jeopardy for facility delay, it will provide advance notice to the CLEC.	P-2. Pg. 4
May, 00	Average Jeopardy Notice	Retail Analog	~~95% > 24 hours~~ See Appendix D	P-2. Pg. 4
May, 00	Percent Missed Install	Definition	. . . . . This measure is the percentage of total orders processed for which BST is unable to complete the service orders on the committed due dates and reported for both BST and End User Misses.	P-3. Pg. 5

VERSION CHANGE HISTORY

***Provisioning**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Percent Missed Install	Business Rules	Percent Missed Installation Appointments (PMI) is the percentage of total orders processed for which BST is unable to complete the service orders on the confirmed due dates. Missed Appointments caused by end-user reasons will be included and reported separately. ~~A business day The "due date"~~is any time ~~period within~~ on the ~~same~~ confirmed due date ~~frame~~,-wWhich-means there cannot be a cutoff time for commitments, as certain types of orders are requested to be worked after standard business hours. Also, during Daylight Savings Time, field technicians are scheduled until 9PM in some areas and the customer is offered a greater range of intervals from which to select.	**P-3. Pg. 5**
May, 00	Average Completion Interval	Definition	. . . . . This report measures how well BellSouth meets the interval offered to customers on service orders.	**P-4. Pg. 6**
May, 00	Average Completion Interval	Exclusions	~~• D (Disconnect) and F (From) orders. (From is disconnect side of a move order when the customer moves to a new address).~~ • Disconnect (D&F) listing orders	**P-4. Pg. 6**
May, 00	Average Completion Interval	Business Rules	. . . . .The completion interval is the elapsed time from when BST issues a FOC or SOCS date time stamp receipt of an order from the CLEC to BST's actual order completion date. This includes all delays for BST's CLEC/End Users. The clock starts when a valid order number is assigned by SOCS and stops when the technician or system completes the order in SOCS.	**P-4. Pg. 6**
May, 00	Average Completion Notice Interval	Business Rules	Measurement on interval of completion date and time entered by a field technician on dispatched orders, and 5PM start time on the due date for non-dispatched orders; to the release of a notice to the CLEC/BST of the completion status. The field technician notifies the CLEC the work was complete and then he/she enters the completion time stamp information in his/her computer.	**P-5. Pg. 8**
May, 00	Average Completion Notice Interval	Data retained CLEC Data Retained BST	• ~~Activity Type~~ • CLEC Order Number (so_nbr) • Work Completion Date (cmpltn_dt) • ~~CLEC~~ BST Order Number • ~~Activity Type~~ • CLEC Order Number (so_nbr) • Work Completion Date (cmpltn_dt)	**P-5. Pg. 8**
May, 00	Coordinated Customer Conversions	Definition	This ~~category~~ report measures the average time it takes BST to disconnect an unbundled loop from the BST switch and cross connect it to a CLEC's equipment. .	**P-6. Pg. 9**
May, 00	Coordinated Customer Conversions	Retail Analog/Benchmark	~~There is no retail analog for this measurement because it measures cutting loops to the CLEC.~~	**P-6. Pg. 9**
May, 00	Coordinated Cust. Conver. – Hot Cut Timeliness	All sections	New measurement	**P-6A. Pg. 10**

VERSION CHANGE HISTORY

***_Provisioning_**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Provisioning Troubles within 30 days	Business Rules	Reports are calculated searching in the prior report period for completed service orders and following 30 days after completion of the service order for a trouble report issue date.	**P-7. Pg. 11**
May, 00	Total Service Order Cycle Time (TSOCT)	Data Retained (CLEC Exp.)	ADD: CLEC Company Name (OCN)	**P-8. Pg. 12**
May, 00	Service Order Accuracy (GA)	Data Retained (CLEC Exp.)	~~NOTE: Code in parentheses is the corresponding header found in the raw data file~~	**P-9. Pg. 13**
May, 00	LNP-Percent missed Installation	Definition	. . . . . This measure is the percentage of total orders processed for which BST is unable to complete the service orders on the committed due dates and reported for both BST and End User Misses.	**P-10. Pg. 14**
May, 00	LNP-Percent missed Installation	Business Rules	. . . . The "due date"~~A business day~~ is any time ~~period within~~ on the confirmed due ~~same~~ date ~~frame~~, ...	**P-10. Pg. 14**
May, 00	LNPDisconnect Timeliness	Business Rules	The Disconnect Timeliness interval is determined for ~~the last~~ each Disconnect service order processed on an LSR during the reporting period. The Disconnect Timeliness interval is the elapsed time from when BST receives the ~~last~~ 'Number Ported' message for an LSR's disconnect order from NPAC (signifying the CLEC 'Activate') until the ~~last~~ Disconnect service order is completed in SOCS. Elapsed time for each order is accumulated for each reporting dimension. The accumulated time for each reporting dimension is then divided by the total number of selected disconnect orders which have been completed.	**P-11. Pg. 15**

VERSION CHANGE HISTORY

**Maintenance & Repair*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Maintenance & Repair	Level of Disaggregation	• Resale/Retail – (Note: ISDN Trouble included in ~~Non-Design~~ POTS for Georgia Only) • Unbundled Network Elements ➢ UNE Design ~~(Georgia and Regional SQM)~~ ➢ UNE Non-Design ~~(Georgia and Regional SQM)~~ ➢ Combos, Switching, Local Transport, DSL (under development)	Pg. 1
May, 00	Missed Repair Appointments	Business Rules	. . . . . The cleared time is the date and time that BST personnel clear the trouble and closes the trouble report in his/her Computer Access Terminal (CAT) or workstation.	M&R-1. Pg. 2
May, 00	Maintenance Average Duration	Business Rules	. . . . The clock stops on the date and time the service is restored and the BST or CLEC customer is notified (when the technician completes the trouble ticket on his/her CAT or work systems). ~~NOTE: Customer can be BST or CLEC~~	M&R-3. Pg. 4
May, 00	Out of Svc. (OOS) > 24 Hrs.	Definition	For Out of Service Troubles (no dial tone, cannot be called or cannot call out) the percentage of Total OOS Troubles cleared in excess of 24 hours. (All design services are considered to be out of service).	M&R-5. Pg. 6
May, 00	Out of Svc. (OOS) > 24 Hrs.	Business Rules	. . . .The clock begins when the trouble report is created in LMOS and the trouble is counted if the elasped time exceeds 24 hours.	M&R-5. Pg. 6
May, 00	Out of Svc. (OOS) > 24 Hrs.	Calculation	Out of Service (OOS) > 24 hours = (Total Cleared Troubles OOS > 24 Hours) / Total OOS Troubles in Reporting Period) X 100	M&R-5. Pg. 6
May, 00	Average Answer Time-Repair Ctr.	Definition	This measures the average time a customer is in Queue when calling a BellSouth Repair Center.	M&R-6. Pg. 7
May, 00	Average Answer Time-Repair Ctr.	Business Rules	~~This measure is designed to measure the time required for CLEC & BST from the time of the ACD choice to the time of being answered.~~ The clock starts when ~~the~~ a CLEC Representative or BellSouth customer makes a choice ~~to be~~ on the Repair Center's menu and is put in queue for the next repair attendant. ~~and the~~ The clock stops when the repair attendant answers the call. (abandoned calls are not included) (NOTE: The Total Column is a combined BST Residence and Business number)	M&R-6. Pg. 7

VERSION CHANGE HISTORY

*Billing

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	**Report**	**Section Revised**	**Revisions**	**SQM Page**
May, 00	Invoice Accuracy	Business Rules	The accuracy of billing invoices delivered by BST to the CLEC must enable them to provide a degree of billing accuary comparative to BST bills rendered to retail customers of BST.	**B-1. Pg. 1**
May, 00	Invoice Accuracy	Calculation	**Invoice Accuracy** = (Total Billed Revenues during current month) – (Absolute Value of Billing Related Adjustments during current month) / Total Billed Revenues during current month X 100	**B-1. Pg. 1**
May, 00	Mean Time to Deliver Invoices	Definition	Bill Distribution is calculated as follows: CRIS BILLS-The number of work days is reported for CRIS bills. This is calculated by counting the Bill Period date as the first work day. Weekends and holidays are excluded when counting work days. J/N Bills are counted in the CRIS work day category for the purposes of the measurement since their billing account number (Q account) is provided from the CRIS system. CABS BILLS-The number of calendar days is reported for CABS bills. This is calculated by counting the day following the Bill Period date as the first calendar day. Weekends and holidays are included when counting the calendar days.~~This measure provides the mean interval for billing invoices~~	**B-2. Pg. 2**
May, 00	Mean Time to Deliver Invoices	Business Rules	This report ~~M~~measures the mean interval for timeliness of billing records delivered to CLECs in an agreed upon format. CRIS-based invoices are measured in business days, and CABS-based invoices in calendar days.	**B-2. Pg. 2**
May, 00	Usage Data Delivery Timeliness	Calculation	Usage Data Delivery Timeliness Current month = Σ(Total number of usage records sent within six (6) calendar days from initial recording/receipt) / Σ(Total number of usage records sent) X 100	**B-5. Pg. 5**
May, 00	Mean Time to Deliver Usage	Calculation	Mean Time to Deliver Usage = Σ (~~Record volume~~ Volume of Records Delivered X estimated number of days to deliver ~~the Usage Record~~) / ~~t~~Total ~~r~~Record ~~v~~Volume Delivered **Note:** Any usage record falling in the 30+ day interval will be added using an average figure of of 31.5 days.	**B-6. Pg. 6**

VERSION CHANGE HISTORY
*OS/DA

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Average Speed to Answer - Toll	Exclusions	~~Calls abandoned by customers are not reflected in the average speed to answer but are reflected in the conversion tables where the percent answered within "X" seconds is determined.~~ None	**OS-1. Pg. 1**
May, 00	Average Speed to Answer - Toll	Business Rules	~~The call waiting measurement scan starts when the customer enters the queue and ends when a BST representative answers the call. The average speed to answer is determined by measuring and accumulating the seconds of wait time from the entry of a customer into the BST call management system queue until the customer is transferred to a BST representative.~~ The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is transferred to BellSouth personnel assigned to handle calls for assistance. . ~~No distinction is made~~ The system makes no distinction between CLEC customers and BST customers.	**OS-1. Pg. 1**
May, 00	Average Speed to Answer - Toll	Calculation	The Average Speed to Answer for toll is calculated by using data from monthly system measurement reports taken from the centralized call routing switches. The "total call waiting seconds" is a sub-component of this measure which BST systems calculate by monitoring the number of calls in queue throughout the day multiplied by the time (in seconds) between monitoring events. The "total calls served" is the other sub-component of this measure, which BST systems record as the total number of calls handled by Operator Services toll centers. Since calls abandoned are not reflected in the calculation, the percent answered within the required timeframe is determined by using conversion tables with input for the abandonment rate. Total queue time ÷ total calls answered	**OS-1. Pg. 1**
May, 00	Average Speed to Answer - Toll	Report Structure	• ~~CLEC Specific~~ • ~~CLEC Aggregate~~ • ~~BST Aggregate~~ • Reported for the aggregate of BST and CLECs ➢ State	**OS-1. Pg. 1**
May, 00	Average Speed to Answer - Toll	Level of Disaggregation	• None • ~~Reported for the aggregate of BST and CLECs~~ ➢ ~~State~~	**OS-1. Pg. 1**
May, 00	Percent Answered with "X" Seconds - Toll	Definitions	Measurement of the percent of toll calls that are answered in less than "X" seconds. The number of seconds represented by "X" is thirty, except where a different regulatory benchmark has been set ~~against~~ for the Average Speed to Answer by a State Commission.	**OS-2. Pg. 2**
May, 00	Percent Answered with "X" Seconds - Toll	Exclusions	~~Calls abandoned by customers are not reflected in the average speed to answer but are reflected in the conversion tables where the percent answered within "X" seconds is determined.~~ None	**OS-2. Pg. 2**

VERSION CHANGE HISTORY
<u>OS/DA</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Percent Answered with "X" Seconds - Toll	Business Rules	~~The call waiting measurement scan starts when the customer enters the queue and ends when a BST representative answers the call. The average speed to answer is determined by measuring and accumulating the seconds of wait time from the entry of a customer into the BST call management system queue until the customer is transferred to a BST representative.~~ <u>The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is transferred to BellSouth personnel assigned to handle calls for assistance.</u> ~~No distinction is made~~<u>The system makes no distinction</u> between CLEC customers and BST customers.	**OS-2. Pg. 2**
May, 00	Average Speed to Answer – Directory Assistance (DA)	Exclusions	~~Calls abandoned by customers are not reflected in the average speed to answer but are reflected in the conversion tables where the percent answered within "X" seconds is determined.~~ None	**DA-1. Pg. 3**
May, 00	Average Speed to Answer – Directory Assistance (DA)	Business Rules	~~The call waiting measurement scan starts when the customer enters the queue and ends when a BST representative answers the call. The average speed to answer is determined by measuring and accumulating the seconds of wait time from the entry of a customer into the BST call management system queue until the customer is transferred to a BST representative.~~ The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is transferred to BellSouth personnel assigned to handle calls for assistance. ~~No distinction is made~~ <u>The system makes no distinction</u> between CLEC customers and BST customers.	**DA-1. Pg. 3**
May, 00	Average Speed to Answer – Directory Assistance (DA)	Calculation	~~The call waiting measurement scan starts when the customer enters the queue and ends when a BST representative answers the call. The average speed to answer is determined by measuring and accumulating the seconds of wait time from the entry of a customer into the BST call management system queue until the customer is transferred to a BST representative.~~ The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is transferred to BellSouth personnel assigned to handle calls for assistance. ~~No distinction is made~~ <u>The system makes no distinction</u> between CLEC customers and BST customers.	**DA-1. Pg. 3**
May, 00	Percent Answered within "X" Seconds – Directory Assistance (DA)	Definition	...... The number of seconds represented by "X" is twenty, except where a different regulatory benchmark has been set ~~against~~ <u>for</u> the Average Speed to Answer by a State Commission.	**DA-2. Pg. 4**
May, 00	Percent Answered within "X" Seconds – Directory Assistance (DA)	Exclusions	~~Calls abandoned by customers are not reflected in the average speed to answer but are reflected in the conversion tables where the percent answered within "X" seconds is determined.~~ None	**DA-2. Pg. 4**

VERSION CHANGE HISTORY

***OS/DA**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Percent Answered within "X" Seconds – Directory Assistance (DA)	Business Rules	~~The call waiting measurement scan starts when the customer enters the queue and ends when a BST representative answers the call. The average speed to answer is determined by measuring and accumulating the seconds of wait time from the entry of a customer into the BST call management system queue until the customer is transferred to a BST representative.~~ The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is transferred to BellSouth personnel assigned to handle calls for assistance. ~~No distinction is made~~ The system makes no distinction between CLEC customers and BST customers.	**DA-2. Pg. 4**

VERSION CHANGE HISTORY

<u>E911</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Timeliness	Definition	Measures the percent~~age~~ of batch orders for E911 database updates (to CLEC resale and BST retail records) processed successfully within a 24-hour period.	**E-1. Pg. 1**
May, 00	Timeliness	Business Rules	..... Mechanical processing starts when SCC (BST's E911 vendor) receives E911 files containing batch orders extracted from BST's Service Order ~~Communication~~ Control System (SOCS). Processing stops when SCC loads the individual records to the E911 database. The system makes ~~N~~no distinctions ~~are made~~ between CLEC resale records and BST retail records.	**E-1. Pg. 1**
May, 00	Accuracy	Definition	Measures the percent of ~~individual~~ E911 telephone number (TN) record updates (to CLEC resale and BST retail records) processed successfully for E911.	**E-2. Pg. 2**
May, 00	Accuracy	Business Rules	..... Mechanical processing starts when SCC (BST's E911 vendor) receives E911 files containing telephone number (TN) records extracted from BST's Service Order ~~Communication~~ Control System (SOCS). The system makes ~~N~~no distinctions ~~are made~~ between CLEC resale records and BST retail records.	**E-2. Pg.2**
May, 00	Mean Interval	Business Rules	..... Data is posted is 4-hour increments up to and beyond 24 hours. The system makes ~~N~~no distinctions ~~are made~~ between CLEC resale records and BST retail records.	**E-3. Pg. 3**

VERSION CHANGE HISTORY

****Trunk Group Performance***

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Trunk Group Performance – Aggregate	Calculation	Heading: Calculation $\frac{(1x\cancel{5})+(0.5x\cancel{5})+(2x4)+(1.5x4)}{\cancel{5}+\cancel{5}+4+4} = 1.\cancel{2}\%$ has been replaced with	**TGP-1. Pg. 2**
May, 00	Trunk Group Performance – CLEC Specific	Calculation	$\frac{(1x7)+(0.5x7)+(2x5)+(1.5x6)}{\underline{7}+\underline{7}+\underline{5}+\underline{6}} = 1.\underline{8}\%$	**TGP-2. Pg. 4**

VERSION CHANGE HISTORY
*<u>*Collocation*</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Average Response Time	Exclusions	• ~~Requests to augment previously completed arrangements~~ • Any application cancelled by the CLEC	**C-1. Pg. 1**
May, 00	Average Response Time	Calculation	Average Response Time = Σ[(Request Response Date) – (Request Submission Date)] / Count of Responses Returned within Reporting Period.	**C-1. Pg. 1**
May, 00	Average Response Time	Level of Disaggregation	ADD – • <u>Caged/Cageless (under development)</u>	**C-1. Pg. 1**
May, 00	Average Arrangment Time	Definition	Measures the average time from the receipt of a complete and accurate Bone Fide firm order (including receipt of appropriate fee) to the date BST completes the collocation arrangement <u>and notifies the CLEC</u>.	**C-2. Pg. 2**
May, 00	Average Arrangment Time	Exclusions	• Any Bona Fide firm order cancelled by the CLEC • ~~Bona Fide firm orders to augment previously completed arrangements~~ • Time for BST to obtain permits • Time during which the collocation contract is being negotiated	**C-2. Pg. 2**
May, 00	Average Arrangment Time	Business Rules	……. The clock stops on the date that BST completes the collocation arrangement <u>and notifies the customer</u>.	**C-2. Pg. 2**
May,00	Average Arrangment Time	Calculation	Average Arrangement Time = Σ[(Date Collocation Arrangement is Complete) – (Date Order for Collocation Arrangement Submitted)] / Total Number of Collocation Arrangements Completed during Reporting Period.	**C-2. Pg. 2**
May, 00	Average Arrangment Time	Level of Disaggregation	ADD – • <u>Caged/Cageless (under development)</u>	**C-2. Pg. 2**
May, 00	Percent of Due Dates Missed	Exclusions	• Any Bona Fide firm order cancelled by the CLEC • ~~Bona Fide firm orders to augment previously completed arrangements~~ • Time for BST to obtain permits • Time during which the collocation contract is being negotiated	**C-3. Pg. 3**
May, 00	Percent of Due Dates Missed	Business Rules	<u>Percent Due Dates Missed is the percent of total collocation arrangements which BST is unable to complete by end of the ILEC committed due date.</u> The clock starts on the date that BST receives a complete and accurate Bona Fide firm order accompanied by the appropriate fee. <u>The arrangement is considered a missed due date if it is not completed on or before the committed due date.</u> ~~The clock stops on the date that BST completes the collocation arrangement.~~	**C-3. Pg. 3**
May, 00	Percent of Due Dates Missed	Level of Disaggregation	ADD – • <u>Caged/Cageless (under development)</u>	**C-3. Pg. 3**

VERSION CHANGE HISTORY

*<u>*Appendix A*</u>*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Reporting Scope	Standard Svc. Groupings	Matched with the Product Reporting Levels with Maintenance & Repair and Provisioning.	Pg. 1
May, 00	Reporting Scope	Standard Svc. Groupings	***Pre-Order, Ordering*** ➢ Residence Resale ~~Resale Residence~~ ➢ Business Resale ~~Resale Business~~ ➢ Special ~~Resale~~ ➢ Local Interconnection Trunks ➢ UNE ➢ UNE Design ➢ UNE - Loops w/LNP	Pg. 1
May, 00	Reporting Scope	Report Levels	ADD – BST MSA	Pg. 2
May, 00	Reporting Scope	Maintenance Query Types	ADD - TAFI - *Note TAFI Access the system list below: ➢ CRIS ➢ DLR ➢ LMOSupd ➢ March ➢ Predictor ➢ Oleth ➢ LMOS ➢ LNP ➢ NIW ➢ OSPCM ➢ SOCS	Pg. 3

VERSION CHANGE HISTORY

*Appendix B

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	**Report**	**Section Revised**	**Revisions**	**SQM Page**
May, 00	Glossary of Acronyms and Terms	A	ADD – ALEC – Alternative Local Exchange Company = FL CLEC	**Pg. 1**
May, 00	Glossary of Acronyms and Terms	C	ADD – CLP – Competitive Local Provider = NC CLEC	**Pg. 1**
May, 00	Glossary of Acronyms and Terms	D	ADD – DSL – Digital Subscriber Line	**Pg. 2**
May, 00	Glossary of Acronyms and Terms	I	ADD – IPC – Interconnection Purchasing Center	**Pg. 3**
May, 00	Glossary of Acronyms and Terms	V	ADD – VSEEM – Voluntary Self Effectuating Enforcement Mechanism	**Pg. 5**

VERSION CHANGE HISTORY

Appendix D

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Revisions	SQM Page
May, 00	Analogs & Benchmarks	Benchmark	ADD – to LNP – Average Disconnect Timeliness Interval 95% ≤ 24 hours.	**Pg. 9**

VERSION CHANGE HISTORY
*Format Changes

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	
02/24/00	All Reports	Measurement Name	Added to the table of contents and each section is the letter and number of the measurement.	
			~~Pre Ordering OSS~~ has been replaced with OSS (Operations Support Systems)	

***NOTE:** The changes in this version of the SQM have been made as a result of the Collaborative Process in Louisiana between BellSouth and the Joint CLECs (AT&T, MCIWorldCom, Sprint and Cox). This process and the associated workshops are being conducted by the Louisiana Public Service Commission in Docket U-22252-C. No other Commission has fostered or approved these changes. None of the changes materially change the calculations or output of the SQM Reports.

VERSION CHANGE HISTORY

***Operational Support Systems (OSS)**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version / Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Avg. Response Time and Response Interval (Pre-Ordering)	Business Rules	The average response time for retrieving pre-order/order information from a given legacy system is determined by summing the response times for all requests submitted to the legacy during the reporting period and dividing by the total number of legacy requests for that month ~~day~~ X 100.	OSS-1. Pg. 3
02/24/00	Avg. Response Time and Response Interval (Pre-Ordering)	Level of Disaggregation	CLECs and BST query this legacy system to RSAG-Address, RSAG-TN, ATLAS, DSAP CLECs query this legacy system to COFFI, HAL, P/SIMS BST query this legacy system to OASIS	OSS-1. Pg. 3
02/24/00	Avg. Response Time and Response Interval (Pre-Ordering)	Retail Analog/ Benchmark	~~CLEC Average Response Interval is comparable to BST Average Response Interval.~~ See Appendix D	OSS-1. Pg. 3
02/24/00	Interface Availability (Pre-Ordering)	Data Retained Relating to CLEC Experience.	Hours of Downtime	OSS-2. Pg. 5
02/24/00	Interface Availability (Pre-Ordering)	OSS Interface Availability chart	Added middle column (Applicable to)	OSS-2. Pg. 5
02/24/00	Interface Availability (Pre-Ordering)	Retail Analog/ Benchmark	~~CLEC OSS Interface Availability is comparable to BST OSS Interface Availability Parity with Retail where applicable~~ Benchmark – 99.5%	OSS-2. Pg. 5
02/24/00	Interface Availability (M & R)	Data Retained Relating to CLEC Experience.	~~(under development at this time)~~ (ECTA Under Development)	OSS-3 Pg. 6
02/24/00	Interface Availability (M & R)	Data Retained Relating to BST Experience.	SOCs, CRIS, PREDICTOR, LNP and OSPCM	OSS-3 Pg. 6
02/24/00	Interface Availability (M & R)	Retail Analog/ Benchmark	ECTA Benchmark – 99.5%	OSS-3 Pg. 6
02/24/00	Interface Availability (M & R)	New Chart	New OSS Interface Availability (M&R) chart added to the bottom of the OSS-3. Measurement page.	OSS-3 Pg. 6
02/24/00	Response Interval (M & R)	Exclusions	~~Queries received during scheduled system maintenance time~~. None	OSS-4. Pg. 7
02/24/00	Response Interval (M & R)	Report Structure	~~(BST Total is under development at this time)~~ BST Total (Business + Residence)	OSS-4. Pg. 7
02/24/00	Response Interval (M & R)	New Chart	New OSS Response Interval (M&R) chart added to the bottom of the OSS-4. Measurement page.	OSS-4. Pg. 7
02/24/00	Response Interval (M & R)	New Chart	New OSS Response Interval (M&R) chart added to the bottom of the OSS-4. Measurement page.	OSS-4. Pg. 7
02/24/00	Response Interval (M & R)	Measurement Name	~~and Percentages~~	OSS-4. Pg. 7
02/24/00	Response Interval (M & R)	Retail Analog/ Benchmark	~~Retail Analog~~ ~~Audit Verification~~ Oss Response Interval for CLEC's is comparable to OSS Response Interval for BST	OSS-4. Pg. 7

VERSION CHANGE HISTORY

*Operational Support Systems (OSS)

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision
05/15/00	Average Response Time and Response Interval (Pre-Ordering)	Business Rules	The average response time for retrieving pre-order/order information from a given legacy system is determined by summing the response times for all requests submitted to the legacy systems during the reporting period and dividing by the total number of legacy system requests for that month. The response interval starts when the client application (LENS or TAG for CLECs and RNS for BST) submits a request to the legacy system and ends when the appropriate response is returned to the client application. The number of ~~legacy~~ accesses to the legacy systems during the reporting period, which take less than 2.3 seconds and the number, which take more than 6 second are also captured.
05/15/00	Average Response Time and Response Interval (Pre-Ordering)	Level of Disaggregation	• **HAL/CRIS** (Hands-Off Assignment Logic/Customer Record Information System) – a system used to access the Business Office Customer Record Information System (BOCRIS). It allows BST servers, including LENS, access to legacy systems. CLECs query this legacy system.
05/15/00	Interface Availability (Pre-Ordering)	Chart	??

VERSION CHANGE HISTORY

*Ordering

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/04/00	Percent Flow Through Service Requests (Summary)	Definition	and LNP Local Service Requests (LNP LSRs) and reach a status for a FOC to be issued, ~~to SOCS~~	**O-1. Pg. 8**
02/04/00	Percent Flow Through Service Requests (Summary)	Exclusions	~~Supplements (subsequent versions) to cancel LSRs that are not LESOG eligible (Under development)~~	**O-1. Pg. 8**
02/04/00	Percent Flow Through Service Requests (Summary)	Business Rules	The CLEC mechanized ordering process includes all LSRs, including supplements (subsequent versions) which are submitted through one of the three gateway interfaces (TAG, EDI, and LENS), ~~and~~ that flow through and reach a status for a FOC to be issued, ~~to SOCS~~ without manual intervention. **Fatal Rejects**: LEO/LNP Gateway **Auto-Clarification**: LESOG/LAUTO or if the LNP is not available for the NPA NXX requested, **Manual Fallout**: ~~errors~~ Planned Fallout LESOG/LAUTO **Total System Fallout:** and the LSR will continue to be processed	**O-1. Pg. 8**
02/04/00	Percent Flow Through Service Requests (Summary)	Calculation	sentence removed - ~~Percent Flow Through Service Requests = Σ[(Total~~ . . . ~~Description:~~ Percent Flow Through = (The total number of LSRs that flow through LESOG/LAUTO and reach a status for a FOC to be issued ~~to SOCS~~) / (the number of LSRs passed from LEO/LNP Gateway to LESOG/LAUTO)	**O-1. Pg. 9**
02/04/00	Percent Flow Through Service Requests (Summary)	Level of Disaggregation	• Product ~~(Under Development)~~ ➢ ~~Special~~ ➢ LNP	**O-1. Pg. 9**
02/04/00	Percent Flow Through Svc. Requests (Summary)	Data Retained Relating to CLEC Experience	• Total number of errors by type, by CLEC: ➢ ~~Total fallout for manual processing~~ • Total fallout for manual processing	**O-1. Pg. 9**
02/04/00	Percent Flow Through Service Requests (Summary)	Retail Analog/ Benchmark	~~CLEC Flow-Through/benchmark comparison (Under Development)~~ Residence – 90% Business – 80% LNP – 80%	**O-1. Pg. 9**
02/04/00	Percent Flow Through Service Requests (Detail)	Definition	A detailed list by CLEC of the percentage of Local Service Requests (LSR) and LNP Local Service Requests (LNP LSRs) submitted electronically via the CLEC mechanized ordering process that flow through and reach a status for a FOC to be issued, ~~to SOCS~~ without manual or human intervention.	**O-2. Pg. 10**
02/04/00	Percent Flow Through Service Requests (Detail)	Exclusions	~~Supplements (subsequent versions) to cancel LSRs that are not LESOG eligible(Under development)~~	**O-2. Pg. 10**
02/04/00	Percent Flow Through Service Requests (Detail)	Business Rules	The CLEC mechanized ordering process includes all LSRs, including supplements (subsequent versions) which are submitted through one of the three gateway interfaces (TAG, EDI, and LENS), ~~and~~ that flow through and reach a status for a FOC to be issued, ~~to SOCS~~ without manual intervention. **Fatal Rejects**: LEO/LNP Gateway **Auto-Clarification**: LESOG/LAUTO or if the LNP is not available for the NPA NXX requested, **Manual Fallout**: ~~errors~~ Planned Fallout LESOG/LAUTO **Total System Fallout:** and the LSR will continue to be processed	**O-2. Pg. 10**

VERSION CHANGE HISTORY

*<u>*Ordering*</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/04/00	Percent Flow Through Service Requests (Detail)	Calculation	Sentence removed: ~~Percent Flow Through Service Requests = Σ[~~ . . ~~**Description:**~~ Percent Flow Through = (The total number of LSRs that flow through LESOG/<u>LAUTO and reach a status</u> <u>for a FOC to be issued</u> ~~to SOCS~~) / (the number of LSRs passed from LEO/<u>LNP Gateway</u> to LESOG/<u>LAUTO</u>)	**O-2. Pg. 11**
02/04/00	Percent Flow Through Service Requests (Detail)	Level of Disaggregation	• Product ~~(Under Development)~~ ➢ ~~Special~~ ➢ <u>LNP</u>	**O-2. Pg. 11**
02/04/00	Percent Flow Through Service Requests (Detail)	Data Retained Relating to CLEC Experience	• Total number of errors by type, by CLEC: ➢ ~~Total fallout for manual processing~~ • <u>Total fallout for manual processing</u>	**O-2. Pg. 11**
02/04/00	Percent Flow Through Service Requests (Detail)	Retail Analog/ Benchmark	~~CLEC Flow Through/benchmark comparison (Under Development)~~ <u>Residence – 90%</u> <u>Business – 80%</u> <u>UNE – 80%</u>	**O-2. Pg. 11**
02/24/00	Flow-Through Error Analysis	Definition	An analysis of each error type (by error code) that was experienced by the LSRs that did not flow through <u>and reach a status for a FOC to be issued</u> ~~to SOCS~~.	**<u>O-3. Pg. 12</u>**
02/24/00	Flow-Through Error Analysis	Business Rules	The CLEC mechanized ordering process includes all LSRs, including supplements (subsequent versions) which are submitted through one of the three gateway interfaces (TAG, EDI, and LENS), ~~and~~ <u>that</u> flow through <u>and reach a status for a FOC to be issued</u> ~~to provisioning SOCS without manual intervention. These LSRs can be divided into two classes of service; Business and Residence, and two types of service; Resale and Unbundled Network Elements (UNE). This measurement captures the total number of errors by type~~	**<u>O-3. Pg. 12</u>**
02/24/00	LSR Flow Through Matrix	Matrix	~~Attachment BellSouth Flow-Through Analysis For CLECs LSRs placed via EDI or TAG~~ <u>LSR Flow Through Matrix</u>	**<u>Pg. 13</u>**
02/24/00	Percent Rejected Service Requests	Definition	Percent Rejected Service Request is the percent of total Local Service Requests (LSRs) received which are rejected due to error or omission. An LSR is considered valid when it is ~~electronically~~ submitted by the CLEC and passes ~~LEO~~ edit checks to insure the data received is correctly formatted and complete.	**O-4. Pg. 17**
02/24/00	Percent Rejected Service Requests	Business Rules	**<u>Fully Mechanized</u>:** An LSR is considered "rejected" when it is submitted electronically but does not pass LEO edit checks in the ordering systems (EDI, TAG, LEO, LESOG) and is returned to the CLEC <u>without manual intervention</u>. There are two types of "Rejects" in the Mechanized category: A Fatal Reject occurs when a CLEC attempts to electronically submit an LSR but required fields are <u>either</u> not populated <u>or</u> incorrectly <u>populated</u> and the request is returned to the CLEC before it is considered ~~an~~ <u>a valid</u> LSR. <u>In LEO,</u> Fatal Rejects are included in the <u>"Other" category</u> ~~calculation~~ for Regional reports only. An Auto Clarification <u>occurs when</u> ~~is~~ a valid LSR ~~which~~ is electronically submitted but rejected from LESOG because it does not pass further edit checks for order accuracy. **<u>Partially Mechanized</u>:** A valid LSR, which is electronically submitted (via EDI, <u>LENS</u>, ~~or~~ TAG)~~, but~~ cannot be processed electronically and "falls out" for manual handling. It is then put into "clarification" and (rejected) sent back to the CLEC. **<u>Total Mechanized</u>:** Combination of Fully Mechanized and Partially Mechanized LSRs <u>which were electronically submitted by the CLEC.</u> **<u>Non Mechanized</u>:** ~~An~~ LSR<u>s</u> which <u>are</u> ~~is~~ faxed or mailed to the LCSC for processing and is "clarified" (rejected) back to the CLEC by the BST service representative. ~~LNP: Under Development~~	**O-4. Pg. 17**

VERSION CHANGE HISTORY

__Ordering__

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Percent Rejected Service Requests	Calculation	Percent Rejected Service Requests = (Total Number of Rejected Service Requests in the reporting period) / (Total Number of Service Requests Received in the reporting period) X 100 ~~during the month~~.	**O-4. Pg. 17**
02/24/00	Percent Rejected Service Requests	Report Structure	~~State and Region~~	**O-4. Pg. 17**
02/24/00	Percent Rejected Service Requests	Level of Disaggregation	• Product Reporting Levels ➢ Resale - Design (Special) ➢ Interconnection Trunks • Geographic Scope ➢ State, Region and further geographic disaggregation as required by State Commission Order • Mechanized: 0-4 minutes, 4-8 minutes, 8-12 minutes, 12-60 minutes, 0-1 hour, 1-8 hours, 8-24 hours, > 24 hours. • Non-mechanized: 0-1 hour, 1-4 hours, 4-8 hours, 8-12 hours, 12-16 hours, 16-20 hours, 20-24 hours > 24 hours • Average Interval for mechanized reports in hours, non-mechanized and Trunk reports in days. • Trunks: < 5days, > 5-8 days, > 8-12 days, > 12-14 days, > 14-17 days, > 17-20 days, > 20 days.	**O-4. Pg. 17**
02/24/00	Percent Rejected Service Requests	Data Retained Relating to BST Performance	• ~~Report Month~~ • ~~Total number of LSRs~~ • ~~Total number of Errors~~ • ~~Adjusted Error Volume~~ • ~~State and Region~~	**O-4. Pg. 18**
02/24/00	Percent Rejected Service Requests	Retail Analog/ Benchmark	~~Benchmark is under development. Retail Analog also under development~~ See Appendix D	**O-4. Pg. 18**
02/24/00	Reject Interval	Definition	Reject Interval is the average reject time from receipt of an LSR to the distribution of a Reject. An LSR is considered valid when it is submitted by the CLEC and passes ~~LEO~~ edit checks to insure the data received is correctly formatted and complete.	**O-5. Pg. 19**
02/24/00	Reject Interval	Exclusions	Weekend hours for Partially Mechanzied and Non-Mechanized LSRs	**O-5. Pg. 19**
02/24/00	Reject Interval	Business Rules	**Fully Mechanized**: The elapsed time from receipt of a valid electronically submitted LSR (date and time stamp in EDI, LENS or TAG) until the LSR is rejected (date and time stamp of reject in LEO). ~~Fatal Rejects and~~ Auto Clarifications are considered in the Fully Mechanized category. **Partially Mechanized:** The elapsed time from receipt of a valid electronically submitted LSR (date and time stamp in EDI, LENS or TAG) until it falls out for manual handling **Total Mechanized**: Combination of Fully Mechanized and Partially Mechanized LSRs which are electronically submitted by the CLEC. **Non-Mechanized**: The elapsed time from receipt of a valid LSR (date and time stamp ~~from~~ of FAX ~~stamp~~ or date and time mailed LSR is received in the LCSC) until notice of the reject is (clarification) returned to the CLEC via LON. ~~LNP: Under development.~~	**O-5. Pg. 19**

VERSION CHANGE HISTORY

*Ordering

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Reject Interval	Level of Disaggregation	• Product Reporting Levels ➢ Resale – Design (Special) ➢ UNE ~~Design~~ ➢ UNE Loop with ~~and w/o~~ NP ➢ Interconnection Trunks ~~• Average Interval in Days~~ • Trunks: ≤ 5 days, > 5-8 days, > 8-12 days, > 12-14 days, > 14-17 days, > 17-20 days, > 20 days • Average Interval for mechanized reports in hours, non-mechanized and Trunk reports in days.	O-5. Pg. 19
02/24/00	Reject Interval	Data Retained Relating to CLEC Experience	• Total number of ~~Errors~~ Rejects • Total Number of ASRs (Trunks)	O-5. Pg. 20
02/24/00	Reject Interval	Data Retained Relating to BST Performance	• ~~Report Month~~ • ~~Reject Interval~~ • ~~Total number of LSRs~~ • ~~Total number of Errors~~ • ~~State and Region~~	O-5. Pg. 20
02/24/00	Reject Interval	Retail Analog/ Benchmark	~~Benchmark is under development. Retail Analog also under development~~ See Appendix D	O-5. Pg. 20
03/14/00	Firm Order Confirmation Timeliness	Exclusions	~~Partially Mechanized or Non-Mechanized LSRs received and/or FOCd outside of normal business hours.~~ Weekend hours for Partically Mechanized and non-Mechanized LSRs	O-6. Pg. 21
02/24/00	Firm Order Confirmation Timeliness	Business Rules	**Fully Mechanized**: The elapsed time from receipt of a valid electronically submitted LSR (date and time stamp in LENS, EDI, TAG) until the LSR is processed, ~~and~~ appropriate service orders are generated and a Firm Order confirmation is returned to the CLEC. ~~in SOCS.~~ **Partially Mechanized:** The elapsed time from receipt of a valid electronically submitted LSR which falls out for manual handling ~~by the LCSC personnel~~ until appropriate service orders are issued by a BST service representative via Direct Order Entry (DOE) or Service Order Negotiation Generation System (SONGS) to SOCS and a Firm Order Confirmation is returned to the CLEC. **Total Mechanized**: Combination of Fully Mechanized and Partially Mechanized LSRs which were electronically submitted by the CLEC. **Non-Mechanized**: The elapsed time from receipt of a valid paper LSR (date and time stamp of FAX or date and time paper LSRs received in LCSC) ~~(fax receive date and time stamp)~~ until appropriate service orders are issued by BST service representative via Direct Order Entry (DOE) or Service Order Negotiation Generation System (SONGS) to SOCS and a Firm Order Confirmation is sent to the CLEC via LON. ~~**LNP**: Under development.~~	O-6. Pg. 21
02/24/00	Firm Order Confirmation Timeliness	Level of Disaggregation	• Product Reporting Levels ➢ Resale – Design (Special) ➢ UNE Design ~~➢ UNE Non- Design~~ ➢ UNE Loop with ~~and w/o~~ NP	O-6. Pg. 21

VERSION CHANGE HISTORY

***Ordering**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Firm Order Confirmation Timeliness	Data Retained Relating to CLEC Experience	• Total Number of ASRs (Trunks)	O-6. Pg. 22
02/24/00	Firm Order Confirmation Timeliness	Data Retained Relating to BST Performance	• ~~Report Month~~ • ~~Interval for FOC~~ • ~~Total Number of LSRs~~ • ~~State and Region~~	O-6. Pg. 22
02/24/00	Firm Order Confirmation Timeliness	Retail Analog/ Benchmark	~~Benchmark is under development. Retail Analog also under development~~ See Appendix D	O-6. Pg. 22
02/24/00	Speed of Answer in Ordering Center	Retail Analog/ Benchmark	See Appendix D	O-7. Pg. 23
02/24/00	Percent Rejected Svc. Requests - LNP	All sections	New LNP Percent Rejected Service Requests Measurement	LNP-8. Pg. 24
02/24/00	Reject Interval Distribution & Average Reject Interval - LNP	All sections	New LNP Reject Interval Distribution & Average Reject Interval Measurement	LNP-9. Pg. 24
02/24/00	Firm Order Confirmation Timeliness Interval Distribution & Firm Order Confirmation Average Interval – LNP	All sections	New LNP Firm Order Confirmation Timeliness Interval Distribution & Firm Order Confirmation Average Interval Measurement	LNP-10. Pg. 24

VERSION CHANGE HISTORY

Provisioning

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00 03/14/00	Provisioning Disaggregation	New Page	Pulled from each measurement the Product Reporting Levels and the Geographic Scope. (Pg. 16) ~~ESSX (Louisiana SQM)~~	Pg. 28
02/24/00	Mean Held Order Interval & Distribution Intevals	Exclusions	~~Any order canceled by the CLEC will be excluded from this measurement.~~	**P-1. Pg. 29**
02/24/00	Mean Held Order Interval & Distribution Intervals	Business Rules	**Mean Held Order Interval:** Added to the end of the paragraph --The interval is by calendar days with no exclusions for Holidays or Sundays.	**P-1. Pg. 29**
02/24/00	Mean Held Order Interval & Distribution Intervals	Level of Disaggregation	Moved: Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page. ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-1. Pg. 29**
02/24/00	Mean Held Order Interval & Distribution Intervals	Retail Analog/ Benchmark	CLEC Non-UNE Design / BST Design UNEs-(See Appendix D) ~~Retail Analog (under development at this time)~~	**P-1. Pg. 30**
02/24/00	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Exclusions	• ~~Any order canceled by the CLEC will be excluded from this measurement~~	**P-2. Pg. 31**
02/24/00	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Calculation	**Percent of Orders Given Jeopardy Notice** = Σ [(Number of Orders Given Jeopardy Notices in Reporting Period) / (Number of Orders ~~Committed~~ Confirmed (due) in Reporting Period)	**P-2. Pg. 31**
02/24/00	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Level of Disaggregation	Moved this level of disaggregations in its entirety to new page ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-2. Pg. 31**
02/24/00	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Retail analog/ Benchmark	~~Retail Analog~~ 95% >= 24 hours	**P-2. Pg. 31**
02/24/00	Percent Missed Installation Appointments	Exclusions	End User Misses on Interconnection Trunks	**P-3. Pg. 32**

VERSION CHANGE HISTORY

*<u>*Provisioning*</u>*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Percent Missed Installation Appointments	Business Rules	Percent Missed Installation Appointments is the percentage of total orders processed for which BST is unable to complete the service orders on the ~~committed~~ <u>confirmed</u> due dates.	**P-3. Pg. 32**
02/24/00	Percent Missed Installation Appointment	Level of Disaggregation	**Moved:** Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page (16). ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-3. Pg. 32**
02/24/00	Avg. Completion Interval (OCI) & Order Completion Interval Distribution	Exclusions	<u>CLEC Non-UNE Design / BST Design</u> UNEs~~-Retail Analog (under development at this time)~~ <u>(See Appendix D)</u>	**P-4. Pg. 33**
02/24/00	Avg. Completion Interval (OCI) & Order Completion Interval Distribution	Level of Disaggregation	**Moved:** Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page (16). ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-4. Pg. 33**
02/24/00	Avg. Completion Interval (OCI) & Order Completion Interval Distribution	Retail analog/ Benchmark	<u>UNEs</u>~~-Retail Analog (under development at this time)~~ <u>(See Appendix D)</u>	**P-4. Pg. 34**
02/24/00	Avg. Completion Notice Interval	Business Rules	The start time is the completion stamp either by the field technician or the 5PM due date stamp; the end time is the time stamp the notice was ~~released~~ <u>submitted</u> to the CLEC/BST system.	**P-5. Pg. 35**
02/24/00	Avg. Completion Notice Interval	Level of Disaggregation	**Moved:** Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page (16). ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-5. Pg. 35**
02/24/00	Avg. Completion Notice Interval	Retail analog/ Benchmark	~~Retail Analog~~ <u>CLEC Residence Resale / BST Residence Retail</u> <u>CLEC Business Resale / BST Business Retail</u> <u>CLEC Non-UNE Design / BST Design</u> <u>Interconnection Trunks-CLEC / Interconnection Trunks-BST</u> <u>UNEs – (See Appendix D)</u>	**P-5. Pg. 35**
02/24/00	Coordinated Customer Conversions	Calculation	Σ [(Completion Date and Time for Cross Connection of an Unbundled Loop)- (Disconnection Date and Time of an Unbundled Loop)] / Total Number of Unbundled Loop ~~Items~~ <u>Conversions (items)</u> for the reporting period.	**P-6. Pg. 36**
02/24/00	Coordinated Customer Conversions	Level of Disaggregation	**Moved:** Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page (16). ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-6. Pg. 36**

VERSION CHANGE HISTORY

*Provisioning

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	**Report**	**Section Revised**	**Reason for Revision**	**SQM Page**
02/24/00	Coordinated Customer Conversions	Data Retained Relating to CLEC Experience	• Total Conversions (Items)	**P-6. Pg. 36**
02/24/00	Coordinated Customer Conversions	Retail analog/ Benchmark	Benchmark – See Appendix D ~~currently under development~~	**P-6. Pg. 36**
02/24/00	Provisioning Troubles within 30 days of Svc. Order Activity	Level of Disaggregation	**Moved:** Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page (16). ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-7. Pg. 37**
02/24/00	Provisioning Troubles within 30 days of Svc. Order Activity	Retail analog/ Benchmark	CLEC Non-UNE Design / BST Design UNEs ~~Retail Analog (Under Development at this time)~~ (See Appendix D)	**P-7. Pg. 37**
02/24/00	Total Svc. Order Cycle Time (TSOCT)	Measurement Name	~~(under development 1Q99)~~	**P-8. Pg. 38**
02/24/00	Total Svc. Order Cycle Time (TSOCT)	Definition	This is a new measurement ~~under development~~ to measure the total service order cycle time from receipt of a valid service order request to the completion of the service order.	**P-8. Pg. 38**
02/24/00	Total Svc. Order Cycle Time (TSOCT)	Exclusions	• Orders with CLEC/Subscriber caused delays or CLEC/Subscriber requested due date changes.	**P-8. Pg. 38**
02/24/00	Total Svc. Order Cycle Time (TSOCT)	Calculation	~~(under development)~~ Σ (Date and Time of Service Request Receipt) – (Completion Date and Time of Service Order) (SOCS HIST-CD DATE) / (Count of Orders Completed in Reporting Period)	**P-8. Pg. 38**
02/24/00	Total Svc. Order Cycle Time (TSOCT)	Level of Disaggregation	~~• ISDN Orders included in Non Design – GA Only~~ • Reported in categories of < 10 line/circuits; > 10 line/circuits • Dispatch/No Dispatch categories applicable to all levels except trunks. Intervals ~~under development~~ 0-5, 5-10, 10-15, 15-20, 20-25, 25-30, > = 30 Days **Moved:** Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page (16). ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-8. Pg. 38**
02/24/00	Total Svc. Order Cycle Time (TSOCT)	Retail analog/ Benchmark	~~Under development (BST retail analog available at this time would be Average Completion Interval)~~ See Appendix D	**P-8. Pg. 38**

VERSION CHANGE HISTORY

*<u>*Provisioning*</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Service Order Accuracy	Level of Disaggregation	**Moved:** Product Reporting Levels, Geographic Scope part of the level of disaggregation to a new page (16). ~~*Further disaggregations available on PMAP for CLEC specific reports.~~	**P-9. Pg. 39**
02/24/00	Percent Missed Installation Appts. - LNP	All sections	New <u>LNP Percent Missed Installation Appointments Measurement</u>	**LNP-10. Pg. 40**
02/24/00	Avg. Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution - LNP	All sections	New <u>LNP Avg. Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution Measurement</u>	**LNP-11. Pg. 41**
02/24/00	Total Service Order Cycle Time - LNP	All sections	New <u>LNP Total Service Order Cycle Time Measurement</u>	**LNP-12. Pg. 42**

VERSION CHANGE HISTORY
*Maintenance & Repair

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00 03/14/00	M & R Disaggregation	New Page	Moved each level of disaggregation sections to a new page. ~~ESSX (Louisiana SQM)~~	M&R Pg. 43
02/24/00	Missed Repair Appointments	Level of Disaggregation	Move level of disaggregation to Page 43 of the updated SQM	M&R-1. Pg. 44
02/24/00	Missed Repair Appointments	Retail analog/ Benchmark	UNEs - ~~Retail Analog (under development at this time.)~~ (See Appendix D)	M&R-1. Pg. 44
02/24/00	Customer Trouble Report Rate	Business Rules	The resulting number of trouble reports are divided by the total "number of service" lines, ports or combination ~~of existing~~ that exist for the CLEC's and BST respectively at the end of the report month.	M&R-2. Pg. 45
02/24/00	Customer Trouble Report Rate	Level of Disaggregation	Move level of disaggregation to Page 43 of the updated SQM	M&R-2. Pg. 45
02/24/00	Customer Trouble Report Rate	Retail analog/ Benchmark	UNEs – ~~Retail Analog (under development at this time)~~ (See Appendix D)	M&R-2. Pg. 45
02/24/00	Maintenance Average Duration	Business Rules	For Average Duration the clock starts on the date and time of the receipt of a correct repair request. The clock stops on the date and time the service is restored and the customer notified (when the technician completes the trouble ticket on his/her CAT or work system). NOTE: Customer can be BST or CLEC.	M&R-3. Pg. 46
02/24/00	Maintenance Average Duration	Level of Disaggregation	Move level of disaggregation to Page 43 of the updated SQM	M&R-3. Pg. 46
02/24/00	Maintenance Average Duration	Retail Analog/ Benchmark	UNEs - ~~Retail Analog (under development at this time)~~ (See Appendix D)	M&R-3. Pg. 46
02/24/00	Percent Repeat Troubles within 30 Days	Calculation	Percent Repeat Troubles within 30 Days ~~Percentage of Missed Repair Appointments~~ = (Count of Customer Troubles where more than one trouble report was logged for the same service line within a continuous 30 days) / (Total Trouble Reports Closed in Reporting Period) X 100	M&R-4. Pg. 47
02/24/00	Percent Repeat Troubles within 30 Days	Level of Disaggregation	Move level of disaggregation to Page 43 of the updated SQM	M&R-4. Pg. 47
02/24/00	Percent Repeat Troubles within 30 Days	Retail Analog/ Benchmark	UNEs - ~~Retail Analog (under development at this time)~~ (See Appendix D)	M&R-4. Pg. 47
02/24/00	Out of Service (OOS) > 24 Hrs.	Level of Disaggregation	Move level of disaggregation to Page 43 of the updated SQM	M&R-5. Pg. 48
02/24/00	Out of Service (OOS) > 24 Hrs.	Retail Analog/ Benchmark	UNEs - ~~Retail Analog (under development at this time)~~ (See Appendix D)	M&R-5. Pg. 48

VERSION CHANGE HISTORY

***Maintenance & Repair**

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	**Report**	**Section Revised**	**Reason for Revision**	**SQM Page**
02/24/00	OSS Interface Availability	Measurement	Moved to OSS (Operations Support Systems)	**M&R**
02/24/00	OSS Response Interval and Percentages	Measurement	Moved to OSS (Operations Support Systems)	**M&R**
02/14/00	Average Answer Time – Repair Centers	Definition	~~This measure demonstrates an average response time for the CLEC representative to contact a BST representative. The average time a CLEC Rep is in queue waiting for the LCSC or UNE Center Rep to answer.~~ This Measures the average time a customers is in Que.	**M&R-6. Pg. 49**
02/14/00	Average Answer Time – Repair Centers	Business Rules	(NOTE: The Column is a combined BST Residence and Business number)	**M&R-6. Pg. 49**
02/14/00	Average Answer Time – Repair Centers	Report Structure	• ~~CLEC Aggregate~~	**M&R-6. Pg. 49**
02/14/00	Average Answer Time – Repair Centers	Retail Analog/ Benchmark	~~Retail Analog~~ ~~Audit Verification~~ For CLEC, Average Answer Times in UNE Center and BRMC are comparable to the Average Answer Times in the BST Repair Centers.	**M&R-6. Pg. 49**

VERSION CHANGE HISTORY

*Billing

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Invoice Accuracy	Retail Analog/ Benchmark	See Appendix D	**B-1. Pg. 50**
02/24/00	Mean Time to Deliver Invoices	Retail Analog/ Benchmark	See Appendix D	**B-2. Pg. 51**
02/24/00	Usage Data Delivery Accuracy	Retail Analog/ Benchmark	See Appendix D	**B-3. Pg. 52**
02/24/00	Usage Data Delivery Completeness	Retail Analog/ Benchmark	See Appendix D	**B-4. Pg. 53**
02/24/00	Usage Data Delivery Timeliness	Retail Analog/ Benchmark	See Appendix D	**B-5. Pg. 54**
02/24/00	Mean Time to Deliver Usage	Retail Analog/ Benchmark	See Appendix D	**B-6. Pg. 55**

Second Quarter Changes

05/15/00	Invoice Accuracy	Calculation	**Invoice Accuracy** = (Total Billed Revenues during current month) – (Absolute Value of Billing Related Adjustments during current month) / Total Billed Revenues during current month X 100
05/15/00	Mean Time to Deliver Invoices	Definition	Bill Distribution calculates as follows: CRIS BILLS-The number of work days is reported for CRIS bills. This is calculated by counting the Bill Period date as the first work day. Weekends and holidays are excluded when counting work days. J/N Bills are counted in the CRIS work day category for the purposes of the measurement since their billing account number (Q account) is provided from the CRIS system. CABS BILLS-The number of calendar days is reported for CABS bills. This is calculated by counting the day following the Bill Period date as the first calendar day. Weekends and holidays are included when counting the calendar days.~~This measure provides the mean interval for billing invoices~~
05/15/00	Usage Data Delivery Timeliness	Calculation	Usage Data Delivery Timeliness Current month = Σ(Total number of usage records sent within six (6) calendar days from initial recording/receipt) / Σ(Total number of usage records sent) X 100
05/15/00	Mean Time to Deliver Usage	Calculation	Mean Time to Deliver Usage = Σ (~~Record volume~~ Volume of Records Delivered X estimated number of days to deliver ~~the Usage Record~~) / total record volume

VERSION CHANGE HISTORY

OS/DA

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Speed to Answer Performance/ Average Speed to Answer - Toll	Retail Analog/ Benchmark	See Appendix D	**OS-1. Pg. 56**
02/24/00	Speed to Answer Performance/ Percent Answered within "X" Seconds - Toll	Retail Analog/ Benchmark	See Appendix D	**OS-2. Pg. 57**
02/24/00	Speed to Answer Performance/ Average Speed to Answer – Directory Assistance (DA)	Retail Analog/ Benchmark	See Appendix D	**DA-1. Pg. 58**
02/24/00	Speed to Answer Performance/ Percent Answered within "X" Seconds – Directory Assistance (DA)	Retail Analog/ Benchmark	See Appendix D	**DA-2. Pg. 59**

Second Quarter Changes

05/15/00	Speed to Answer Performance/Average Speed to Answer - Toll	Business Rules	~~The call waiting measurement scan starts when the customer enters the queue and ends when a BST representative answers the call. The average speed to answer is determined by measuring and accumulating the seconds of wait time from the entry of a customer into the BST call management system queue until the customer is transferred to a BST representative.~~ The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is transferred to BellSouth personnel assigned to handle calls for assistance.
05/15/00	Speed to Answer Performance/Average Speed to Answer - Toll	Calculation	~~The Average Speed to Answer for toll is calculated by using data from monthly system measurement reports taken from the centralized call routing switches. The "total call waiting seconds" is a sub-component of this measure which BST systems calculate by monitoring the number of calls in queue throughout the day multiplied by the time (in seconds) between monitoring events. The "total calls served" is the other sub-component of this measure, which BST systems record as the total number of calls handled by Operator Services toll centers. Since calls abandoned are not reflected in the calculation, the percent answered within the required timeframe is determined by using conversion tables with input for the abandonment rate.~~ Total queue time ÷ total calls answered

VERSION CHANGE HISTORY

OS/DA

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
05/15/00	Speed to Answer Performance/Average Speed to Answer - Toll	Report Structure	• ~~CLEC Specific~~ • ~~CLEC Aggregate~~ • ~~BST Aggregate~~ • Reported for the aggregate of BST and CLECs ➢ State	
5/15	Speed to Answer Performance/Average Speed to Answer - Toll	Level of Disaggregation	• None • ~~Reported for the aggregate of BST and CLECs~~ ➢ ~~State~~	
5/15	Speed to Answer Performance/Average Speed to Answer – Directory Assistance (DA)	Definition	Measurement of the average time in seconds calls wait before answered by a DA operator.	
5/15	Speed to Answer Performance/Average Speed to Answer – Directory Assistance (DA)	Business Rules	~~The call waiting measurement scan starts when the customer enters the queue and ends when a BST representative answers the call. The average speed to answer is determined by measuring and accumulating the seconds of wait time from the entry of a customer into the BST call management system queue until the customer is transferred to a BST representative.~~ The clock starts when the customer enters the queue and the clock stops when a BellSouth representative answers the call or the customer abandons the call. The length of each call is determined by measuring, using a scanning technique, and accumulating the elapsed time from the entry of a customer call into the BellSouth call management system queue until the customer call is transferred to BellSouth personnel assigned to handle calls for assistance. No distinction is made between CLEC customers and BST customers.	

VERSION CHANGE HISTORY

<u>E911</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Timeliness	Measurement Name	~~E911/~~	E-1. Pg. 60
02/24/00	Timeliness	Retail Analog/ Benchmark	See Appendix D	E-1. Pg. 60
02/24/00	Accuracy	Measurement Name	~~E911/~~	E-2. Pg. 61
02/24/00	Accuracy	Retail Analog/ Benchmark	See Appendix D	E-2. Pg. 61
02/24/00	Mean Interval	Measurement Name	~~E911/~~	E-3. Pg. 62
02/24/00	Mean Interval	Retail Analog/ Benchmark	See Appendix D	E-3. Pg. 62

VERSION CHANGE HISTORY

*<u>*Trunk Group Performance*</u>*

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Trunk Group Performance – Aggregate	Measurement	New Measurement	**TGP-1. Pg. 63**
02/24/00	Trunk Group Performance – CLEC Specific	Measurement	New Measurement	**TGP-2. Pg. 65**
02/24/00	Trunk Group Service Report	Retail Analog/ Benchmark	<u>See Appendix D</u>	**TGP-3. Pg. 67**
02/24/00	Trunk Group Service Detail	Retail Analog/ Benchmark	<u>See Appendix D</u>	**TGP-4. Pg. 68**

VERSION CHANGE HISTORY

*Collocation

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00	Average Response Time	Measurement Name	~~Collocation~~	C-1. Pg. 69
02/24/00	Average Response Time	Level of Disaggregation	• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA)	C-1. Pg. 69
02/24/00	Average Response Time	Retail Analog/ Benchmark	~~Under development~~ See Appendix D	C-1. Pg. 69
02/24/00	Average Arrangment Time	Measurement Name	~~Collocation~~	C-2. Pg. 70
02/24/00	Average Arrangment Time	Definition	Measures the average time ~~(counted in business days)~~ from the receipt of a complete and accurate Bona Fide firm order (including receipt of appropriate fee) to the date BST completes the collocation arrangement.	C-2. Pg. 70
02/24/00	Average Arrangment Time	Level of Disaggregation	• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA)	C-2. Pg. 70
02/24/00	Average Arrangment Time	Retail Analog/ Benchmark	~~Under development~~ See Appendix D	C-2. Pg. 70
02/24/00	Percent of Due Dates missed	Measurement Name	~~Collocation~~	C-3. Pg. 71
02/24/00	Percent of Due Dates missed	Level of Disaggregation	• State, Region and further geographic disaggregation as required by State Commission Order (e.g. Metropolitan Service Area – MSA)	C-3. Pg. 71
02/24/00	Percent of Due Dates missed	Retail Analog/ Benchmark	~~Under development~~ See Appendix D < 10% Missed Due Dates	C-3. Pg. 71

VERSION CHANGE HISTORY

*<u>*Appendix A*</u>

<u>*Reporting Scope*</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	
02/24/00		Standard Service Groupings	Under Provisioning, Maintenance & Repair - <u>BST Design Retail</u>	**Pg. 72**

VERSION CHANGE HISTORY

**Appendix B*

Glossary of Acronyms and Terms

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
				Pg. 74
			No Changes	

VERSION CHANGE HISTORY

*<u>*Appendix C*</u>*

<u>*Audit Policy*</u>

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00			BellSouth currently provides many CLECs with <u>certain</u> audit rights as a part of their individual interconnection agreements. However, it is not reasonable for BellSouth to undergo an audit for every CLEC with which it has a contract. ~~As of June, 1999, that would equate to over 732 audits per year and that number is continually growing.~~ BellSouth has developed a proposed Audit Plan for use by the parties to an audit. If requested by a Public Service Commission <u>or by a CLEC exercising contractual audit rights.</u> BellSouth will agree to undergo a comprehensive audit of the aggregate level reports for both BellSouth and the CLEC(s) for each of the next five (5) years (~~1999~~ <u>2000</u>– 2005), to be conducted by an independent third party. The results of that audit will be made available to all the parties subject to proper safeguards to protect proprietary information. This aggregate level audit includes the following specifications:	**Pg. 79**

VERSION CHANGE HISTORY

***Appendix D**

BST SQM Retail Analog & Benchmarks

This section list changes made to the Service Quality Measurement Plan document since the last issue. New versions of this document may be obtained via BellSouth's Web site.

Version/ Issue Date	Report	Section Revised	Reason for Revision	SQM Page
02/24/00			New Benchmark chart	Pg. 80

APPENDIX D
Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Pre-Ordering	Percent Response Received within "X" seconds	Parity w/ retail where applicable		
	OSS Interface Availability			
				99.5%
Ordering	**Percent Rejected Service Request** ◆ Residence ◆ Business ◆ UNE			90% 80% 80%
	Percent Rejected Service Request	Diagnostic		Diagnostic
	Reject Interval (Mechanized)			95% within 1 hrs.
	◆ Reject Interval (Non-Mechanized and Partially Mechanized)			85% < 48 hrs.
	Firm Order Confirmation Timeliness (Mechanized) (Non-Mechanized & Partially Mechanized)			95% within 4 hrs. 85% < 48 hrs.
	Speed of Answer in Ordering Center	X	X	
Provisioning	**Mean Held Order Interval**			
	◆ Resale Residence	X		
	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		
	◆ UNE Design		Retail Design	
	◆ UNE Non Design		Retail Residence and Business	
	◆ UNE Loop and Port Combos		Retail Residence and Business	
	◆ UNE 2w Loop with NP – Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop without NP – Non-Design		Retail Residence and Business	
	◆ UNE Loop Other with NP Non-Design		Retail Residence and Business	
	◆ UNE Loop Other without NP Non-Design		Retail Residence and Business	

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Provisioning	• UNE Other Non-Design		Retail Residence and Business	
	• UNE 2w Loop with NP - Design		Retail Residence and Business	
	• UNE 2w Loop without NP - Design		Retail Residence and Business	
	• UNE Loop Other with NP – Design		Retail Design	
	• UNE Loop Other without NP – Design		Retail Design	
	• UNE Other Design		Retail Design	
	• Local Interconnection Trunks	X		
	Average Jeopardy Notice Interval (Mechanized)			
	• Resale Residence			95% > = 24 hrs.
	• Resale Business			95% > = 24 hrs.
	• Resale Design			95% > = 24 hrs.
	• Resale PBX			95% > = 24 hrs.
	• Resale Centrex			95% > = 24 hrs.
	• Resale ISDN			95% > = 24 hrs.
	• UNE Design			95% > = 24 hrs.
	• UNE Non-Design			95% > = 24 hrs.
	• UNE Loop and Port Combos			95% > = 24 hrs.
	• UNE 2w Loop with NP – Non-Design			95% > = 24 hrs.
	• UNE 2w Loop without NP – Non-Design			95% > = 24 hrs.
	• UNE Loop Other with NP Non-Design			95% > = 24 hrs.
	• UNE Loop Other without NP Non-Design			95% > = 24 hrs.
	• UNE Other Non-Design			95% > = 24 hrs.
	• UNE 2w Loop with NP – Design			95% > = 24 hrs.
	• UNE 2w Loop without NP – Design			95% > = 24 hrs.
	• UNE Loop Other with NP – Design			95% > = 24 hrs.
	• UNE Loop Other without NP – Design			95% > = 24 hrs.
	• UNE Other Design			95% > = 24 hrs.
	• Local Interconnection Trunks			95% > = 24 hrs.

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Provisioning	**% of Orders given jeopardy notice (Mechanized)**			
	◆ Resale Residence	X		
	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		
	◆ UNE Loop and Port Combos		Retail Residence and Business	
	◆ UNE Design		Retail Design	
	◆ UNE Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop with NP – Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop without NP – Non-Design		Retail Residence and Business	
	◆ UNE Loop Other with NP Non-Design		Retail Residence and Business	
	◆ UNE Loop Other without NP Non-Design		Retail Residence and Business	
	◆ UNE Other Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop with NP - Design		Retail Residence and Business	
	◆ UNE 2w Loop without NP - Design		Retail Residence and Business	
	◆ UNE Loop Other with NP - Design		Retail Design	
	◆ UNE Loop Other without NP - Design		Retail Design	
	◆ UNE Other Design		Retail Design	
	◆ Interconnection Trunks	X		
	Percent Missed Installation Appointments			
	◆ Resale Residence	X		
	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		
	◆ UNE Loop and Port Combos		Retail Residence and Business	

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Provisioning	• UNE Design		Retail Design	
	• UNE Non-Design		Retail Residence and Business	
	• UNE 2w Loop with NP – Non-Design		Retail Residence and Business	
	• UNE 2w Loop without NP – Non-Design		Retail Residence and Business	
	• UNE Loop Other with NP Non-Design		Retail Residence and Business	
	• UNE Loop Other without NP Non-Design		Retail Residence and Business	
	• UNE Other Non-Design		Retail Residence and Business	
	• UNE 2w Loop with NP – Design		Retail Residence and Business	
	• UNE 2w Loop without NP - Design		Retail Residence and Business	
	• UNE Loop Other with NP Non-Design		Retail Design	
	• UNE Loop Other without NP Non-Design		Retail Design	
	• UNE Other Design		Retail Design	
	• Local Interconnection Trunks	X		
	Order Completion Interval			
	• Resale Residence	X		
	• Resale Business	X		
	• Resale Design	X		
	• Resale PBX	X		
	• Resale Centrex	X		
	• Resale ISDN	X		
	• UNE Loop and Port Combos		Retail Residence and Business	
	• UNE Design		Retail Design	
	• UNE Non-Design		Retail Residence and Business	
	• UNE 2w Loop with NP – Non-Design		Retail Residence and Business	
	• UNE 2w Loop without NP – Non-Design		Retail Residence and Business	
	• UNE Loop Other with NP Non-Design		Retail Residence and Business	
	• UNE Loop Other without NP Non-Design		Retail Residence and Business	
	• UNE Other Non-Design		Retail Residence and Business	

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Provisioning	• UNE 2w Loop with NP - Design		Retail Residence and Business	
	• UNE 2w Loop without NP - Design		Retail Residence and Business	
	• UNE Loop Other with NP - Design		Retail Design	
	• UNE Loop Other without NP - Design		Retail Design	
	• UNE Other Design		Retail Design	
	• Local Interconnection Trunks	X		
	Average Completion Notice Interval – Resale POTS (Mech)			
	• Resale Residence	X		
	• Resale Business	X		
	• Resale Design	X		
	• Resale PBX	X		
	• Resale Centrex	X		
	• Resale ISDN	X		
	• UNE Loop and Port Combos		Retail Residence and Business	
	• UNE Design		Retail Design	
	• UNE Non-Design		Retail Residence and Business	
	• UNE 2w Loop with NP – Non-Design		Retail Residence and Business	
	• UNE 2w Loop without NP – Non-Design		Retail Residence and Business	
	• UNE Loop Other with NP Non-Design		Retail Residence and Business	
	• UNE Loop Other without NP Non-Design		Retail Residence and Business	
	• UNE Other Non-Design		Retail Residence and Business	
	• UNE 2w Loop with NP - Design		Retail Residence and Business	
	• UNE 2w Loop without NP - Design		Retail Residence and Business	
	• UNE Loop Other with NP - Design		Retail Design	
	• UNE Loop Other without NP - Design		Retail Design	
	• UNE Other Design		Retail Design	
	• Local Interconnection Trunks	X		

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Provisioning	**Percent Provisioning Troubles within 30 Days**			
	◆ Resale Residence	X		
	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		
	◆ UNE Loop and Port Combos		Retail Residence and Business	
	◆ UNE Design		Retail Design	
	◆ UNE Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop with NP – Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop without NP – Non-Design		Retail Residence and Business	
	◆ UNE Loop Other with NP Non-Design		Retail Residence and Business	
	◆ UNE Loop Other without NP Non-Design		Retail Residence and Business	
	◆ UNE Other Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop with NP - Design		Retail Residence and Business	
	◆ UNE 2w Loop without NP - Design		Retail Residence and Business	
	◆ UNE Loop Other with NP - Design		Retail Design	
	◆ UNE Loop Other without NP - Design		Retail Design	
	◆ UNE Other Design		Retail Design	
	◆ Local Interconnection Trunks	X		
	Total Service Order Cycle Time	Diagnostic	Diagnostic	Diagnostic
	◆ Resale Residence	X		
	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Provisioning	• UNE Design		Retail Design	
	• UNE Non-Design		Retail Residence and Business	
	• UNE Loop and Port Combos		Retail Residence and Business	
	• UNE 2w Loop with NP – Non-Design		Retail Residence and Business	
	• UNE 2w Loop without NP – Non-Design		Retail Residence and Business	
	• UNE Loop Other with NP Non-Design		Retail Residence and Business	
	• UNE Loop Other without NP Non-Design		Retail Residence and Business	
	• UNE Other Non-Design		Retail Residence and Business	
	• UNE 2w Loop with NP - Design		Retail Residence and Business	
	• UNE 2w Loop without NP - Design		Retail Residence and Business	
	• UNE Loop Other with NP - Design		Retail Design	
	• UNE Loop Other without NP - Design		Retail Design	
	• UNE Other Design		Retail Design	
	• Local Interconnection Trunks	X		
Maintenance	**Customer Trouble Report Rate**	Diagnostic	Diagnostic	Diagnostic
	• Resale Residence	X		
	• Resale Business	X		
	• Resale Design	X		
	• Resale PBX	X		
	• Resale Centrex	X		
	• Resale ISDN	X		
	• UNE Design		Retail Design	
	• UNE Non-Design		Retail Residence and Business	
	• UNE Loop and Port Combos		Retail Residence and Business	
	• UNE 2w Loop – Non-Design		Retail Residence and Business	
	• UNE Loop Other - Non-Design		Retail Residence and Business	
	• UNE Other Non-Design		Retail Residence and Business	
	• UNE 2w Loop - Design		Retail Residence and Business	

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Maintenance	◆ UNE Loop Other - Design		Retail Design	
	◆ UNE Other Design		Retail Design	
	◆ Local Interconnection Trunks	X		
	Percent Missed Repair Appointments			
	◆ Resale Residence	X		
	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		
	◆ UNE Design		Retail Design	
	◆ UNE Non-Design		Retail Residence and Business	
	◆ UNE Loop and Port Combos		Retail Residence and Business	
	◆ UNE 2w Loop – Non-Design		Retail Residence and Business	
	◆ UNE Loop Other - Non-Design		Retail Residence and Business	
	◆ UNE Other Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop - Design		Retail Residence and Business	
	◆ UNE Loop Other - Design		Retail Design	
	◆ UNE Other Design		Retail Design	
	◆ Local Interconnection Trunks	X		
	Maintenance Average Duration			
	◆ Resale Residence	X		
	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		
	◆ UNE Design		Retail Design	

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Maintenance	• UNE Non-Design		Retail Residence and Business	
	• UNE Loop and Port Combos		Retail Residence and Business	
	• UNE 2w Loop – Non-Design		Retail Residence and Business	
	• UNE Loop Other - Non-Design		Retail Residence and Business	
	• UNE Other Non-Design		Retail Residence and Business	
	• UNE 2w Loop - Design		Retail Residence and Business	
	• UNE Loop Other - Design		Retail Design	
	• UNE Other Design		Retail Design	
	• Local Interconnection Trunks	X		
	Percent Repeat Troubles within 30 Days			
	• Resale Residence	X		
	• Resale Business	X		
	• Resale Design	X		
	• Resale PBX	X		
	• Resale Centrex	X		
	• Resale ISDN	X		
	• UNE Design		Retail Design	
	• UNE Non-Design		Retail Residence and Business	
	• UNE Loop and Port Combos		Retail Residence and Business	
	• UNE 2w Loop – Non-Design		Retail Residence and Business	
	• UNE Loop Other - Non-Design		Retail Residence and Business	
	• UNE Other Non-Design		Retail Residence and Business	
	• UNE 2w Loop - Design		Retail Residence and Business	
	• UNE Loop Other - Design		Retail Design	
	• UNE Other Design		Retail Design	
	• Local Interconnection Trunks	X		
	Out of Service > 24 hours			
	• Resale Residence	X		

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Maintenance	◆ Resale Business	X		
	◆ Resale Design	X		
	◆ Resale PBX	X		
	◆ Resale Centrex	X		
	◆ Resale ISDN	X		
	◆ UNE Design		Retail Design	
	◆ UNE Non-Design		Retail Residence and Business	
	◆ UNE Loop and Port Combos		Retail Residence and Business	
	◆ UNE 2w Loop – Non-Design		Retail Residence and Business	
	◆ UNE Loop Other - Non-Design		Retail Residence and Business	
	◆ UNE Other Non-Design		Retail Residence and Business	
	◆ UNE 2w Loop - Design		Retail Residence and Business	
	◆ UNE Loop Other - Design		Retail Design	
	◆ UNE Other Design		Retail Design	
	◆ Local Interconnection Trunks	X		
	OSS Interface Availability			
	◆ All systems except ECTA	X		
	◆ ECTA			99.5%
	OSS Response Interval and %			
	◆ TAFI (Front End) ◆ CRIS, DLETH, DLR, OSPCM, LMOS, LMOSUP, MARCH, Predictor, SOCS, LNP (Parity by Design)	X PBD		
	Average Answer Time – Repair Center	X		
Billing	**Invoice Accuracy**			
	Mean Time To Deliver Invoices	X		
	Usage Data Delivery Accuracy	X		
	Usage Data Delivery Timeliness	X		
	Usage Data Delivery Completeness	X		

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Billing	**Invoice Accuracy - continued**			
	Mean Time to Deliver Usage	X		
Operator Services (Toll)	**Average Speed to Answer**	PBD		
	% Answered in "X" Seconds	PBD		
Directory Assistance	**Average Speed to Answer**	PBD		
E911	**Timeliness**	PBD		
	Accuracy	PBD		
	Mean Interval	PBD		
Trunk Group Performance (Blockage)	**Trunk Group Service Report (Percent Trunk Blockage)** Any 2 hour period in 24 hours where CLEC blockage exceeds BST blockage by more than 0.5% = a miss using trunk groups 1,3,4,5,10,16 for CLECs and 9 for BST.	X		
	Trunk Group Service Report (Percent Trunk Blockage)	X		
LNP	**Average Disconnect Timeliness Interval**			95% ≤ 24 Hrs.
	Percent Missed Installation Appointments		Retail Residence and Business	
	FOC Mechanized			95% ≤ 4 Hrs.
	% Reject Service Request		Diagnostic	
	Average Reject Interval Mechanized			95% ≤ 1 Hrs.
	TSOCT		Diagnostic	
	% Flow Through			80%

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Analogs and Benchmarks

BST SQM Category	Measures and Sub-Metrics	Resale Retail Analogue	UNEs Retail Analogue	Benchmark*
Customer Coordinated Conversions	**Coordinated Customer Conversions – UNE Loop**			95% ≤ 15 mins.
	Coordinated Customer Conversions – LNP			95% ≤ 15 mins.
Collocation+	% of Due Dates Missed			< 10% Missed Due Dates
	Average Response Time		FL PSC is addressing this in generic docket	30 Days
+A contract with each CLEC required	**Average Arrangement Time** Ordinary Extraordinary		FL PSC is addressing this in generic docket	 90 Days 130 Days

Note 1: PBD = Parity by Design. UD = Under Development – Benchmarks will be replaced when Analogs are complete.

Note 2: The retail analog for UNE Non-Design and UNE 2w Loops – Design is the average of Retail Residence Dispatch and Retail Business Dispatch transactions for the particular month. The retail analog for other UNE Design is Retail Design Dispatch.

Note 3: Analogs and Benchmarks will be re-evaluated periodically, at least once a year, to validate applicability.

Statistical Techniques For The Analysis And Comparison Of Performance Measurement Data

Submitted to Louisiana Public Service Commission (LPSC) Docket U-22252 Subdocket C

Revised February 28, 2000

1. Introduction and Scope

The Louisiana Public Service Commission (LPSC) staff has requested Drs. S. Hinkins, E. Mulrow, and F. Scheuren[1] of Ernst & Young LLP (consultants for BellSouth Telecommunications), and Dr. C. Mallows of AT&T Labs-Research to set out their views on the application of a statistical analysis to performance measurement data. The present report is intended to provide a detailed statistical report on appropriate methodology.

The setting for the analysis is crucial to the interpretation of any statistical significance that might be found. There is no doubt that, to quote the Commission staff, "statistical analysis can help reveal the likelihood that reported differences in an ILECs performance toward its retail customers and CLECs are due to underlying differences in behavior rather than random chance" (Staff Final Recommendation, LPSC Docket No. U-22252 - Subdocket C, dated August 12, 1998, pages 15 - 16).

To frame our presentation the next paragraph from the LPSC Docket U-22252 is quoted in its entirety.

> **"Statistical tests are effective in identifying those measurements where differences in performance exist. The tests themselves cannot identify the cause of the apparent differences. The differences may be due to a variety of reasons, including: 1) when the ILEC and CLEC processes being measured are actually different and should not be expected to produce the same result, 2) when the ILEC is employing discriminatory practices, or 3) when assumptions necessary for the statistical test to be valid are not being met."** (Ibid., page 16)

Apparent statistically significant differences in BellSouth and CLEC performance can arise when

- the ILEC and CLEC processes being measured are actually different and should not be expected to produce the same result
- the ILEC is employing discriminatory practices, or
- assumptions necessary for the statistical test to be valid are not being met.

[1] Dr. Scheuren is now a Senior Fellow at the Urban Institute.

To meet the Louisiana Commission's purpose, we will recommend techniques that are robust in the presence of possible assumption failure, carefully examine BellSouth Telecommunications (BST) and CLEC performance so "like" is compared only to "like," and are still able, in a highly efficient manner, to detect differences. Upon investigation any differences detected might lead to concerns about possible discriminatory practices.

The LPSC staff also states "that a uniform methodology which identifies those items which need to be measured, how they are to be measured, and how the results are to be reported is also desirable and would be beneficial to all parties" (Ibid., page 16). We agree with this goal as well, stipulating only that the use of a single method may not be desirable while a single methodology (or a set of methods) could be.

The statistical process for testing if CLEC and ILEC customers are being treated equally involves more than just a mathematical formula. Three key elements need to be considered before an appropriate decision process can be developed. These are

- the type of data,
- the type of comparison, and
- the type of performance measure.

When examining the various combinations of these elements, we find that there is a set of testing principles that can be applied uniformly. However, the statistical formulae that need to be used change as the situation changes.

To be responsive to the Commission, we have divided our discussion into four sections and five appendices. The contents of each of these are briefly mentioned below -- first for the main report and then for the extensive supporting appendix materials.

For the main report, this section (Section I) introduces our work and sets out the required scope. The next two sections (Sections II and III) discuss the type of comparisons that need to be identified, and the appropriate testing principles. The final section (Section IV) provides an overview of appropriate testing methodologies, based on what we have learned from our examination of BellSouth's performance measure data in Louisiana.

The five appendices provide technical details on the statistical calculations involved in the Truncated Z statistic (Appendix A), the implementation of the methodology for the trunk blocking performance measure (Appendix B), the calculations involved in computing the balancing critical value of a test (Appendix C), examples of ways to present the results using detailed statistical displays so that results can be audited (Appendix D), and the technical details involved in data trimming (Appendix E).

2. Data Considerations, Comparisons, and Measurement Types

This section makes general distinctions which apply to the performance measures. These distinctions will be important in the determination of appropriate methodologies.

Data Set Types. The type of statistical methodology used depends on the form of the data available. In general, there are two ways to classify the data used for performance measure comparisons. These are:

- transaction level data, and
- aggregated summaries.

Records in a transaction level data set represent a single transaction, e.g. an individual customer order, or the record of a specific trouble reported by a customer. This type of data set allows for deep like-to-like comparisons, and may also allow one to identify the root cause of a problem. A testing methodology needs to be carefully chosen so that it incorporates the comparison levels and does not cover up problem areas.

Records in an aggregated summary data set are typically summaries of related transactions. For example, the total number of blocked calls in a trunk group during the noon hour of a day is a summary statistic. This type of data set may not contain as much information as a transaction level data set, and it therefore needs to be treated differently. While a general methodology may be determined for a transaction level data set, it may not be possible to do so for aggregated summaries. Testing methodology needs to be developed on a case-by-case basis.

Comparison Types. An ILEC's performance in providing services to CLEC customers is tested in one of two ways:

- by comparing CLEC performance to ILEC performance when a retail analog exists, or
- by comparing CLEC performance to a benchmark.

The testing methodologies for these two situations will have similarities, but there are differences that need to be understood.

Table 1 categorizes those performance measures that E&Y has examined by data type and comparison type. The table shows that five performance measures with retail analogs have transaction level data, while three others with retail analogs only have summary level data. No performance measures using benchmarks have been studied.

Table 1. Classification of Performance Measures by Data and Comparison Type (only measures previously examined by E&Y are included)

Level of Data	Comparison Type	
	Retail Analog	Benchmark
Transaction Level	Order Completion Interval Maintenance Average Duration % Missed Installations % Missed Repair Trouble Report Rate	No Measures Examined
Summary Level	Billing Timeliness OSS Response Interval Trunk Blocking	No Measures Examined

Measurement Types. The performance measures that will undergo testing are of four types: means, proportions (an average of a measure that takes on only the values of 0 or 1), rates, and ratios.

While all four have similar characteristics, proportions and rates are derived from count data while means and ratios are derived from interval measurements. Table 2 classifies the performance measures by the type of measurement.

Table 2: Classification of Performance Measures by Measurement Type

Mean	Proportion	Rate	Ratio
Order Completion Interval Maint. Ave. Duration OSS Response Interval	Percent Missed Installations Percent Missed Repairs Billing Timeliness Trunk Blocking	Trouble Report Rate	Billing Accuracy

3. Testing Principles

This section describes five general principles which the final methodology should satisfy:

1. *When possible, data should be compared at appropriate levels, e.g. wire center, time of month, dispatched, residential, new orders.*
2. *Each performance measure of interest should be summarized by one overall test statistic giving the decision maker a rule that determines whether a statistically significant difference exists.*
3. *The decision system must be developed so that it does not require intermediate manual intervention.*
4. *The testing methodology should balance Type I and Type II Error probabilities.*
5. *Trimming of extreme observations from BellSouth and CLEC distributions is needed in order to ensure that a fair comparison is made between performance measures.*

Like-to-Like Comparisons. *When possible, data should be compared at appropriate levels, e.g. wire center, time of month, dispatched, residential, new orders.*

In particular, to meet this goal the testing process should:

- Identify variables that may affect the performance measure.
- Record important confounding covariates.
- Adjust for the observed covariates in order to remove potential biases and to make the CLEC and the ILEC units as comparable as possible.

It is a well known principle that comparisons should be made on equal footing: apples-to-apples, oranges-to-oranges. Statistical techniques that are addressed in most text books usually assume that this is the case beforehand. Some higher level books address the issue of "designed experiments" and discuss appropriate ways to structure the data collection method so that the text books' formulae can be used in analyzing the data.

Performance measure testing does not involve data from a designed experiment. Rather, the data is obtained from an observational study. That being the case, one must impose a structure on the data after it is gathered in order to assure that fair comparisons are being made. For example, it is important to disaggregate the data to a fine level so that appropriate like-to-like comparisons of CLEC and ILEC data can be made. Any statistical methodology that ignores important confounding variables can produce biased results.

Aggregate Level Test Statistic. *Each performance measure of interest should be summarized by one overall test statistic giving the decision maker a rule that determines whether a statistically significant difference exists.*

To achieve this goal, the aggregate test statistic should have the following properties:

- The method should provide a single overall index, on a standard scale.

- If entries in comparison cells are exactly proportional over a covariate, the aggregated index should be very nearly the same as if comparisons on the covariate had not been done.
- The contribution of each comparison cell should depend on the number of observations in the cell.
- Cancellation between comparison cells should be limited, i.e., positive outcomes should not be allowed to cancel negative ones.
- The index should be a continuous function of the observations.

Since the data are being disaggregated to a very deep level, thousands of like-to-like comparison cells are created. An aggregate summary statistic is needed in order to make an overall judgment.

The aggregate level statistic should be insensitive to small changes in cells values, and its value should not be affected if some of the disaggregation for like-to-like cells is truly unnecessary. Furthermore, individual cell results should be weighted so that those cells with more transactions have larger effects on the overall result.

<u>Production Mode Process</u>. *The decision system must be developed so that it does not require intermediate manual intervention.*

Two statistical paradigms are possible for examining performance measure data. In the exploratory paradigm, data are examined and methodology is developed that is consistent with what is found. In a production paradigm a methodology is decided upon before data exploration. For the production paradigm to succeed

- Calculations should be well defined for possible eventualities.
- The decision process should be based on an algorithm that needs no manual intervention.
- Results should be arrived at in a timely manner.
- The system must recognize that resources are needed for other performance measure-related processes that also must be run in a timely manner.
- The system should be both auditable and adjustable over time.

While the exploratory paradigm provides protection against using erroneous data, it requires a great deal of lead time and is unsuitable for timely monthly performance measure testing. A production paradigm will not only promptly produce overall test results but will also provide documentation that can be used to explore the data after the test results are released.

<u>Error Probability Balancing</u>. *The testing methodology should balance Type I and Type II Error probabilities.*

Specifically, what is required to achieve this goal is

- The probability of a Type I error should equal the probability of a Type II error for well-defined null and alternative hypotheses.
- The formula for a test's balancing critical value should be simple enough to calculate using standard mathematical functions, i.e. one should avoid methods that require computationally intensive techniques.
- Little to no information beyond the null hypothesis, the alternative hypothesis, and the number of observations should be required for calculating the balancing critical value.

The objective of a statistical test is to test a hypothesis concerning the values of one or more population parameters. Usually an inquiry into whether or not there is evidence to support a hypothesis, called the *alternative hypothesis*, is conducted by seeking statistical evidence that the converse of the alternative, the *null hypothesis*, is most likely false. If there is not sufficient evidence to reject the null hypothesis, then a case for accepting the alternative has not been made.

Two types of errors are possible in any decision-making process. These have been summarized in Table 3.

Table 3: Statistical Testing Errors

Decision Error	General Description	In terms of Performance Measure Testing
Type I	Rejecting the null hypothesis (accepting the alternative) when the null is true.	Deciding that BST favors its own customers when it does not.
Type II	Accepting the null hypothesis when the alternative is true.	Deciding that BST does not favor its own customers when it does.

In a controlled experimental study where the sample sizes are relatively small, it is generally desirable to control the Type I error closely to avoid making a conclusion that there is a difference when, in fact, there is none. The probability of a Type II error is not directly controlled but is determined by the sample size and the distance between the null and the alternative hypotheses.

If a standard of materiality is set by stating a specific alternative for the test, and the distribution of the test statistic under both the null and alternative hypotheses is understood, then a critical value can be determined so that the two error probabilities are equal.

<u>Trimming</u>. *Trimming of extreme observations from BellSouth and CLEC distributions is needed in order to ensure that a fair comparison is made between performance measures.*

Three conditions are needed to accomplish this goal. These are:

- Trimming should be based on a general rule that can be used in a production setting.
- Trimmed observations should not simply be discarded; they need to be examined and possibly used in the final decision making process.
- Trimming should only be used on performance measures that are sensitive to "outliers."

For the purpose of performance measure testing, trimming refers to removing transactions that significantly distort the performance measure statistic for the set of transactions under consideration. For example, the arithmetic average (or mean) is extremely sensitive to "outliers" since a single large value can significantly distort the average.

The term "outliers" refers to:

1) extreme data values that may be valid, but since they are rare measurements, they may be considered to be statistically unique; or
2) large values that should not be in the analysis data set because of errors in the measurement or in selecting the data.

Trimming is beneficial since it puts both ILEC and CLEC transactions on equal footing with respect to the largest value in each set. Note, though, that it is only needed for performance measures that are distorted by outliers. Of the three types of measures defined in Section 2, only mean (average) measures require trimming. Appendix E sets forth a trimming plan for mean performance measures.

4. Testing Methodology

This section details the testing methodology that is most appropriate for the various types of performance measures. First, transaction level testing will be discussed when there is a retail analog. Next, transaction level testing against a benchmark. Then, testing when only aggregated summaries are available.

<u>Transaction Level - Retail Analog: The Truncated Z Statistic</u>. When a retail analog is available CLEC performance can be directly compared with ILEC performance. Over the last year, for transaction level data, many test statistics have been examined. We now believe that the "Truncated Z" test statistic provides the best compromise with respect to possessing the desired qualities outlined in Section 3, above.

The Truncated Z is fully described in Appendix A, and formulae for calculation of a balancing critical value are found in Appendix C. The main features of this statistic are:

- A basic test statistic is calculated within each comparison cell.
- The value of a cell's result is left "as is" if the result suggests that "favoritism" may be taking place. Otherwise, the result is set to zero. This is called the truncation step.
- Weights that depend on the volume of both ILEC and CLEC transactions within the cell are determined, and a weighted sum of the "truncated" cell results is calculated.
- The weighted sum is theoretically corrected to account for the truncation, and a final overall statistic is determined.
- This overall test value is compared to a balancing critical value to determine if favoritism is likely.

The test statistic itself is based on like-to-like comparisons, and it possesses all five of the properties of an aggregate test statistic (Section 3). While the test requires a large amount of calculations, our studies of the process on some of BellSouth's performance measure data indicate that the calculations can be completed in a reasonable amount of time. Therefore, the process can be put into production mode. Finally, since a balancing critical value can be calculated, it is possible to balance the error probabilities.

Transaction Level - Benchmark. When a benchmark is used, CLEC performance is not compared with ILEC performance. Like-to-like comparison cells are not needed, thus greatly simplifying the testing process. Statistical testing can be done using a probability model, or non-statistical testing can be done using a deterministic model. No data for this data/comparison class has been studied at this point in time.

Aggregated Summary - Retail Analog or Benchmark. We cannot provide any one single set of rules for the analysis of data in this class. Data that is an aggregated summary of transactions may or may not present problems. For example, BellSouth's trunk blocking data is saved as summaries by hour of the day. Collectively, the summaries do provide sufficient information to proceed with the Truncated Z methodology.

On the other hand, our examination of the data for the OSS response interval revealed that information necessary for computing a Truncated Z was not available. In this case, however, we were able to construct a satisfactory time series method to analyze the measure.

Each measure falling into this class needs to be handled on a case-by-case basis. If sufficient information is available to use the Truncated Z method, then we feel it should be used. When the Truncated Z cannot be used, a testing methodology that adheres closely to the principles outlined in Section 3 should be determined and followed.

Appendix A. The Truncated Z Statistic

The Truncated Z test statistic was developed by Dr. Mallows in order to have an aggregate level test when transaction level data are available that

- provides a single overall index on a standard scale;
- will not change the outcome if the disaggregation is unnecessary,
- incorporates the number of observations in a cell into the determination of the weight for the contribution of each comparison cell,
- limits the amount of "neutralization" between comparison cells, and
- is a continuous function of the observations.

The Ernst & Young statistical team and Dr. Mallows have studied the implementation of the statistic using some of BellSouth's performance measure data. This has resulted in an overall process for comparing CLEC and ILEC performance such that the following principles hold:

1) Like-to-Like Comparisons are made. (See Appendix B for an example based on the trunk blocking measure.)
2) Error probabilities are balanced. (See Appendix C)
3) Extreme values are trimmed from the data sets when they significantly distort the performance measure statistic. (See Appendix E)
4) The testing process is an automated production system. (Discussed here. See Appendix D for reporting guidelines.)
5) The determination of ILEC favoritism is based on a single aggregate level test statistic. (Discussed here.)

This appendix provides the details behind computing the Truncated Z test statistic so that principles 4 and 5 hold. We start by assuming that any necessary trimming of the data is complete, and that the data are disaggregated so that comparisons are made within appropriate classes or adjustment cells that define "like" observations.

Notation and Exact Testing Distributions

Below, we have detailed the basic notation for the construction of the truncated z statistic. In what follows the word "cell" should be taken to mean a like-to-like comparison cell that has both one (or more) ILEC observation and one (or more) CLEC observation.

L = the total number of occupied cells

j = $1,\ldots,L$; an index for the cells

n_{1j} = the number of ILEC transactions in cell j

n_{2j} = the number of CLEC transactions in cell j

n_j = the total number transactions in cell j; $n_{1j} + n_{2j}$

X_{1jk} = individual ILEC transactions in cell j; $k = 1,\ldots, n_{1j}$

X_{2jk} = individual CLEC transactions in cell j; $k = 1,\ldots, n_{2j}$

Y_{jk} = individual transaction (both ILEC and CLEC) in cell j

$$= \begin{cases} X_{1jk} & k = 1,K\ ,n_{1j} \\ X_{2jk} & k = n_{1j} + 1,K\ ,n_j \end{cases}$$

$\Phi^{-1}(\cdot)$ = the inverse of the cumulative standard normal distribution function

For Mean Performance Measures the following additional notation is needed.

$\overline{X}_{1j}$ = the ILEC sample mean of cell j

$\overline{X}_{2j}$ = the CLEC sample mean of cell j

s^2_{1j} = the ILEC sample variance in cell j

s^2_{2j} = the CLEC sample variance in cell j

$\{y_{jk}\}$ = a random sample of size n_{2j} from the set of $Y_{j1},K\ ,Y_{jn_j}$; $k = 1,\ldots,n_{2j}$

M_j = the total number of distinct pairs of samples of size n_{1j} and n_{2j};

$$= \binom{n_j}{n_{1j}}$$

The exact parity test is the permutation test based on the "modified Z" statistic. For large samples, we can avoid permutation calculations since this statistic will be normal (or Student's t) to a good approximation. For small samples, where we cannot avoid permutation calculations, we have found that the difference between "modified Z" and the textbook "pooled Z" is negligible. We therefore propose to use the permutation test based on pooled Z for small samples. This decision speeds up the permutation computations considerably, because for each permutation we need only compute the sum of the CLEC sample values, and not the pooled statistic itself.

A permutation probability mass function distribution for cell j, based on the "pooled Z" can be written as

$$PM(t) = P(\sum_k y_{jk} = t) = \frac{\textit{the number of samples that sum to } t}{M_j},$$

and the corresponding cumulative permutation distribution is

$$\mathrm{CPM}(t) = P(\sum_k y_{jk} \le t) = \frac{\textit{the number of samples with sum } \le t}{M_j}.$$

For Proportion Performance Measures the following notation is defined

a_{1j} = the number of ILEC cases possessing an attribute of interest in cell j

a_{2j} = the number of CLEC cases possessing an attribute of interest in cell j

a_j = the number of cases possessing an attribute of interest in cell j; $a_{1j}+ a_{2j}$

The exact distribution for a parity test is the hypergeometric distribution. The hypergeometric probability mass function distribution for cell j is

$$\mathrm{HG}(h) = P(H = h) = \begin{cases} \dfrac{\binom{n_{1j}}{h}\binom{n_{2j}}{a_j - h}}{\binom{n_j}{a_j}}, & \max(0, a_j - n_{2j}) \le h \le \min(a_j, n_{1j}) \\ 0 & \text{otherwise} \end{cases},$$

and the cumulative hypergeometric distribution is

$$\mathrm{CHG}(x) = P(H \le x) = \begin{cases} 0 & x < \max(0, a_j - n_{2j}) \\ \sum\limits_{h=\max(0,a_j-n_{1j})}^{x} \mathrm{HG}(h), & \max(0, a_j - n_{2j}) \le x \le \min(a_j, n_{1j}) \\ 1 & x > \min(a_j, n_{1j}) \end{cases}.$$

For Rate Measures, the notation needed is defined as

b_{1j} = the number of ILEC base elements in cell j

b_{2j} = the number of CLEC base elements in cell j

b_j = the total number of base elements in cell j; $b_{1j}+ b_{2j}$

$\hat{r}_{1j}$ = the ILEC sample rate of cell j; n_{1j}/b_{1j}

$\hat{r}_{2j}$ = the CLEC sample rate of cell j; n_{2j}/b_{2j}

q_j = the relative proportion of ILEC elements for cell j; b_{1j}/b_j

The exact distribution for a parity test is the binomial distribution. The binomial probability mass function distribution for cell j is

$$BN(k) = P(B = k) = \begin{cases} \binom{n_j}{k} q_j^k (1-q_j)^{n_j-k}, & 0 \le k \le n_j \\ 0 & \text{otherwise} \end{cases},$$

and the cumulative binomial distribution is

$$CBN(x) = P(B \le x) = \begin{cases} 0 & x < 0 \\ \sum_{k=0}^{x} BN(k), & 0 \le x \le n_j \\ 1 & x > n_j \end{cases}.$$

For Ratio Performance Measures the following additional notation is needed.

U_{1jk} = additional quantity of interest of an individual ILEC transaction in cell j; $k = 1, \ldots, n_{1j}$

U_{2jk} = additional quantity of interest of an individual CLEC transaction in cell j; $k = 1, \ldots, n_{2j}$

$\hat{R}_{ij}$ = the ILEC (i = 1) or CLEC (i = 2) ratio of the total additional quantity of interest to the base transaction total in cell j, i.e., $\sum_k U_{ijk} \Big/ \sum_k X_{ijk}$

Calculating the Truncated Z

The general methodology for calculating an aggregate level test statistic is outlined below.

1. **Calculate cell weights**, W_j. A weight based on the number of transactions is used so that a cell which has a larger number of transactions has a larger weight. The actual weight formulae will depend on the type of measure.

   Mean or Ratio Measure

$$W_j = \sqrt{\frac{n_{1j} n_{2j}}{n_j}}$$

   Proportion Measure

$$W_j = \sqrt{\frac{n_{2j} n_{1j}}{n_j} \cdot \frac{a_j}{n_j} \cdot \left(1 - \frac{a_j}{n_j}\right)}$$

Rate Measure

$$W_j = \sqrt{\frac{b_{1j} b_{2j}}{b_j} \cdot \frac{n_j}{b_j}}$$

2. **In each cell, calculate a Z value**, Z_j. A Z statistic with mean 0 and variance 1 is needed for each cell.

- If $W_j = 0$, set $Z_j = 0$.
- Otherwise, the actual Z statistic calculation depends on the type of performance measure.

Mean Measure

$$Z_j = \Phi^{-1}(\alpha)$$

where α is determine by the following algorithm.

If $\min(n_{1j}, n_{2j}) > 6$, then determine α as

$$\alpha = P(t_{n_{1j}-1} \leq T_j),$$

that is, α is the probability that a t random variable with n_{1j} - 1 degrees of freedom, is less than

$$T_j = t_j + \frac{g}{6}\left(\frac{n_{1j} + 2n_{2j}}{\sqrt{n_{1j}\, n_{2j}(n_{1j} + n_{2j})}}\right)\left(t_j^2 + \frac{n_{2j} - n_{1j}}{2n_{1j} + n_{2j}}\right),$$

where

$$t_j = \frac{\bar{X}_{1j} - \bar{X}_{2j}}{s_{1j}\sqrt{\frac{1}{n_{1j}} + \frac{1}{n_{2j}}}}$$

and the coefficient g is an estimate of the skewness of the parent population, which we assume is the same in all cells. It can be estimated from the ILEC values in the largest cells. This needs to be done only once for each measure. We have found that attempting to estimate this skewness parameter for each cell separately leads to excessive variability in the "adjusted" t. We therefore use a single compromise value in all cells.

Note, that t_j is the "modified Z" statistic. The statistic T_j is a "modified Z" corrected for the skewness of the ILEC data.

If $\min(n_{1j}, n_{2j}) \leq 6$, and

a) $M_j \leq 1{,}000$ (the total number of distinct pairs of samples of size n_{1j} and n_{2j} is 1,000 or less).

- Calculate the sample sum for all possible samples of size n_{2j}.
- Rank the sample sums from smallest to largest. Ties are dealt by using average ranks.
- Let R_0 be the rank of the observed sample sum with respect all the sample sums.

$$\alpha = 1 - \frac{R_0 - 0.5}{M_j}$$

b) $M_j > 1{,}000$

- Draw a random sample of 1,000 sample sums from the permutation distribution.
- Add the observed sample sum to the list. There is a total of 1001 sample sums. Rank the sample sums from smallest to largest. Ties are dealt by using average ranks.
- Let R_0 be the rank of the observed sample sum with respect all the sample sums.

$$\alpha = 1 - \frac{R_0 - 0.5}{1001}.$$

Proportion Measure

$$Z_j = \frac{n_j a_{1j} - n_{1j} a_j}{\sqrt{\dfrac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}}.$$

Rate Measure

$$Z_j = \frac{n_{1j} - n_j q_j}{\sqrt{n_j q_j (1 - q_j)}}$$

Ratio Measure

$$Z_j = \frac{\hat{R}_{1j} - \hat{R}_{2j}}{\sqrt{V(\hat{R}_{1j})\left(\frac{1}{n_{1j}} + \frac{1}{n_{2j}}\right)}}$$

$$V(\hat{R}_{1j}) = \frac{\sum_k \left(U_{1jk} - \hat{R}_{1j}X_{1jk}\right)^2}{\bar{X}_{1j}^2(n_{1j}-1)} = \frac{\sum_k U_{1jk}^2 - 2\hat{R}_{1j}\sum_k \left(U_{1jk}X_{1jk}\right) + \hat{R}_{1j}^2\sum_k X_{1jk}^2}{\bar{X}_{1j}^2(n_{1j}-1)}$$

3. **Obtain a truncated Z value for each cell, Z_j^*.** To limit the amount of cancellation that takes place between cell results during aggregation, cells whose results suggest possible favoritism are left alone. Otherwise the cell statistic is set to zero. This means that positive equivalent Z values are set to 0, and negative values are left alone. Mathematically, this is written as

$$Z_j^* = \min(0, Z_j).$$

4. **Calculate the theoretical mean and variance of the truncated statistic under the null hypothesis of parity, $E(Z_j^*|H_0)$ and $Var(Z_j^*|H_0)$.** In order to compensate for the truncation in step 3, an aggregated, weighted sum of the Z_j^* will need to be centered and scaled properly so that the final aggregate statistic follows a standard normal distribution.

   - If $W_j = 0$, then no evidence of favoritism is contained in the cell. The formulae for calculating $E(Z_j^* \mid H_0)$ and $Var(Z_j^* \mid H_0)$ cannot be used. Set both equal to 0.

   - If $\min(n_{1j}, n_{2j}) > 6$ for a mean measure, $\min\left\{a_{1j}\left(1-\frac{a_{1j}}{n_{1j}}\right), a_{2j}\left(1-\frac{a_{2j}}{n_{2j}}\right)\right\} > 9$ for a proportion measure, $\min\left(n_{1j}, n_{2j}\right) > 15$ and $n_j q_j (1-q_j) > 9$ for a rate measure, or n_{1j} and n_{2j} are large for a ratio measure then

$$E(Z_j^* \mid H_0) = -\frac{1}{\sqrt{2\pi}}, \text{ and}$$

$$Var(Z_j^* \mid H_0) = \frac{1}{2} - \frac{1}{2\pi}.$$

- Otherwise, determine the total number of values for Z_j^*. Let z_{ji} and θ_{ji}, denote the values of Z_j^* and the probabilities of observing each value, respectively.

$$E(Z_j^* \mid H_0) = \sum_i \theta_{ji} z_{ji} \text{ ,and}$$

$$Var(Z_j^* \mid H_0) = \sum_i \theta_{ji} z_{ji}^2 - \left[E(Z_j^* \mid H_0)\right]^2.$$

The actual values of the z's and θ's depends on the type of measure.

Mean Measure

$$N_j = \min(M_j, 1{,}000), \quad i = 1, \ldots, N_j$$

$$z_{ji} = \min\left\{0, \Phi^{-1}\left(1 - \tfrac{R_i - 0.5}{N_j}\right)\right\} \quad \text{where } R_i \text{ is the rank of sample sum i}$$

$$\theta_j = \frac{1}{N_j}$$

Proportion Measure

$$z_{ji} = \min\left\{0, \frac{n_j i - n_{1j} a_j}{\sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}}\right\}, \quad i = \max(0, a_j - n_{2j}), \ldots, \min(a_j, n_{1j})$$

$$\theta_{ji} = HG(i)$$

Rate Measure

$$z_{ji} = \min\left\{0, \frac{i - n_j q_j}{\sqrt{n_j q_j (1 - q_j)}}\right\}, \quad i = 0, \ldots, n_j$$

$$\theta_{ji} = BN(i)$$

Ratio Measure

The performance measure that is in this class is billing accuracy. The sample sizes for this measure are quite large, so there is no need for a small sample technique. If one does need a small sample technique, then a resampling method can be used.

5. **Calculate the aggregate test statistic, Z^T.**

$$Z^T = \frac{\sum_j W_j Z_j^* - \sum_j W_j E(Z_j^* | H_0)}{\sqrt{\sum_j W_j^2 Var(Z_j^* | H_0)}}$$

Decision Process

Once Z^T has been calculated, it is compared to a critical value to determine if the ILEC is favoring its own customers over a CLEC's customers. The derivation of the critical value is found in Appendix C.

This critical value changes as the ILEC and CLEC transaction volume change. One way to make this transparent to the decision maker, is to report the difference between the test statistic and the critical value, *diff* = $Z^T - c_B$. If favoritism is concluded when $Z^T < c_B$, then the *diff* < 0 indicates favoritism.

This make it very easy to determine favoritism: a positive *diff* suggests no favoritism, and a negative *diff* suggests favoritism. Appendix D provides an example of how this information can be reported for each month.

Appendix B. Trunk Blocking

This Appendix provides an example of how the trunk blocking data can be processed to apply the Truncated Z Statistic. Trunk blocking is defined as the proportion of blocked calls a trunk group experiences in a time interval. It is a ratio of two numbers—blocked and attempted calls, both of which can vary over time and across trunk groups. Since the measure is a proportion where the numerator is a subset of the denominator, the truncated Z statistic, modified for proportions, can be applied here (see Appendix A).

As with other performance measures, data are first assigned to like-to-like cells, and the Z statistic is then computed within each cell. For trunk blocking, cells are defined by three variables: hour, day, and trunk group size or capacity. The next sections will describe the data and the data processing steps in greater detail.

The approach used in this example needs to be reviewed by subject matter expert to determine if it proper to use for trunk blocking.

Data Sources

Two data files are processed for the trunk blocking measure. One is the Trunk Group Data File that contains the Trunk Group Serial Number (TGSN), Common Language Location Identifier (CLLI) , and other characteristics needed to categorize trunk groups and to identify them as BellSouth or CLEC.

The other file is the Blocking Data File (BDF), which contains the actual 24 hour blocking ratios for each weekday. There are 4 or 5 weeks in a monthly report cycle. The current system, however, allows the storage of daily blocking data by hour for a week only. Therefore, the data elements necessary to compute the Truncated Z must be extracted each week.

Two important data fields of interest on the Blocking Data File are the Blocking Ratio and Offered Load. The basic definition of Blocking Ratio is the proportion of all attempted calls that were blocked. For the simplest case of one way trunk groups, this is computed by dividing the number of blocked calls by the total call attempts, given that the data are valid. If they are not valid (e.g., actual usage exceeds capacity), blocking is estimated via the Neal Wilkinson algorithm.

Although the raw data--blocked calls (overflow) and peg counts (total call attempts)--are available, the calculation of the Blocking Ratio may be complicated for two-way trunk groups and trunk groups with invalid data. For this reason, we use the blocking ratios from the BDF instead of computing the ratios from the raw data. In order to reflect different call volumes processed through each trunk group, however, the blocking ratios need to be either weighted by call volume or converted to blocked and attempted calls before they are aggregated.

The measure of call traffic volume recommended for weighting is Offered Load. Offered Load is different from call counts in that it incorporates call duration as well. Since it is not just the number of calls but the total usage—number of calls multiplied by average call duration--that determines the occurrence of any blocking, this pseudo measure, Offered Load, appears to be the best indicator of call volume.

Cells or comparison classes are determined by three factors—hour, day, and trunk group capacity (number of trunks in service). The first two factors represent natural classes because trunk blocking changes over time. The third factor is based on our finding that high blocking tends to occur in small trunk groups. A pattern was found not only in the magnitude of blocking but also in its variability. Both the magnitude and variability of blocking decrease as trunk group capacity increases. Additional work is needed to establish the appropriate number of capacity levels and the proper location of boundaries.

Data Processing

The data are processed using the five steps below:

1. Merge the two files by TGSN and select only trunk groups listed in both files.
2. Reset the blocking of all high use trunk groups to zero[1].
3. Assign trunk group categories to CLEC and BellSouth: Categories 1, 3, 4, 5, 10, and 16 for CLEC and 9 for BellSouth[2]. The categories used here for comparison are:

Category	Administrator	Point A	Point B
1	BellSouth	BellSouth End Office	BellSouth Access Tandem
3	BellSouth	BellSouth End Office	CLEC Switch
4	BellSouth	BellSouth Local Tandem	CLEC Switch
5	BellSouth	BellSouth Access Tandem	CLEC Switch
9	BellSouth	BellSouth End Office	BellSouth End Office
10	BellSouth	BellSouth End Office	BellSouth Local Tandem
16	BellSouth	BellSouth Tandem	BellSouth Tandem

4. Recode the missing data. The Blocking Data File assigns all missing data (no valid measurement data) zero blocking. To differentiate true zero blocking from zeroes due to missing data, invalid records were identified and the ratios reset to missing. The blocking value was invalid if both the number of Loaded Days and the Offered Load were 0 for a given hourly period.
5. Form comparison classes based either on the data (i.e., quartiles) or on a predetermined set of values.

[1] The high use trunk groups cannot have any blocking. These are set up such that all overflow calls are automatically routed to other trunk groups instead of being physically blocked.
[2] More detailed information on all categories is described in a report 'Trunk Performance Report Generation' by Ernst & Young (March 1999).

Calculation of the Proportion of Blocked Calls

Each cell is determined by day of the month, hour of the day, and trunk group capacity. To use the Truncated Z method, we generate summary information, to include the total number of blocked calls and the total number of attempted calls, for each cell.

For the details of each calculation step, the following notation is used. For a given hour of a day, let $\overline{X}_{1ij}$ be the proportion of BellSouth blocked calls for trunk group i in cell j and $\overline{X}_{2ij}$ be the corresponding proportion for CLEC. Then $\overline{X}_{1ij} = X_{1ij} / n_{1ij}$ where X_{1ij} denotes the number of BellSouth blocked calls and n_{1ij} denotes the number of BellSouth total call attempts (indicated by Offered Load) for trunk group i in cell j. Likewise, $\overline{X}_{2ij} = X_{2ij} / n_{2ij}$. For the steps outlined below, only the CLEC notation is provided.

1. Compute the number of blocked calls for trunk group i: $X_{2ij} = \overline{X}_{2ij} * n_{2ij}$
2. Compute total call attempts for all trunk groups in the cell: $n_{2j} = \sum_i n_{2ij}$
3. Compute mean blocking proportion for cell j: $\overline{X}_{2j} = \sum_i X_{2ij} \Big/ \sum_i n_{2ij}$
4. Compute the total number of BellSouth and CLEC blocked calls in cell j: $t_j = \sum_i X_{1ij} + \sum_i X_{2ij}$
5. Apply the Truncated Z Statistic for Proportion measures presented in Appendix A.

Appendix C
Balancing the Type I and Type II Error Probabilities of the Truncated Z Test Statistic

This appendix describes a the methodology for balancing the error probabilities when the Truncated Z statistic, described in Appendix A, is used for performance measure parity testing. There are four key elements of the statistical testing process:

1. the null hypothesis, H_0, that parity exists between ILEC and CLEC services
2. the alternative hypothesis, H_a, that the ILEC is giving better service to its own customers
3. the Truncated Z test statistic, Z^T, and
4. a critical value, c

The decision rule[1] is

- If $Z^T < c$ then accept H_a.
- If $Z^T \geq c$ then accept H_0.

There are two types of error possible when using such a decision rule:

Type I Error: Deciding favoritism exists when there is, in fact, no favoritism.
Type II Error: Deciding parity exists when there is, in fact, favoritism.

The probabilities of each type of each are:

Type I Error: $\alpha = P(Z^T < c \mid H_0)$.
Type II Error: $\beta = P(Z^T \geq c \mid H_a)$.

In what follows, we show how to find a balancing critical value, c_B, so that $\alpha = \beta$.

General Methodology

The general form of the test statistic that is being used is

[1] This decision rule assumes that a negative test statistic indicates poor service for the CLEC customer. If the opposite is true, then reverse the decision rule.

$$z_0 = \frac{\hat{T} - E(\hat{T}|H_0)}{SE(\hat{T}|H_0)}, \tag{C.1}$$

where

$\hat{T}$ is an estimator that is (approximately) normally distributed,

$E(\hat{T} \mid H_0)$ is the expected value (mean) of $\hat{T}$ under the null hypothesis, and

$SE(\hat{T} \mid H_0)$ is the standard error of $\hat{T}$ under the null hypothesis.

Thus, under the null hypothesis, z_0 follows a standard normal distribution. However, this is not true under the alternative hypothesis. In this case,

$$z_a = \frac{\hat{T} - E(\hat{T}|H_a)}{SE(\hat{T}|H_a)}$$

has a standard normal distribution. Here

$E(\hat{T} \mid H_a)$ is the expected value (mean) of $\hat{T}$ under the alternative hypothesis, and

$SE(\hat{T} \mid H_a)$ is the standard error of $\hat{T}$ under the alternative hypothesis.

Notice that

$$\begin{aligned} \beta &= P(z_0 > c \mid H_a) \\ &= P\left(z_a > \frac{cSE(\hat{T} \mid H_0) + E(\hat{T} \mid H_0) - E(\hat{T} \mid H_a)}{SE(\hat{T} \mid H_a)} \right) \end{aligned} \tag{C.2}$$

and recall that for a standard normal random variable z and a constant b, $P(z < b) = P(z > -b)$. Thus,

$$\alpha = P(z_0 < c) = P(z_0 > -c) \tag{C.3}$$

Since we want $\alpha = \beta$, the right hand sides of (C.2) and (C.3) represent the same area under the standard normal density. Therefore, it must be the case that

$$-c = \frac{cSE(\hat{T} \mid H_0) + E(\hat{T} \mid H_0) - E(\hat{T} \mid H_a)}{SE(\hat{T} \mid H_a)}.$$

Solving this for c gives the general formula for a balancing critical value:

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF RONALD M. PATE

BEFORE THE TENESSEE REGULATORY AUTHORITY

DOCKET NO. 00-00309

December 6, 2000

Q. PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. AND YOUR BUSINESS ADDRESS.

A. My name is Ronald M. Pate. I am employed by BellSouth Telecommunications, Inc. ("BellSouth") as a Director, Interconnection Services. In this position, I handle certain issues related to local interconnection matters, primarily operations support systems ("OSS"). My business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.

A. I graduated from Georgia Institute of Technology in Atlanta, Georgia, in 1973, with a Bachelor of Science Degree. In 1984, I received a Masters of Business Administration from Georgia State University. My professional career spans over twenty-five years of general management experience in operations, logistics management, human resources, sales and marketing. I joined BellSouth in 1987, and have held various positions of increasing responsibility.

Q. HAVE YOU TESTIFIED PREVIOUSLY?

A. Yes. I have testified before the Public Service Commissions in Alabama, Florida, Georgia, Louisiana, South Carolina, the Tennessee Regulatory Authority and the North Carolina Utilities Commission.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to provide BellSouth's position on Issue Nos. 1, 80, and 81 raised by MCI metro Access Transmission Services, LLC ("MCI WORLDCOM ") in its Petition for Arbitration filed with the Tennessee Regulatory Authority dated April 14, 2000.

Issue 1: Should the electronically ordered NRC apply in the event an order is submitted manually when electronic interfaces are not available or not functioning within specified standards or parameters?

Q. WHICH PARTS OF THE ABOVE ISSUE ARE YOU ADDRESSING?

A. My testimony addresses BellSouth's obligation to provide nondiscriminatory access to BellSouth's OSS. Ms. Cindy Cox provides BellSouth's position on Issue #1 in her testimony.

Q. PAGE 5, PARAGRAPH 10 OF MCI WORLDCOM'S PETITION STATES THAT "BELLSOUTH IS UNREASONABLE AND DISCRIMINATORY, 47 U.S.C. 251 (c) (3), AND DOES NOT PROVIDE PARITY WHEN IT PROVIDES AND CHARGES COMPETITIVE LOCAL EXCHANGE CARRIERS ("CLECS") FOR A MANUAL PROCESS, WITHOUT MAKING AN ELECTRONIC PROCESS AVAILABLE, WHEN BELLSOUTH PROVIDES AN ELECTRONIC PROCESS FOR ITS RETAIL BUSINESS." DO YOU AGREE?

A. No. MCI WORLDCOM does not offer any specific information to support its suggestion that BellSouth is acting in a discriminatory manner, and I disagree strongly with this claim. I am not aware of any situation in which BellSouth "does not provide parity when it provides and charges alternative local exchange carriers for a manual process, without making an electronic process available, when BellSouth provides an electronic process for its retail business." Thus, the issue referenced by MCI WORLDCOM is not an issue at all.

Q. WHAT IS THE PRIMARY TYPE OF SERVICE REQUESTS THAT MCI WORLDCOM SENDS TO BELLSOUTH FOR WHICH THEY PAY MANUAL CHARGES?

A. At present, it appears that MCI WORLDCOM is submitting Local Service Requests ("LSRs") for primarily Unbundled Network Elements ("UNEs") in Florida and choosing to send most of these LSRs manually. Such service requests incur manual ordering charges. It also appears that many of the LSRs that MCI WORLDCOM is submitting manually could be submitted electronically through one of the following electronic interfaces offered by BellSouth: Local Exchange Navigation System ("LENS"), Telecommunications Access Gateway ("TAG"), RoboTAG™ and Electronic Data Interchange ("EDI"). LSRs submitted through one of these interfaces would be assessed only on an electronic ordering charge.

LSRs for most complex services must be submitted manually. However, the manual processes BellSouth uses for complex resold services offered to MCI WORLDCOM are accomplished in substantially the same time and manner as the processes used for BellSouth's retail complex services. BellSouth retail service orders for similar complex retail services also utilize manual processes. Because the same manual processes are in place for both MCI WORLDCOM and

BellSouth retail orders, the processes are nondiscriminatory and competitively neutral.

For certain resale and UNE services that must be submitted manually, BellSouth complies with the FCC requirement expressed in paragraph 87 of its Order on BellSouth's second 271 application for Louisiana, where the FCC reiterated its requirement as it had stated in the Ameritech Michigan Order and in the Local Competition First Report and Order "that a BOC must offer access to competing carriers that is analogous to OSS functions that a BOC provides to itself. Access to OSS functions must be offered in 'substantially the same time and manner' as the BOC. For those OSS functions that have no retail analogue . . . a BOC must offer access sufficient to allow an efficient competitor a meaningful opportunity to compete." Since BellSouth complies with applicable FCC requirements with respect to its OSS, it is not clear why MCI WORLDCOM believes that it should be permitted to avoid paying manual ordering charges when MCI WORLDCOM submits an LSR manually.

Q. DID THE FCC DEFINE NON-DISCRIMINATORY ACCESS TO OPERATIONS SUPPORT SYSTEMS?

A. Yes. The Federal Communications Commission ("FCC's") August 8, 1996 Order in Docket No. 96-98 ("FCC August 8 Order"), at paragraph

312, indicates generally that the quality of access to unbundled network elements must be comparable among competitive (alternative) local exchange carriers ("CLECs"), and between CLECs and BellSouth. More specifically, paragraph 518 of the FCC's August 8 Order states that "if competing carriers are unable to perform the functions of pre-ordering, ordering, provisioning, maintenance and repair, and billing for network elements and resale services in substantially the same time and manner that an incumbent can for itself, competing carriers will be severely disadvantaged, if not precluded altogether, from fairly competing. Thus providing non-discriminatory access to these support system functions, which would include access to the information such systems contain, is vital to creating opportunities for meaningful competition." (Emphasis added.)

Q. HAS THE FCC SUBSEQUENTLY REAFFIRMED THIS DEFINITION?

A. Yes. In paragraph 87 of its Order on BellSouth's second 271 application for Louisiana, the FCC reiterated its requirement as it had stated in the Ameritech Michigan Order and in the Local Competition First Report and Order "that a BOC must offer access to competing carriers that is analogous to OSS functions that a BOC provides to itself. Access to OSS functions must be offered in 'substantially the same time and manner' as the BOC. For those OSS functions that have no retail analogue . . . a BOC must offer access sufficient to allow an efficient competitor a meaningful opportunity to compete."

Q. MCI WORLDCOM, ON PAGE 5 OF ITS PETITION, STATES "BELLSOUTH SHOULD NOT BE ENCOURAGED TO USE INEFFICIENT, COSTLY SYSTEMS TO SERVE CLECS …". PLEASE COMMENT.

A. Again, I disagree strongly with the implication of MCI WORLDCOM's statement that BellSouth uses "inefficient costly systems to serve CLECs" which is not the case. BellSouth has provided the CLECs efficient, cost effective and non-discriminatory access to its operations support systems ("OSS") for pre-ordering, ordering, provisioning, maintenance and repair, and billing through robust and reliable manual and electronic interfaces. The electronic interfaces are: Local Exchange Navigation System ("LENS"), Telecommunications Access Gateway ("TAG"), RoboTAG, Electronic Data Interchange ("EDI"), Trouble Analysis Facilitation Interface ("TAFI"), Electronic Communications Trouble Administration ("ECTA"), Optional Daily Usage File ("ODUF"), Enhanced Optional Daily Usage File ("EODUF"), and Access Daily Usage File ("ADUF").

The interfaces for CLECs provide a full range of options from which to choose including integratable machine-to–machine interfaces, human-to–machine interfaces and manual interfaces. For whatever reason, MCI WORLDCOM has chosen to use the manual interfaces for UNE and resale services, even when MCI WORLDCOM could submit these orders electronically. In spite of the availability of electronic interface capability, MCI WORLDCOM does not utilize these efficient and cost effective means to submit their local service requests.

Q. DOES NON-DISCRIMINATORY ACCESS MEAN ALL SERVICES MUST BE ORDERED ELECTRONICALLY?

A. No. Nondiscriminatory access does not require that all information and functions for CLECs must be electronic and involve no manual handling. Many of BellSouth's retail services, primarily complex services, involve substantial manual handling by BellSouth account teams for BellSouth's own retail customers. Nondiscriminatory access to certain functions for CLECs also legitimately may involve manual processes for these same functions. These processes are in compliance with the Act and the FCC's rules.

Q. PLEASE EXPLAIN WHEN BELLSOUTH APPLIES THE ELECTRONIC AND THE MANUAL ORDERING CHARGES.

A. BellSouth charges the electronic charge for LSRs that are submitted over any of BellSouth's electronic interfaces. BellSouth applies the manual ordering charge for LSRs submitted manually to BellSouth's Local Carrier Service Center ("LCSC") via e-mail, facsimile, U.S. Mail, or similar method.

Q. WILL MCI WORLDCOM PAY ELECTRONIC ORDERING CHARGES FOR CERTAIN MANUALLY SUBMITTED ORDERS?

A. Yes. BellSouth has agreed to charge MCI WORLDCOM electronic ordering charges for complete and accurate LSRs that MCI WORLDCOM must submit manually when BellSouth's existing electronic interface utilized by MCI WORLDCOM are unavailable for reasons other than scheduled maintenance, provided the down time does not occur outside the scheduled maintenance window or for other reasonable scheduled activities for which reasonable advance notification is provided by BellSouth, and provided the activities do not occur outside the scheduled window. However, MCI WORLDCOM should not be permitted to avoid manual charges in a wholesale fashion as MCI WORLDCOM seeks to do.

Issue 80: Should BellSouth be required to provide an application-to-application access service order inquiry process?

Q. WHAT DO YOU UNDERSTAND MCI WORLDCOM IS REQUESTING REGARDING ISSUE 80?

A. My understanding is that MCI WORLDCOM is requesting BellSouth to develop an application-to-application electronic interface to process service inquiries (pre-ordering) for its access service requirements. MCI WORLDCOM indicates that pre-order information on Unbundled Network Elements ("UNEs") is required electronically via this process.

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth should not be required to provide an application-to-application access service order inquiry process. BellSouth currently provides non-discriminatory access to its OSS for pre-ordering for network elements and resale services pursuant to Section 251 of the Telecommunications Act of 1966 ("Act"). Access services are not part of BellSouth's obligations under the Act and MCI WORLDCOM should not be permitted to use this arbitration to try to enhance its interexchange service offerings.

Q. DOES MCI WORLDCOM NEED A NEW INTERFACE FOR ACCESS SERVICE ORDER INQUIRIES IN ORDER TO OBTAIN PRE-ORDERING INFORMATION ELECTRONICALLY FOR UNBUNDLED NETWORK ELEMENTS, AS DESCRIBED BY MCI WORLDCOM ON PAGE 73 OF ITS PETITION?

A. No. MCI WORLDCOM's claim that MCI WORLDCOM needs the Access Service Request ("ASR") interface in order " to obtain pre-order information electronically for UNEs…" is wrong. The national standard for ordering UNEs and resale services is through the submission of an LSR, not an ASR. BellSouth provides electronic pre-ordering functionality for UNEs and resale services via LENS, RoboTAG™, and TAG. Thus, the electronic pre-ordering functionality MCI WORLDCOM seeks is available through the LSR process

Q. MCI WORLDCOM CLAIMS ON PAGE 73 OF ITS PETITION THAT MCI WORLDCOM USES ASRs "TO ORDER, AMONG OTHER THINGS, INTERCONNECTION TRUNKS AND UNES FOR LOCAL SERVICE." HOW DO YOU RESPOND?

A. While conceivably MCI WORLDCOM could use an ASR to order certain UNEs, there is no requirement that MCI WORLDCOM do so. In fact, all UNEs offered by BellSouth can be ordered via an LSR, which would give MCI WORLDCOM the electronic pre-ordering functionality it claims it needs to provide local service. Although interconnection trunks are ordered via an ASR, interconnection trunks are used to provide much more than local service and, in any event, are not "unbundled network elements". MCI WORLDCOM has been using an ASR to order interconnection trunks for its long distance services for years, and MCI WORLDCOM's request for an ASR interface appears to be an effort to improve the manner in which MCI WORLDCOM orders access services, which is obviously beyond the scope of this proceeding.

Q. WHAT ORDERING SYSTEM HAS BEEN PROVIDED FOR SUBMITTING ACCESS SERVICE REQUESTS?

A. BellSouth has provided the Exchange Access Control and Tracking ("EXACT") electronic ordering system for the provisioning of ASRs submitted by interexchange carriers ("IXCs"). IXCs may submit ASRs directly to EXACT or submit ASRs via a dial-up to the BellSouth TELIS Access Ordering System that downloads ASRs to EXACT. Users of TELIS Access Ordering System may access The Interexchange Carrier Reference ("ICREF") to obtain pre-ordering functions of address validations, check Network Channel ("NC") and Network channel Interface ("NCI") codes, and to verify busy Connecting Facility

Assignments ("CFAs"). It is not clear why MCI WORLDCOM believes that BellSouth must enhance the pre-ordering capabilities for ASRs.

Issue 81: Should BellSouth provide a service inquiry process for local services?

Q. PLEASE EXPLAIN YOUR UNDERSTANDING OF MCI WORLDCOM's REQUEST FOR A LOCAL SERVICE INQUIRY ("SI") AS A PRE ORDERING FUNCTION.

A. My understanding of MCI WORLDCOM's request is that MCI WORLDCOM wants BellSouth to make the SI process available as a pre-ordering function on any local service request. Further, the SI process would be applied at MCI WORLDCOM's discretion and I presume that MCI WORLDCOM desires an electronic capability.

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth currently provides a SI process for CLECs for local services when appropriate. The SI process provided to MCI WORLDCOM is accomplished in substantially the same time and manner as BellSouth does for itself.

Q. DESCRIBE THE SI PROCESS AVAILABLE TO CLECs?

A. The availability of facilities on selected services for both CLECs and BellSouth's Retail units is determined via the SI process. The CLEC initiates this process by submitting a SI to its BellSouth Account Team ("AT") or the Complex Resale Support Group ("CRSG") along with its Local Service Request ("LSR"). If the CLEC desires to have BellSouth immediately order the service once the SI is complete and compatible facilities are availability, the CLEC submits a LSR and a SI to the AT/CRSG. This is referred to as a SI with a firm order. The AT/CRSG sends the SI to the Service Activation Center ("SAC") to determine if compatible facilities exist for the requested service and if so, reserve the facilities for the ordering CLEC. The SAC returns the completed SI form to the CRSG. If compatible facilities exist, the AT/CRSG forwards the LSR to the Local Carrier Service Center ("LCSC") for order issuance. If compatible facilities do not exist, the CRSG notifies the CLEC via electronic mail.

Q. IS THE SI PROCESS APPLICABLE FOR ALL SERVICE REQUESTS SUBMITTED BY CLECs?

A. No. The availability of facilities for simple services, some complex services and some types of loops, such as 2-wire unbundled voice grade loops, is not determined via the SI process for CLECs or BellSouth's Retail units. The availability of facilities for these services is determined during the service order provisioning process. The SI process is utilized only when it is necessary to determine whether facilities are available that meet certain technical requirements for the particular service(s) to be provided. Such an inquiry is not necessary for the services mentioned above.

Q. HOW ARE AVAILABILITY OF FACILITIES DETERMINED FOR SERVICES WHERE A SI IS NOT INITIATED?

A. Availability of facilities are determined as part of the provisioning cycle. When a LSR submitted by a CLEC has successfully passed through the various edits and formatting checks, the LSR is translated into a service order which can be accepted by BellSouth's downstream legacy systems for provisioning of the requested service. As an example, one such downstream system is the Loop Facility Assignment Control System ("LFACS"). LFACS selects loop facilities which serve the address(es) on the service order as a function of the provisioning cycle.

Q. WHAT ARE BELLSOUTH'S 319 REMAND OBLIGATIONS REGARDING LOOP QUALIFICATION?

A. It is my understanding that 47 C.F.R §51.319 (g) requires BellSouth to make available, as part of its duty to provide access to the pre-ordering function, nondiscriminatory access to the same detailed information about the loop that is available to BellSouth.

Q. HOW IS BELLSOUTH MEETING ITS OBLIGATIONS?

A. BellSouth has developed procedures to provide CLECs detailed loop make-up information as a pre-ordering function via the SI process. This process is available to any CLEC that is interested in incorporating these procedures into their interconnection agreement. Additionally, BellSouth has developed an electronic loop make-up data query to allow the CLECs to obtain loop make-up information electronically. BellSouth began Beta testing of electronic access to pre-order loop make-up information on July 31, 2000 with selected CLECs and placed this functionality into production on November 18, 2000. These processes provide sufficient information to allow the CLEC to make a decision about whether the loop is capable of supporting the services and equipment the CLEC intends to install prior to submitting a firm order for that loop.

Q. PLEASE DESCRIBE THE LOOP MAKE-UP SI PROCESS.

A. Loop make-up is defined as the physical characteristics of the loop facilities, starting at the BellSouth Central Office listed in sequential order and ending at the serving distribution terminal. Loop make-up consists of such things as cable gauge and length, bridged taps, load coils, presence of Digital Loop Carrier ("DLC") and other equipment that is part of the local loop facilities.

CI completes BellSouth's Loop Make-up SI form ("form") filling in the "Customer Information" section indicating if it wants the loop make-up by telephone number or address. MCI WORLDCOM submits the form to the BellSouth's Account Team or Complex Resale Support Group ("CRSG"). The CRSG forwards the form to the BellSouth's Outside Plant Engineering Service Activation Center ("SAC").

If MCI WORLDCOM indicates it wants the make-up by telephone number, the SAC will return a specific make-up for the requested telephone number. If MCI WORLDCOM indicates it wants the make-up by address, the SAC will return a specific make-up for the requested address.

Q. HAS THE FEDERAL COMMUNICATION COMMISSION ("FCC") ADDRESSED THIS ISSUE?

A. Yes. Paragraph 426 of the Federal Communication Commission's ("FCC") Third Report and Order and Fourth Further Notice of Proposed Rulemaking ("UNE Remand Order") in CC Docket No. 96-98 and released on November 5, 1999, states that "this Commission should clarify that the pre-ordering function includes access to loop qualification information. Loop qualification information identifies the physical attributes of the loop plant (such as loop length, the presence of analog load coils and bridge taps, and the presence and type of Digital Loop Carrier) that enable carriers to determine whether the loop is capable of supporting xDSL and other advanced technologies."

The FCC further states in paragraph 427 that "an incumbent Local Exchange Carrier ("LEC") must provide the requesting carrier with nondiscriminatory access to the same detailed information about the loop that is available to the incumbent, so that the requesting carrier can make an independent judgment about whether the loop is capable of supporting the advanced services equipment the requesting carrier intends to install."

BellSouth's current process of providing loop make-up via an SI as part of pre-ordering is for compliance with this Order. In other words, loop make-up is provided as a "front-end" pre-ordering function so that MCI

WORLDCOM can determine up-front if compatible loop facilities exist for the intended service. Once this determination is made, MCI WORLDCOM then submits a LSR to order the loop.

Q AS YOU UNDERSTAND MCI WORLDCOM'S REQUIREMENTS, WILL BELLSOUTH'S DETAILED LOOP MAKE-UP INFORMATION AS A PRE-ORDERING FUNCTION VIA THE SERVICE INQUIRY ("SI"), IN ITSELF, SATISIFY MCI WORLDCOM?

A. No. My testimony describes BellSouth's plans and procedures to satisfy the 319 Remand Obligations regarding Loop Qualification. With that background, I do not think that this SI process will satisfy all of MCI WORLDCOM's requirements as stated. MCI WORLDCOM is asking for manual and electronic SI processes for the pre-ordering of local services that would indicate whether facilities are available to serve an end user, information regarding redundancy, and possibly other information to be specified by MCI WORLDCOM.

Q. IS MCI WORLDCOM's REQUEST A FUNCTION OF PRE-ORDERING AS DEFINED BY THE FCC?

A. No. Pre-ordering deals with the collection of information necessary to populate an order for resale services or UNEs. MCI WORLDCOM's request deals with the gathering of data to have assurance of facilities availability for the purpose of developing sales proposals. That was not contemplated by the Act and as such BellSouth has no statutory requirement to provide such.

Q. IS BELLSOUTH NECESSARILY OPPOSED TO PROVIDING MCI WORLDCOM WITH A SERVICE INQUIRY PROCESS THAT WOULD ENABLE MCI WORLDCOM TO GATHER INFORMATION TO DEVELOP SALES PROPOSALS?

A. No. Even though BellSouth is not required to develop the process proposed by MCI WORLDCOM, BellSouth has no objection to this issue being considered by the industry through the Change Control Process ("CCP"). The CCP is the process by which BellSouth and participating CLECs manage requested changes to the BellSouth Local Interfaces, the introduction of new interfaces, and the identification and resolution of issues related to Change Requests. This process covers Change Requests initiated by both BellSouth and CLECs that affect external users of BellSouth's electronic interface applications and/or, associated manual processes

BellSouth and representatives of the CLECs will meet to review, prioritize, and make recommendations for candidate Change Requests. Through this process the input from all interested CLECs is considered and the decisions that result will best serve the CLEC community as a whole.

The CCP process is described in the BellSouth Website: http://www.interconnection.bellsouth.com/markets/lec/ccp_live/ccp.html

The CLEC industry should have the opportunity to decide whether MCI WORLDCOM's proposed service inquiry process would be beneficial to promoting local competition and the extent to which this process should be given priority over other changes to BellSouth's interfaces currently under discussion.

Q. SHOULD BELLSOUTH BE REQUIRED TO PROVIDE ANY ADDITIONAL SI PROCESS FOR LOCAL SERVICES?

A. No. BellSouth provides CLECs with access to the necessary information for requesting services in substantially the same time and manner as BellSouth provides its retail units. Therefore, BellSouth should not be required to provide any other SI process particularly as part of the pre-ordering process.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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 Ron M. Pate – Director – Interconnection Services, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

He is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 00-00309 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, his testimony would be set forth in the annexed testimony consisting of 22 pages and 0 exhibit(s).

Ron M. Pate

Sworn to and subscribed
before me on [illegible]

NOTARY PUBLIC

MICHEALE F. HOLCOMB
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2001

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF CYNTHIA K. COX

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 00-00309

DECEMBER 6, 2000

Q. PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR BUSINESS ADDRESS.

A. My name is Cynthia K. Cox. I am employed by BellSouth as Senior Director for State Regulatory for the nine-state BellSouth region. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q. PLEASE PROVIDE A BRIEF DESCRIPTION OF YOUR BACKGROUND AND EXPERIENCE.

A. I graduated from the University of Cincinnati in 1981 with a Bachelor of Business Administration degree in Finance. I graduated from the Georgia Institute of Technology in 1984 with a Master of Science degree in Quantitative Economics. I immediately joined Southern Bell in the Rates and Tariffs organization with the responsibility for demand analysis. In 1985 my responsibilities expanded to include administration of selected rates and tariffs including preparation of tariff filings. In 1989, I accepted an assignment in the

North Carolina regulatory office where I was BellSouth's primary liaison with the North Carolina Utilities Commission Staff and the Public Staff. In 1993, I accepted an assignment in the Governmental Affairs department in Washington D.C. While in this office, I worked with national organizations of state and local legislators, NARUC, the FCC and selected House delegations from the BellSouth region. In February 2000, I was appointed Senior Director of State Regulatory.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to certain issues identified as unresolved in the Petition for Arbitration filed by MCImetro Access Services, LLC ("MCI") and Brooks Fiber Communications of Tennessee, Inc. ("Brooks Fiber"), collectively referred to as MCI, with the Tennessee Regulatory Authority ("TRA" or "Authority") on April 14, 2000. I address the following issues in this testimony: 1, 3, 6, 18, 22, 23, 28, 34-36, 39, 40, 42, 45-48, 51, 52, 54, 67, 94, and 107-110.

Issue 1: Should the electronically ordered NRC apply in the event an order is submitted manually when electronic interfaces are not available or not functioning within specified standards or parameters?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Manual ordering charges should apply when MCI places an order manually. either for its own business reasons or because BellSouth does not have an electronic interface that will allow MCI to place orders electronically. As Mr. Pate explains, BellSouth is not required to provide electronic ordering for all unbundled network elements ("UNEs"), but MCI proposes to be charged a price for electronic ordering regardless of whether BellSouth provides that capability.

Q. WHAT LANGUAGE HAS BELLSOUTH PROPOSED FOR INCLUSION IN THE PARTIES' INTERCONNECTION AGREEMENT?

A. BellSouth's proposed language as set forth in Attachment 1 is as follows:

> 2.9.1 LSRs submitted by means of one of the available electronic interfaces will incur an OSS electronic ordering charge as specified in Table 1 of this Attachment. An individual LSR will be identified for billing purposes by its Purchase Order Number ("PON"). LSRs submitted by means other than one of these interfaces (mail, fax, courier, etc.) will incur a manual order charge as specified in Table 1 of this Attachment. Each LSR and all its supplements or clarifications issued, regardless of their number. will count as a single LSR for OSS billing purposes. OSS charges will not be refunded for LSRs that are canceled by MCIm.

MCI's proposed language that would obligate BellSouth to apply an electronic ordering charge when BellSouth does not provide electronic ordering capability is inappropriate and should be rejected. If BellSouth provides an electronic interface, and an order is submitted manually, a manual ordering charge will apply. If BellSouth does not provide an electronic interface, manual ordering charges apply for any submitted orders.

Q. IS MCI'S POSITION ON THIS ISSUE REASONABLE?

A. No. If BellSouth is not obligated to provide and does not provide electronic ordering capability for a particular UNE, it is unreasonable to expect BellSouth to charge MCI an electronic ordering charge for that UNE. Under MCI's proposal, BellSouth would have no way to recover the cost of manually handling such orders.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority require MCI to pay manual ordering charges when MCI places an order manually, either for its own business reasons or because BellSouth does not have an electronic interface that will allow MCI to place orders electronically.

Issue: 3: Should the resale discount apply to all telecommunication services BellSouth offers to end users, regardless of the tariff in which the service is contained?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is only obligated by Section 251(c)(4) of the Telecommunications Act of 1996 (the "1996 Act") and the FCC's Rule 51.605(a) to offer a resale discount on telecommunications service that BellSouth provides at retail to subscribers who are not telecommunications carriers. Exchange access services are generally not offered at retail to subscribers who are not telecommunications carriers. Consequently, the resale discount does not apply to services in the access tariffs, particularly since, as the FCC has concluded, BellSouth does not avoid any "retail" costs in selling access services at "wholesale".

Q. ON WHAT BASIS DOES BELLSOUTH CONTEND THAT IT IS NOT OBLIGATED TO OFFER ITS EXCHANGE ACCESS SERVICES FOR RESALE AT A DISCOUNT?

A. The FCC has specifically exempted exchange access services from the resale requirements of the 1996 Act. Paragraphs 873 and 874 of the FCC's First Report and Order in CC Docket No. 96-98 ("Local Competition Order") reads as follows:

> Exchange access services are not subject to the resale requirements of section 251(c)(4). The vast majority of purchasers of interstate access services are telecommunications carriers, not end users. It is true that incumbent LEC interstate access tariffs do not contain any limitation that prevents end users from buying these services, and that end users

do occasionally purchase some access services, including special access, Feature Group A, and certain Feature Group D elements for large private networks.

We find several compelling reasons to conclude that exchange access services should not be subject to resale requirements. First, these services are predominantly offered to, and taken by, IXCs, not end users. Part 69 of our rules defines these charges as "carrier's carrier charges," and the specific part 69 rules that describe each interstate switched access element refer to charges assessed on "interexchange carriers" rather than end users. The mere fact that fundamentally non-retail services are offered pursuant to tariffs that do not restrict their availability, and that a small number of end users do purchase some of these services, does not alter the essential nature of the services. Moreover, because access services are designed for, and sold to, IXCs as an input component to the IXC's own retail services, LECs would not avoid any "retail" costs when offering these services at "wholesale" to those same IXCs. Congress clearly intended section 251(c)(4) to apply to services targeted to end user subscribers, because only those services would involve an appreciable level of avoided costs that could be used to generate a wholesale rate. Furthermore, as explained in the following paragraph, section 251(c)(4) does not entitle subscribers to obtain services at wholesale rates for their own use. Permitting IXCs to purchase access services at wholesale rates for their own use would be inconsistent with this requirement. [Footnotes deleted]

More recently, the FCC reiterated its position in its Order approving Bell Atlantic New York's application for interLATA authority, CC Docket No. 99-295. In paragraph 393 of that Order addressing Bell Atlantic's ADSL Access Tariff offering, the FCC stated, "we agree with Bell Atlantic that it is not required to provide an avoided-cost discount on its wholesale ADSL offering because it is not a retail service subject to the discount obligations of section 251(c)(4)." Bell Atlantic's wholesale ADSL offering is only offered in its access tariff.

Based on the foregoing, there can be no doubt that both Congress and the FCC fully intended that exchange access services be excluded from the resale requirements of the 1996 Act.

Q. HAS THE AUTHORITY ADDRESSED THIS ISSUE IN A PREVIOUS ARBITRATION?

A. Yes. The Authority addressed resale of access services under Issue 2 of its Second and Final Order of Arbitration Awards in Docket Nos. 96-10271 and 96-01152 (MCI and AT&T Arbitration proceedings, respectively). At pages 18-19 of that Order, citing the restrictions in the FCC's First Report and Order, the Authority adopted a restriction on the resale of access services.

Q. WHAT SERVICES DOES BELLSOUTH BELIEVE MCI IS ENTITLED TO PURCHASE AT A RESALE DISCOUNT?

A. BellSouth's position is that MCI and all Competitive Local Exchange Carriers ("CLECs") are entitled to purchase BellSouth's retail services at a resale discount. BellSouth's retail services are contained in BellSouth's General Subscriber Services Tariff ("GSST") and BellSouth's intrastate Private Line Tariff.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority find that BellSouth is only obligated to offer a resale discount on telecommunications services that BellSouth provides at retail to subscribers who are not telecommunications carriers. Therefore the resale discount does not apply to services in BellSouth's access tariffs.

Issue 6: Should BellSouth be directed to perform, upon request, the functions necessary to combine network elements that are ordinarily combined in its network?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

BellSouth will make combinations of UNEs available to MCI consistent with BellSouth's obligations under the 1996 Act and applicable FCC rules. Recently, on July 18, 2000, the United States Court of Appeals for the Eighth Circuit Court ("Eighth Circuit") reaffirmed its decision vacating FCC Rules 51.315(c)-(f), or the so-called additional combination rules. Therefore, it is clear that BellSouth has no obligation to combine UNEs for CLECs such as MCI.

Q. WHAT DID THE EIGHTH CIRCUIT COURT OF APPEALS ("EIGHTH CIRCUIT") RULE REGARDING THIS ISSUE?

A. On July 18, 2000, the Eighth Circuit ruled that an ILEC is not obligated to combine UNEs, and it reaffirmed that the FCC's Rules 51.315(c)-(f) remain vacated. Specifically, referring to Section 251(c)(3) of the Act that requires ILECs to provide UNEs in a manner that allows requesting carriers to combine such telecommunications services, the Eighth Circuit stated: "[h]ere Congress has directly spoken on the issue of who shall combine previously uncombined network elements. It is the requesting carriers who shall 'combine such elements.' It is not the duty of the ILECs to 'perform the functions necessary to combine unbundled network elements in any manner' as required by the FCC's rule."

Q. WHAT IS THE BASIS FOR BELLSOUTH'S POSITION?

A. As a general matter, it is neither sound public policy nor an obligation of BellSouth to combine UNEs. In the FCC's Third Report and Order and Fourth Further Notice of Proposed Rulemaking, FCC 99-238, released November 5, 1999 ("UNE Remand Order"), the FCC confirmed that incumbent LECs presently have no obligation to combine network elements for CLECs when those elements are not currently combined in BellSouth's network. The FCC rules, Section 51.315(c)-(f), that purported to require incumbent LECs to combine unbundled network elements, were vacated by the Eighth Circuit, and those rules were neither appealed to nor reinstated by the Supreme Court. As noted, on July 18, 2000, The Eighth Circuit reaffirmed its ruling that FCC Rules 51.315(c)-(f) are vacated.

Q. HOW DID THE FCC ADDRESS BELLSOUTH'S OBLIGATION TO COMBINE UNES IN ITS UNE REMAND ORDER?

A. The FCC concluded that BellSouth has no obligation to combine UNEs. As the FCC made clear, Rule 51.315(b) applies to elements that are "in fact" combined, stating that "[t]o the extent an unbundled loop is in fact connected to unbundled dedicated transport, the statute and our rule 51.315(b) require the incumbent to provide such elements to requesting carriers in combined form." (¶ 480) The FCC declined to adopt a definition of "currently combines," that would include all elements "ordinarily combined" in the incumbent's network. *Id.* (declining to "interpret rule 51.315(b) as requiring incumbents to combine unbundled network elements that are 'ordinarily combined'...") It makes no sense to suggest that the FCC meant for its Rule 51.315(b) to cover anything other than specific pre-existing combinations of elements for a customer when the FCC's orders specifically state that ILECs are not required to combine elements. As previously discussed, the Eighth Circuit has reaffirmed that BellSouth has no such obligation.

Q. DID THE FCC SET FORTH AN EXCEPTION IN THE UNE REMAND ORDER REGARDING CERTAIN UNE COMBINATIONS?

A. Yes. The FCC allows an ILEC to elect to be exempted from providing access to unbundled local switching in Density Zone 1 of the Nashville MSA. To avail itself of this exemption, the FCC requires BellSouth to combine loop and transport UNEs (also known as the "Enhanced Extended Link" or "EEL") in the geographic area where the exemption applies. The FCC also requires that such combinations be provided at cost-based rates. BellSouth will combine loop and transport UNEs at FCC mandated prices as required in the FCC's UNE Remand Order in order to have the exemption from providing local circuit switching in Density Zone 1 of the Nashville MSA.

Beyond this limited exception dictated by the FCC, BellSouth is under no obligation to physically combine network elements, where such elements are not in fact combined. Nevertheless, BellSouth is willing to negotiate rates for combining UNEs: however, such negotiations are outside of a Section 251 arbitration, and the rates for this service are not subject to the pricing standards in Section 252 of the Act.

Q. WHY IS IT GENERALLY NOT IN THE PUBLIC INTEREST TO REQUIRE BELLSOUTH TO COMBINE UNEs?

A. First, requiring BellSouth to combine UNEs does not benefit consumers as a general matter, and would unnecessarily reduce the overall degree of competition in the market. Congress established several means to introduce competition, namely, resale, unbundling and facilities constructed by new entrants. The requirements of the 1996 Act attempt to balance these three entry methods such that firms use the most efficient method. However, the greatest benefits occur when firms build their own facilities. Expanding BellSouth's obligations beyond the Act's requirements would upset the balance intended by the Act. This is not just BellSouth's view – Justice Breyer of the Supreme Court agrees. As Justice Breyer points out in his opinion concurring in the Supreme Court's vacating of the FCC's unbundling rules:

> [i]ncreased sharing (unbundling) by itself does not automatically mean increased competition. It is in the unshared, not in the shared, portions of the enterprise that meaningful competition would likely emerge. Rules that force every firm to share every resource or element of a business would create, not competition, but pervasive regulation, for the regulators, not the marketplace, would set the relevant terms.
>
> The upshot, in my view, is that the statute's unbundling requirements, read in light of the Act's basic purposes, require balance. Regulatory rules that go too far, expanding the definition of what must be shared beyond that which is essential to that which merely proves advantageous to a single competitor, risk costs that, in terms of the Act's objectives, may make the game not worth the candle. (142 L. Ed. 2d 834, 880)

Second, requiring BellSouth to combine UNEs at cost-based prices, particularly TELRIC-based prices, reduces BellSouth's incentive to invest in new capabilities. TELRIC-based prices do not cover the actual cost of the elements, let alone do such prices represent a fair price in the market place. Again, Justice Breyer agrees, as evidenced by his observation that

> [n]or can one guarantee that firms will undertake the investment necessary to produce complex technological innovations knowing that any competitive advantage deriving from those innovations will be dissipated by the sharing requirement. The more complex the facilities, the more central their relation to the firm's managerial responsibilities, the more extensive the sharing demanded, the more likely these costs will become serious. (142 L. Ed. 2d 834, 879)

Finally, requiring BellSouth to combine elements where such combinations do not, in fact, exist is inconsistent with the Act's basic purpose, which is to introduce competition into the local market. The intent was not to subsidize competitors where CLECs have reasonable alternatives to BellSouth combining UNEs. CLECs can combine the UNEs themselves in collocation spaces, use the assembly room option, or build their own facilities. This view is also supported in Justice Breyer's opinion:

> [i]n particular, I believe that, given the Act's basic purpose, it requires a convincing explanation of why facilities should be shared (or 'unbundled') where a new entrant could compete effectively without

the facility, or where practical alternatives to that facility are available. (142 L. Ed. 2d 834, 879)

Clearly, expanding BellSouth's obligation to include combining UNEs does not benefit consumers. Such action only provides an unwarranted subsidy to CLECs, disincents BellSouth to invest in its network, and discourages CLECs from building their own networks.

Q. IS BELLSOUTH WILLING TO NEGOTIATE A VOLUNTARY COMMERCIAL AGREEMENT WITH MCI TO COMBINE CERTAIN UNES?

A. Yes. As noted earlier, although not obligated by the 1996 Act to do so, BellSouth is willing to negotiate a voluntary commercial agreement with MCI to combine certain UNEs on behalf of MCI. As the Authority noted in its May 18, 1999 Order in Docket No. 98-00123 (NEXTLINK arbitration), even prior to the Eighth Circuit's most recent ruling, "[t]he Arbitrators recognize that under the Eighth Circuit decision, incumbent LECs are not required to combine unbundled network elements for CLECs, although the Eighth Circuit did not preclude incumbent LECs from voluntarily agreeing to provide such combinations. Since BellSouth is not required to provide combinations (such as combining a loop and transport), any charges assessed by BellSouth if it voluntarily agrees to do so should be negotiated between the parties outside the parameters of this proceeding." Order at page 14.

Q. HAS BELLSOUTH REACHED AGREEMENT WITH ANY CLECS CONCERNING THE CONDITIONS UNDER WHICH BELLSOUTH WILL COMBINE UNES?

A. Yes. Certain CLECs have requested that BellSouth provide the service of combining elements on the CLECs' behalf. These CLECs have entered into amendments to their interconnection agreements with BellSouth. The rates these CLECs pay for new combinations are market-based and appropriately compensate BellSouth for the service it is providing.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority find that BellSouth has no obligation to combine UNEs for CLECs such as MCI. CLECs are only entitled to obtain pre-existing combinations of UNEs at UNE prices.

Issue 18: Is BellSouth required to provide all technically feasible unbundled dedicated transport between locations and equipment designated by MCI so long as the facilities are used to provide telecommunications services, including interoffice transmission facilities to network nodes connected to MCI switches and to the switches or wire centers of other requesting carriers?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. The FCC only requires BellSouth to unbundle dedicated transport in BellSouth's existing network and has specifically excluded transport between other carriers' locations. BellSouth is not required to offer, and certainly not required to build, dedicated transport facilities between MCI network locations, whether they be nodes or network switches or between MCI's network and another carrier's network.

Q. WHAT IS THE BASIS FOR BELLSOUTH'S POSITION?

A. The FCC's Local Competition Order, at paragraph 440, only requires that BellSouth:

> ...provide unbundled access to dedicated transmission facilities <u>between LEC central offices or between such offices and those of competing carriers</u>. This includes, at a minimum, interoffice facilities between end offices and serving wire centers ("SWCs"), SWCs and IXC POPs, tandem switches and SWCs, end offices or tandems of the incumbent LEC, and the wire centers of incumbent LECs and requesting carriers. [Emphasis added]

Q. DOES THE FCC'S UNE REMAND ORDER SUPPORT BELLSOUTH'S POSITION?

A. Yes. In its discussion of unbundled dedicated transport, the FCC specifically addresses the issue of whether an ILEC's obligations include constructing facilities between locations where the ILEC has not deployed facilities for its own use. Paragraph 324 of the UNE Remand Order states,

> In the *Local Competition First Report and Order*, the Commission limited an incumbent LEC's transport unbundling obligation to existing facilities, and did not require incumbent LECs to construct facilities to meet a requesting carrier's requirements where the incumbent LEC has not deployed transport facilities for its own use. Although we conclude that an incumbent LEC's unbundling obligation extends throughout its ubiquitous transport network, including ring transport architectures, we do not require incumbent LECs to construct new transport facilities to meet specific competitive LEC point-to-point demand requirements for facilities that the incumbent LEC has not deployed for its own use. [Footnotes deleted]

Q. DID THE EIGHTH CIRCUIT'S JULY 18, 2000 RULING ADDRESS THIS ISSUE?

A. Yes. The Eighth Circuit also speaks to this issue in its ruling vacating the FCC's use of a hypothetical network standard for purposes of its pricing rules. In its discussion, the Eighth Circuit notes that it is the ILECs' existing networks that are to be made available to CLECs, stating that the 1996 Act "requires an ILEC to (1) permit requesting new entrants (competitors) in the ILEC's local market to interconnect with the ILEC's *existing* local network…". (page 2, emphasis added) Also, specifically, in striking down a hypothetical network cost, the Court stated, "[i]t is the cost to the ILEC of providing its *existing facilities and equipment* either through interconnection or by providing the specifically requested *existing network elements* that the competitor will in fact be obtaining for use that must be the basis for the charges." [Emphasis added] Based on the foregoing, BellSouth encourages the Authority to determine, just as the FCC and the Eighth Circuit have determined, that BellSouth is not required to provide dedicated transport between MCI locations or between MCI's network and the network(s) of other carriers.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. Bellsouth requests the Authority determine that BellSouth is only required to unbundle dedicated transport in Bellsouth's existing network and that BellSouth is not required to offer or build dedicated transport facilities between MCI network locations or between MCI's and another carrier's network.

Issue 22: Should the interconnection agreements contain MCI's proposed terms addressing line sharing, including line sharing in the UNE-P and unbundled loop configurations?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is willing to incorporate terms and conditions for line sharing in the parties' interconnection agreement. However, those terms and conditions should be consistent with the FCC's rules, which is the case with BellSouth's proposed line sharing language. In addition, BellSouth is under no obligation to offer line sharing on the UNE Platform ("UNE-P").

Q. WHAT IS THE REAL DISPUTE BETWEEN THE PARTIES?

A. The dispute is not about whether the agreement should address line sharing. Rather, the dispute concerns the terms and conditions associated with this offering. In compliance with the FCC's Third Report and Order in CC Docket No. 98-147 and its Fourth Report and Order in CC Docket No. 96-98, BellSouth offers line sharing to CLECs throughout its nine-state region. BellSouth's proposed language is the product of numerous meetings among BellSouth and various CLECs. BellSouth has entered into line sharing agreements with other CLECs and has made the same rates, terms and conditions of those agreements available to MCI.

Q. WHAT IS THE BASIS FOR BELLSOUTH'S POSITION WITH RESPECT TO PROVISION OF LINE SHARING OVER THE UNE-P?

A. BellSouth's position is that it has no obligation to offer line sharing over the UNE-P. In its Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, released December 9, 1999 ("Line Sharing Order"), the FCC specifically states "[t]he provision of xDSL-based service by a competitive LEC and voiceband service by an incumbent LEC on the same loop is frequently called 'line sharing.'" (Line Sharing Order at ¶ 4)

Clearly, BellSouth is obligated to provide line sharing to CLECs only where BellSouth is providing the voice service. When a CLEC, such as MCI, purchases the loop/port combination, the CLEC becomes the voice service provider. BellSouth is not obligated to provide the equipment necessary to provide a line sharing capability in that case.

Further, the FCC's Line Sharing Order specifically concluded in paragraph 72 that "incumbent LECs must make available to competitive carriers only the high frequency portion of the loop network element on loops on which the incumbent LEC is also providing analog voice service." (emphasis added) In that same paragraph, the FCC stated that "incumbent carriers are not required to provide line sharing to requesting carriers that are purchasing a combination of network elements known as the platform. In that circumstance, the incumbent no longer is the voice provider to the customer." The platform referred to is the loop/port combination.

Finally, the FCC reiterated its position in its Order dated June 30, 2000 in CC Docket No. 00-65 (SBC – Texas Section 271 Application). At paragraph 324 the Order states, "the obligation of an incumbent LEC to make the high frequency portion of the loop separately available is limited to those instances in which the incumbent LEC is providing, and continues to provide, voice service on the particular loop to which the requesting carrier seeks access." Clearly, MCI's position is inconsistent with FCC Orders. When BellSouth provides a loop/port combination, or UNE-P, to a CLEC, the CLEC (and not BellSouth) is the voice service provider.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority adopt BellSouth's proposed language on line sharing for the parties interconnection agreement. Further, BellSouth requests the Authority find, as the FCC has, that BellSouth is not required to provide line sharing over the UNE platform.

Issue 23: Does MCI's right to dedicated transport as an unbundled network element include SONET rings?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth's position is that, if a SONET ring currently exists, BellSouth will provide MCI with dedicated transport over that ring. However, if a SONET ring does not currently exist, BellSouth is not obligated to construct one in order to provide MCI unbundled dedicated transport. MCI's proposed language seeks to obligate BellSouth to construct facilities when BellSouth has no legal obligation to do so. The Eighth Circuit's recent ruling confirms that BellSouth is only obligated to unbundle its existing network.

Q. WHAT IS THE BASIS FOR BELLSOUTH'S POSITION ON THIS ISSUE?

A. The FCC has specifically stated in its UNE Remand Order in response to a request by Sprint, "Notwithstanding the fact that we require incumbents to unbundle high-capacity transmission facilities, we reject Sprint's proposal to require incumbent LECs to provide unbundled access to SONET rings." The basis for the FCC's rejection of Sprint's proposal is that unbundling SONET rings necessarily involves constructing facilities to meet a requesting carrier's specific requirements, and the FCC limited an ILEC's obligation to unbundle transport to existing facilities.

Q. HOW DOES BELLSOUTH'S POSITION CONFORM TO THE FCC'S STATEMENT THAT THE INCUMBENT'S UNBUNDLING OBLIGATION EXTENDS THROUGHOUT ITS NETWORK, INCLUDING RING TRANSPORT ARCHITECTURE?

A. BellSouth provides DS1, DS3 or any other existing transport links throughout its network regardless of whether those links are provisioned over a SONET ring. However, the FCC made clear that BellSouth has no obligation to provide unbundled access to SONET rings themselves. Because CLECs like MCI have access to point-to-point transport regardless of whether the transport is provisioned over SONET rings, MCI would have to show that it would be "impaired" without access to the entire SONET ring, which MCI has not done. MCI's position also is inconsistent with the Eighth Circuit's recent ruling, which limits BellSouth's obligations under the 1996 Act to BellSouth's "existing" network.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority find that BellSouth is not obligated to construct a SONET ring in order to provide MCI unbundled dedicated transport. BellSouth is only obligated to provide dedicated transport links where they exist in its network and, as the FCC has found, BellSouth has no obligation to provide unbundled access to SONET rings themselves.

Issue 28: Should BellSouth provide the calling name database via electronic download, magnetic tape, or via similar convenient media?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is not required by the FCC's rules to provide a download, electronically or by any other media, of BellSouth's calling name ("CNAM") database, as MCI is requesting. BellSouth is only required to provide access to the data contained in the database, which BellSouth does.

Q. WHAT IS THE CNAM DATABASE?

A. End users can purchase a Caller ID service that includes display of the calling party's name in addition to the number for incoming calls. CNAM is the database that allows carriers providing the Caller ID service to match the incoming caller's name with the telephone number. This database contains calling name information for all BellSouth end users and the end users of any carrier that stores their customers' names in BellSouth's calling name database. The FCC's rules only require BellSouth to provide CLECs access to its calling name database.

Q. DOES BELLSOUTH PROVIDE CLECs WITH ACCESS TO ITS CALLING NAME DATABASE?

A. Yes. BellSouth provides CLECs with access to its calling name database on an unbundled basis consistent with the requirements of the FCC's UNE Remand Order. In paragraph 402 of that Order, the FCC states "...we require incumbent LECs, upon request, to provide nondiscriminatory access to their call-related databases on an unbundled basis, for the purpose of switch query and database response through the SS7 network." Access to BellSouth's calling name database is made available to CLECs regardless of whether the CLEC has its end user names stored in BellSouth's calling name database or whether the CLEC elects to maintain its own database for its end users' names. In either situation, the CLEC would provision its switch to appropriately route calling name queries to BellSouth's calling name database in order to obtain real time access to the name of an originating caller whose name is stored in BellSouth's calling name database.

Q. SHOULD BELLSOUTH BE REQUIRED TO PROVIDE AN ELECTRONIC DOWNLOAD OF THE CNAM DATABASE TO MCI?

A. No. The FCC only requires the ILECs to provide nondiscriminatory access to the CNAM database via the SS7 network, which BellSouth does. Nothing in any FCC order can reasonably be read to obligate BellSouth to provide an electronic download of any call-related database, including CNAM. A CLEC's ability to offer service to its customers is not impaired if the CLEC does not receive a download of the database. Furthermore, the capability would have to be developed and maintained for a service that does not exist and that BellSouth is not required to offer.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority determine, as the FCC has done, that BellSouth is only required to provide access to the data contained in its CNAM database. The Authority is further requested to find that BellSouth is not required to provide a download, electronically or by any other media, of its CNAM database.

Issue 34: Is BellSouth obligated to provide and use two-way trunks that carry each party's traffic?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is only obligated to provide and use two-way local interconnection trunks where traffic volumes are too low to justify one-way trunks. In all other instances, BellSouth is able to use one-way trunks for its traffic if it so chooses. Nonetheless, BellSouth is not opposed to the use of two-way trunks for its originating traffic where it makes sense and where the provisioning arrangements can be mutually agreed upon.

Q. ARE TWO-WAY TRUNKS ALWAYS MORE COST EFFICIENT THAN ONE-WAY TRUNKS?

A. No. Two-way trunks may be more efficient than one-way trunks only under some circumstances. Two-way trunks, however, are not always the most efficient due to busy hour characteristics and balance of traffic. For example, trunk groups are engineered based upon the amount of traffic that uses the trunk group during the busiest hour of the day. If the traffic on the trunk group in both directions occurs in the same or similar busy hour, there will be few, if any, savings obtained by using two-way trunks versus one-way trunks. The trunk termination costs will still have to be incurred on the total number of trunks required to accommodate the total two-way traffic in the busy hour. In addition, if the traffic is predominately flowing in one direction, there will be little or no savings in two-way trunks over one-way trunks.

BellSouth has informed MCI on several occasions that it is willing to employ two-way trunks consistent with basic two-way trunking principles. The necessity and reasonableness of these principles are discussed by Mr. Milner.

However, if there are no efficiencies to be gained, BellSouth is entitled to use one-way trunks for its traffic just as MCI is entitled to use one-way trunks for its traffic.

Q. WHY SHOULD BELLSOUTH HAVE THE RIGHT TO ESTABLISH ONE-WAY TRUNKS FOR BELLSOUTH ORIGINATED TRAFFIC?

A. BellSouth should have the flexibility to use one-way trunks for its originated traffic for the following reasons:

1. If the majority of traffic exchanged between the companies originates on BellSouth's network, which is usually the case, BellSouth must have the ability to establish direct trunk groups from its end offices to the point of interconnection when traffic volumes dictate. BellSouth must retain the option to utilize one-way trunks if MCI or another CLEC is unwilling to establish direct end office to end office trunks or in providing a sufficient number of two-way trunks.

2. Because two-way trunks carry both companies' originated traffic, requiring two-way trunks allows a CLEC to determine the Interconnection Point for BellSouth originated traffic. CLECs have the right to determine the interconnection point for traffic originated by their customers. If both BellSouth and CLEC originated traffic is interconnected over the same trunk group, the CLEC would also be defining the interconnection point for BellSouth's originating traffic. The FCC specifically declined to give CLECs such control over BellSouth's internal network costs for handling

local traffic originated by BellSouth end users. This issue is discussed more fully under Issue 36 and is the basis for next concern.

3. Allowing the CLEC to designate the Interconnection Point for BellSouth originated traffic allows the CLEC to inappropriately increase BellSouth's costs.

4. Two-way trunks involve a variety of complex issues that must be addressed by the parties. For example, two-way trunk installation involves agreement on: 1) the number of trunks required; 2) when trunk augmentation is required; 3) whether to install direct end office to end office trunk groups or tandem trunk groups; 4) whose facilities will be used to transport the two-way trunk groups when both companies have available facilities; 5) where the Interconnection Point will be located; 6) which company will order and install the trunk group and who will control testing and maintenance of the trunk group; and 7) the method of compensation between the parties for two-way trunks that carry multi-jurisdictional traffic. All of these issues must be resolved between the parties in order to make two-way trunks a viable arrangement.

Q. DOES THE FCC ALLOW THE USE OF ONE-WAY TRUNKS?

A. Yes. Paragraph 219 of the FCC's Local Competition Order discusses the situation in which a carrier does not have sufficient volume to justify one-way trunks. That is the only instance where two-way trunks must be accommodated. In all other cases, BellSouth is permitted to utilize one-way trunks.

Q. HOW DOES BELLSOUTH RECOMMEND THE AUTHORITY RESOLVE THIS ISSUE?

A. Based on the preceding discussion, BellSouth requests the Authority adopt its position on this issue and not require BellSouth to use two-way trunking except as required by the FCC. The Authority is requested to adopt BellSouth's contract language that allows the parties to reach mutual agreement on the use of two-way trunks. This method has proven effective where BellSouth and other CLECs have addressed the provision of two-way trunks.

Issue 35: If the parties ever choose to implement a combination trunk group, should that trunk group be operated as a two-way trunk?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth understands that this issue has been resolved. If this understanding is not correct, BellSouth reserves the right to file additional testimony on this issue.

Issue 36: Does MCI, as the requesting carrier, have the right pursuant to the Act, the FCC's Local Competition Order and the FCC regulations, to designate the network point (or points) of interconnection at any technically feasible point?

Q. WHAT IS THE ESSENCE OF THE DISPUTE BETWEEN THE PARTIES ON THIS ISSUE?

A. In a nutshell, this issue is about whose customers should pay for the costs that MCI creates as a result of its network design decisions. MCI wants BellSouth's customers to bear those costs. Not surprisingly, BellSouth's position is that MCI's customers should bear the costs of MCI's decisions.

BellSouth has a local network in each of the local calling areas it serves in Tennessee. BellSouth may have 10, 20 or even more such local networks in a given LATA. Nevertheless, MCI wants to physically interconnect its network with BellSouth's "network" in each LATA at a single point. This approach simply ignores that there is not one BellSouth "network" but a host of networks that are generally all interconnected. Importantly, BellSouth does not object to MCI designating a single Point of Interconnection at a point in a LATA on one of BellSouth's "networks" for traffic that MCI's end users originate. Further, BellSouth does not object to MCI using the interconnecting facilities between BellSouth's "networks" to have local calls delivered or collected throughout the LATA. What BellSouth does want, and this is the real issue, is for MCI to be financially responsible when it uses

BellSouth's network in lieu of building its own network to deliver or collect these local calls.

MCI, to contrast its position with BellSouth's, expects BellSouth to collect local traffic bound for MCI's end users in each of BellSouth's numerous local calling areas in the LATA, and MCI expects BellSouth to be financially responsible for delivering, to a single point in each LATA, local calls that are destined for MCI's local customers often within the same local calling area where the call originated. MCI has only committed to establish a single point of interconnection in each LATA. BellSouth agrees that MCI can choose to interconnect with BellSouth's network at any technically feasible point in the LATA. However, BellSouth does not agree that MCI can impose upon BellSouth the financial burden of delivering BellSouth's originating local traffic to that single point. If MCI wants local calls completed between BellSouth's customers and MCI's customers using this single Point of Interconnection, that is fine, provided that MCI is financially responsible for the additional costs MCI causes.

Q. DOES BELLSOUTH'S POSITION MEAN THAT MCI HAS TO BUILD A NETWORK TO EVERY LOCAL CALLING AREA, OR OTHERWISE HAVE A POINT OF INTERCONNECTION WITH BELLSOUTH'S LOCAL NETWORK IN EVERY LOCAL CALLING AREA?

A. No. MCI can build out its network that way if it chooses, but it is not required to do so. MCI can lease facilities from BellSouth or any other provider to bridge the gap between its network (that is, where it designates its Point of Interconnection) and each BellSouth local calling area. BellSouth will be financially responsible for transporting BellSouth's originating traffic to a single point in each local calling area. However, BellSouth is not obligated to be financially responsible for hauling MCI's local traffic to a distant point dictated by MCI.

Q. WHAT IS A POINT OF INTERCONNECTION?

A. The term "Point of Interconnection" describes the point(s) where BellSouth's and MCI's networks physically connect. In its First Report and Order, at paragraph 176, the FCC defined the term "interconnection" by stating that:

> *We conclude that the term "interconnection" under section 251(c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic.*

Therefore, the Point of Interconnection is simply the place, or places, on BellSouth's networks where that physical linking of MCI's and BellSouth's networks takes place. Simply put, the Point of Interconnection is the place where facilities that MCI owns connect to facilities owned by BellSouth.

On the other hand, the term "interconnection point" is used to define the place where financial responsibility for a call changes from one carrier to the other. The "Point of Interconnection" and the "interconnection point" can be at the exact same physical point, or they can be at different points.

Q. IF MCI CAN INTERCONNECT WITH BELLSOUTH'S NETWORK AT ANY TECHNICALLY FEASIBLE POINT, WHY IS THIS AN ISSUE?

A. Recall that what we are talking about here is the interconnection of "local networks." MCI's network deployment is significantly different from BellSouth's, which is the main reason that this issue exists between the parties. BellSouth has a number of distinct networks. For example, BellSouth has local networks, long distance networks, packet networks, signaling networks, E911 networks, etc. Each of these networks is designed to provide a particular service or group of services. With regard to "local networks," BellSouth, in any given LATA, has several such local networks, usually interconnected by BellSouth's long distance network. For instance, in the Knoxville LATA, BellSouth has local networks in Knoxville, Clinton, Tullahoma, Madisonville and Springfield, as well as several other locations. Customers who want local service in a particular local calling area must be connected to the local network that serves that local calling area. For example, a BellSouth customer who connects to the Knoxville local network will not receive local service in the Madisonville local calling area because Madisonville is not in the Knoxville local calling area. Likewise, a CLEC who wants to connect with BellSouth to provide local service in Madisonville has to connect to BellSouth's local network that serves the Madisonville local calling area. BellSouth's local calling areas, I would add, have been defined and set out over the years either by the Authority or by BellSouth with the approval of the Authority.

When MCI has a single switch in a LATA, then, by definition, that switch is located in a single BellSouth local calling area, for example, the Knoxville local calling area, if that is where the switch is located. When a BellSouth local customer in Knoxville wants to call an MCI local customer in Knoxville, BellSouth delivers the call to the appropriate point of interconnection between BellSouth's network and MCI's network in Knoxville. This network configuration is illustrated on Page 1 of Exhibit CKC-1 attached to my testimony. BellSouth would be financially responsible for taking a call from one of its subscribers located in the Knoxville local calling area and delivering it to another point in the Knoxville local calling area, the MCI Point of Interconnection. This scenario is not a problem.

The problem arises when a BellSouth customer located in a distant local calling area from MCI's Point of Interconnection wants to call his next-door neighbor who happens to be an MCI local subscriber. For example, consider that a BellSouth customer in Madisonville that wants to call an MCI customer in Madisonville picks up his or her telephone and draws dial tone from BellSouth's Madisonville switch. The BellSouth customer then dials the MCI customer. The call has to be routed from Madisonville to MCI's Point of Interconnection in the Knoxville LATA, which, in my example, is in Knoxville. MCI then carries the call to its switch in Knoxville and connects to the long loop serving MCI's customer in Madisonville. This call routing is shown on Page 2 of Exhibit CKC-1. The issue here involves who is financially responsible for the facilities that are used to haul calls back and forth between MCI's Point of Interconnection in Knoxville and the BellSouth Madisonville local calling area.

Q. HOW WOULD MCI CONNECT TO BELLSOUTH'S LOCAL NETWORKS THAT ARE OUTSIDE THE LOCAL CALLING AREA WHERE MCI'S SWITCH IS LOCATED?

A. It is my understanding that MCI has agreed to establish at least one Point of Interconnection in each LATA. This is necessary because BellSouth is still not authorized to carry traffic across LATA boundaries. MCI builds facilities from its switch (wherever it is located) to its Point of Interconnection in a LATA. Once that Point of Interconnection is established, the issue remains the same. Who is financially responsible for the facilities needed to carry calls between that Point of Interconnection and the distant BellSouth local calling area in which a local call is to be originated and terminated? Since MCI must establish a Point of Interconnection in each LATA, whether or not MCI also has a switch in each LATA is not relevant to resolving the problem that MCI's network design has created.

Q. WHY DO YOU SAY THAT MCI MUST BE FINANCIALLY RESPONSIBLE FOR THE TRANSPORT OF THESE CALLS FROM LOCAL CALLING AREAS THAT ARE DISTANT FROM THE POINT WHERE MCI HAS CHOSEN TO INTERCONNECT ITS NETWORK WITH BELLSOUTH'S?

A. First, that is the only approach that makes economic sense. Second, the 1996 Act, as the Eighth Circuit determined, only required an ILEC to permit a CLEC to interconnect with the ILEC's existing local network, stating that:

> The Act requires an ILEC to (1) permit requesting new entrants (competitors) in the ILEC's local market to interconnect with the ILEC's existing local network and, thereby, use that network to compete in providing local telephone service (interconnection)....
> (Eighth Circuit Court Order dated July 18, 2000, page 2)

This is a very important point. When MCI interconnects with BellSouth's local network in Knoxville, it is not also interconnecting with BellSouth's local network in Madisonville. MCI is only interconnecting with the Knoxville local network. The fact that MCI is entitled to physically connect with BellSouth at a single point in the LATA cannot overcome the fact that the single Point of Interconnection cannot, by itself, constitute interconnection with every single local calling area in a LATA.

Moreover, if that were true, think of the implications. Absent LATA restrictions, MCI's theory would mean that MCI could have a physical Point of Interconnection with BellSouth's "network" in Knoxville, and BellSouth would be required to haul local calls originating in Madisonville and destined to terminate in Madisonville all the way to Knoxville, at no cost to MCI. That just does not make sense. Again, MCI can build whatever network it wants, and it can interconnect with BellSouth's "network" wherever it is technically feasible. However, MCI cannot shift the financial burden of its network design to BellSouth.

Q. PLEASE EXPLAIN HOW MCI IS ATTEMPTING TO SHIFT ITS FINANCIAL RESPONSIBILITY TO BELLSOUTH.

A. MCI's network design results in additional costs that MCI inappropriately contends BellSouth should bear. The best way to describe these additional costs that MCI causes is to compare examples of two local calls in the same local calling area. One local call is between two BellSouth customers. The other local call is between a BellSouth customer and an MCI customer. Assume that all of the customers in this example live on the same street in Madisonville.

First, let's examine what happens if both customers are served by BellSouth as depicted on page 3 of Exhibit CKC-1. When one neighbor calls the other, the call originates with one customer, and is transported over that customer's local loop to a local switch in Madisonville where the call is connected to the other customer's local loop. Importantly, the call never leaves the Madisonville local calling area. Therefore, the only cost BellSouth incurs for transporting and terminating that call is end office switching in Madisonville.

Now, let's compare what happens when one customer obtains local service from BellSouth, and the other customer obtains local service from MCI. Assume that the BellSouth customer calls the MCI customer next-door, as depicted on page 2 of Exhibit CKC-1. The BellSouth customer is connected to BellSouth's switch in Madisonville. The BellSouth switch then sends the call to Knoxville because that is where MCI told BellSouth to send the call. The call is then hauled over facilities owned by MCI from the Knoxville Point of Interconnection (e.g. access tandem) to MCI's switch. MCI then connects the call through its end office switch to the long loop serving MCI's end user customer back in Madisonville. Again, these two customers live next door to each other. In one case, the call never left the Madisonville local calling area. In the other case, the call had to be hauled all the way to Knoxville, and the only reason that BellSouth did so was because that is what MCI wanted.

Simply put, the point here is that MCI wants BellSouth to bear the cost of the facilities used to haul the call I just described between Madisonville and Knoxville. There is nothing fair, equitable or reasonable about MCI's position. Because MCI has designed its network the way it wants, and has designed its network in the way that is most efficient and cheapest for MCI, MCI must bear the financial responsibility for the additional facilities used to haul the call between Madisonville and Knoxville. MCI does not have to actually build the facilities. It does not have to own the facilities. It just has to pay for them. BellSouth objects to paying additional costs that are incurred solely due to MCI's network design. It is simply inappropriate for MCI to attempt to shift these costs to BellSouth and its customers.

Q. DO BELLSOUTH'S LOCAL EXCHANGE RATES COVER THESE ADDITIONAL COSTS?

A. No. BellSouth is, in theory at least, compensated by the local exchange rates charged to BellSouth's local customers for hauling all calls from one point within a specific local calling area to another point in that same local calling area. Certainly there would be no dispute that the local exchange rates that BellSouth's customers pay were not intended to cover and, indeed, cannot cover, the cost of hauling a local call from one Madisonville customer to another Madisonville customer by way of Knoxville.

Indeed, if MCI is not required to pay for that extra transport which MCI's network design decisions caused, who will pay for it? The BellSouth calling party is already paying for its local exchange service, and certainly will not agree to pay more simply for MCI's convenience. Who does that leave to cover this cost? The answer is that there is no one else, and because MCI has caused this cost through its own decisions regarding the design of its network, it should be required to pay for this additional cost.

Q. IS THE ARRANGEMENT THAT MCI IS PROPOSING EFFICIENT?

A. It might be efficient for MCI, since MCI seems to equate efficiency with what is cheapest for MCI. Of course, that is not an appropriate measure of efficiency. Indeed, to measure efficiency, the cost to every carrier involved must be considered. Presumably, MCI has chosen its particular network arrangement because it is cheaper for MCI. A principal reason that it is cheaper for MCI is because MCI is expecting BellSouth's customers to bear substantially increased costs that MCI causes by its network design. It simply makes no sense for BellSouth to bear the cost of hauling a local Madisonville call outside the local calling area just because that is what MCI wants BellSouth to do. MCI, however, wants the Authority to require BellSouth to do just that. If MCI bought these facilities from anyone else, MCI would pay for the facilities. MCI, however, does not want to pay BellSouth for the same capability.

MCI's method of transporting local traffic is clearly more costly to Bellsouth, but MCI blithely ignores the additional costs it wants BellSouth to bear. Of course, these increased costs will ultimately be borne by customers, and if MCI has its way, these costs will be borne by BellSouth's customers. Competition should reduce costs to customers, not increase them. Competition certainly is not an excuse for enabling a carrier to pass increased costs that it causes to customers it does not even serve. BellSouth requests that the Authority require MCI to bear the cost of hauling local calls outside BellSouth's local calling areas. Importantly, MCI should not be permitted to avoid this cost, nor should MCI be permitted to collect reciprocal compensation for facilities that haul local traffic outside of the local calling area.

Q. HOW HAS THE FCC ADDRESSED THE ADDITIONAL COSTS CAUSED BY THE FORM OF INTERCONNECTION AN CLEC CHOOSES?

A. In its First Report and Order in Docket No. 96-325, the FCC states that the CLEC must bear the additional costs caused by a CLEC's chosen form of interconnection. Paragraph 199 of the Order states that "a requesting carrier that wishes a 'technically feasible' but expensive interconnection would, pursuant to section 252(d)(1), be required to bear the cost of the that interconnection, including a reasonable profit." (Emphasis added) Further, at paragraph 209, the FCC states that "Section 251(c)(2) lowers barriers to competitive entry for carriers that have not deployed ubiquitous networks by permitting them to select the points in an incumbent LEC's network at which they wish to deliver traffic. Moreover, because competing carriers must usually compensate incumbent LECs for the additional costs incurred by providing interconnection, competitors have an incentive to make economically efficient decisions about where to interconnect." (Emphasis added)

Clearly, the FCC expects MCI to pay the additional costs that it causes BellSouth to incur. If MCI is permitted to shift its costs to BellSouth, MCI has no incentive to make economically efficient decisions about where to interconnect.

Q. WOULD MCI'S ABILITY TO COMPETE BE HAMPERED BY MCI'S INABILITY TO OBTAIN FREE FACILITIES FROM BELLSOUTH?

A. Absolutely not. First, MCI does not have to build or purchase interconnection facilities to areas that MCI does not plan to serve. If MCI does not intend to serve any customers in a particular area, its ability to compete cannot be hampered.

Second, in areas where MCI does intend to serve customers, BellSouth is not requiring MCI to build facilities throughout the area. MCI can build facilities to a single point in each LATA and then purchase whatever facilities it needs from BellSouth or from another carrier in order to reach individual local calling areas that MCI wants to serve.

Q. WHAT DOES BELLSOUTH REQUEST OF THE AUTHORITY?

A. BellSouth requests the Authority find that MCI is required to bear the cost of facilities that BellSouth provides on MCI's behalf, in order to connect from a BellSouth local calling area to MCI's Point of Interconnection located outside that local calling area. I believe this to be an equitable arrangement for both parties.

Issue 39: How should Wireless Type 1 and Type 2A traffic be treated under the Interconnection Agreements?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. This issue deals with whether wireless traffic should be treated as transit traffic for routing and billing purposes. "Transit traffic" is traffic that originates on one party's network, is switched and transported by a second party and then is sent to a third party's network. The party that switches the call from the first party to the third party is due payment for that function. However, in many cases, when a wireless company is one of the three parties, neither BellSouth, the wireless company nor the CLEC has the necessary system capabilities required to bill each other using the normal Meet Point Billing process. In addition, as discussed below, for Wireless Type 1 traffic, BellSouth is unable to determine whether or not the transiting function is being performed. As a result, BellSouth simply proposes that traffic involving wireless carriers be treated as if it were land-line traffic originated by either BellSouth or the CLEC. For Type 2A traffic, this arrangement will continue until the involved parties have the necessary Meet Point Billing system capabilities.

Q. DOES BELLSOUTH HAVE ANY PLANS TO IMPLEMENT MEET POINT BILLING WITH WIRELESS CARRIERS IN THE FUTURE?

A. Yes. BellSouth is currently in the process of developing systems, methods and procedures that will allow Wireless Carriers' Type 2A traffic to participate in meet point billing. BellSouth anticipates that meet point billing will be available by the end of the 4th quarter of this year.

Q. PLEASE DESCRIBE WIRELESS TYPE 1 AND TYPE 2A TRAFFIC.

A. Wireless Type 1 traffic is wireless traffic that uses a BellSouth NXX. In other words, the wireless carrier does not have its own NXX, but uses numbers in an NXX assigned to BellSouth's land-line service. In this case, the Wireless Type 1 Traffic is indistinguishable from BellSouth-originated or BellSouth-terminated traffic from a Meet Point Billing perspective. Therefore, for routing and billing purposes, BellSouth is proposing to treat this transit traffic as BellSouth-originated or terminated traffic. In reality, there is very little of this type traffic, since most wireless carriers have distinct NXXs assigned. Further, wireless Type 1 traffic has been treated in this manner for all CLECs, including MCI.

Wireless Type 2A traffic is wireless traffic that is distinguishable from BellSouth-originated or terminated traffic because the wireless carrier has distinct NXXs assigned for its use. However, as I discussed earlier, the necessary system capabilities required to bill through the Meet Point billing process are not yet available. Such arrangements are necessary in order for BellSouth to send the appropriate billing records to the wireless carrier and to the CLEC. Therefore, until such arrangements are available, BellSouth must continue to treat Wireless Type 2A transit traffic as BellSouth originated or terminated traffic.

Q. WHAT DOES BELLSOUTH REQUEST OF THE AUTHORITY?

A. Pursuant to the preceding discussion, BellSouth requests the Authority find that traffic involving wireless carriers be treated as if it were land-line traffic originated by either BellSouth or the CLEC. For Type 2A traffic, this arrangement will continue until the involved parties have the necessary Meet Point Billing system capabilities.

Issue 40: What is the appropriate definition of internet protocol (IP) and how should outbound voice calls over IP telephony be treated for purposes of reciprocal compensation?

Q. PLEASE EXPLAIN BELLSOUTH'S UNDERSTANDING OF THIS ISSUE.

A. This issue addresses the appropriate compensation for phone-to-phone calls that utilize a technology known as Internet Protocol ("IP"). First, let me be clear on the distinction between "voice calls over the Internet" and "voice calls over Internet Protocol ("IP") telephony." IP telephony is, in very simple and basic terms, a mode or method of completing a telephone call. The word "Internet" in Internet Protocol telephony refers to the name of the protocol; it does <u>not</u> mean that the service necessarily uses the World Wide Web.

Q. WHAT IS PHONE-TO-PHONE IP TELEPHONY?

A. Phone-to-Phone IP Telephony is telecommunications service that is provided using Internet Protocol for one or more segments of the call. Technically speaking, Internet Protocol, or any other protocol, is an agreed upon set of technical operating specifications for managing and interconnecting networks. The Internet Protocol is a specific language that equipment on a packet network uses to intercommunicate. It has nothing to do with the transmission medium (wire, fiber, microwave, etc.) that carries the data packets between gateways, but rather concerns gateways, or switches, that are found on either end of that medium.

Currently there are various technologies used to transmit telephone calls, of which the most common are analog and digital. In the case of IP Telephony originated from a traditional telephone set, the local carrier first converts the voice call from analog to digital. The digital call is sent to a gateway that takes the digital voice signal and converts or packages it into data packets. These data packets are like envelopes with addresses that "carry" the signal across a network until they reach their destination, which is known by the address on the data packet, or envelope. This destination is another gateway, which reassembles the packets and converts the signal to analog, or a plain old telephone call, to be terminated on the called party's local telephone company's lines.

To explain it another way, Phone-to-Phone IP Telephony occurs when an end user customer uses a traditional telephone set to call another traditional telephone set using IP technology. The fact that IP technology is used at least in part to complete the call is transparent to the end user. Phone-to-Phone IP Telephony is identical, by all relevant regulatory and legal measures, to any other basic telecommunications service, and should not be confused with calls to the Internet through an Information Service Provider ("ISP").

Characteristics of Phone-to-Phone IP Telephony are:

- IP Telephony provider gives end users traditional dial tone (not modem buzz);
- End user does not call modem bank;
- Uses traditional telephone sets (vs. computer);

- Call routes using telephone numbers (not IP addresses):
- Basic telecommunications (not enhanced); and
- IP Telephone providers are telephone carriers (not ISPs).

  Phone-to-Phone IP Telephony should not be confused with Computer-to-Computer IP Telephony, where computer users use the Internet to provide telecommunications to themselves.

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. As with any other local traffic, reciprocal compensation should apply to local telecommunications provided via IP Telephony, to the extent that it is technically feasible to apply such charges. To the extent, however, that calls provided via IP telephony are long distance calls, access charges should apply. Application of access charges for long distance calls does not depend on the technology used to transport such calls. Due to the increasing use of IP technology mixed with traditional circuit switching technology to switch or transport voice telecommunications, BellSouth's position is that it is important to specify in the agreement that long distance calls, irrespective of the technology used to transport them, constitute switched access traffic and not local traffic.

Switched access charges, not reciprocal compensation, apply to phone-to-phone long distance calls that are transmitted using IP telephony. From the end user's perspective – and, indeed, from the IXC's perspective – such calls are indistinguishable from regular circuit switched long distance calls. The

IXC may use IP technology to transport all or some portion of the long distance call, but that does not change the fact that it is a long distance call.

Q. WHAT IS MCI'S POSITION ON THIS ISSUE?

A. Apparently, MCI believes that all traffic transmitted via IP telephony should be treated as local, regardless of where the end points of the call occur, and that reciprocal compensation should apply to all calls. For example, a call from Knoxville to Chicago sent over MCI's circuit switched network would be treated as a long distance call, and access charges would apply. However, if MCI transported that same call using IP telephony, MCI claims that the call from Knoxville to Chicago is a local call and that reciprocal compensation applies. MCI makes this claim despite the fact that it charges the customer the same long distance price in either case. This position is ridiculous. MCI's choice of transmission medium does not transform a long distance call into a local call.

Q. DOES THE FCC VIEW ISP BOUND TRAFFIC DIFFERENTLY THAN IP TELEPHONY IN TERMS OF APPLICABLE CHARGES?

A. Yes. Neither ISP-bound traffic nor the transmission of long distance services via IP Telephony traffic is local traffic; however, the FCC has treated the two types of traffic differently in terms of the rates that such providers pay for access to the local exchange company's network. Calls to ISPs have been exempted by the FCC from access charges for use of the local network in order to encourage the growth of these emerging services – most recently access to the Internet. The FCC has found that ISPs use interstate access service, but are exempt from switched access charges applicable to other long distance traffic. As a result of this FCC exemption, ISP-bound traffic is assessed at the applicable business exchange rate.

On the other hand, the transmission of long-distance voice services - whether by IP telephony or by more traditional means - is not exempt from switched access charges. The FCC has provided no exemption from access charges when IP telephony is used to transmit long distance telecommunications.

The FCC's April 10, 1998 Report to Congress states: "The record… suggests… 'phone-to-phone IP telephony' services lack the characteristics that would render them 'information services' within the meaning of the statute, and instead bear the characteristics of 'telecommunication services'." Further, Section 3 of the 1996 Act defines "telecommunications" as the "transmission, between or among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received." Thus, IP Telephony is telecommunications service, not information or enhanced service.

Long distance service is a mature industry, and simply changing the technology that is used to transmit the long distance service does not change the service. All other long-distance carriers currently pay these same access charges, and there is no authority to exempt them, regardless of the protocol used to transport such calls. To do otherwise would unreasonably discriminate between long-distance carriers utilizing IP telephony and those who do not.

Q. WHAT IS BELLSOUTH REQUESTING THE AUTHORITY DO?

A. BellSouth requests that the Authority determine that access charges, rather than reciprocal compensation, apply to long distance calls, regardless of the technology used to transport them.

Issue 42: Should MCI be permitted to route access traffic directly to BellSouth end offices or must it route such traffic to BellSouth's access tandem?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth's understanding is that this issue is about whether MCI should be permitted to disguise switched access traffic as local traffic. BellSouth's position is that MCI should not be permitted to disguise switched access traffic as local traffic by routing such switched access traffic over local interconnection trunks. The handling of switched access traffic is governed pursuant to switched access tariffs. Although couched as an issue concerning "tandem switching," MCI is seeking to avoid paying switched access charges, which the Authority should not permit.

Q. WHAT IS THE ISSUE IN DISPUTE?

A. BellSouth has proposed language making clear that MCI will not "deliver switched access to BellSouth for termination except over MCI ordered switched access trunks and facilities." In other words, MCI should not be permitted to send access traffic under the guise of local traffic. MCI has objected to this language for reasons that are not readily apparent, except to perhaps the extent MCI wants to avoid paying access charges.

Q. UNDER ISSUE 35, WHICH IS RESOLVED, BELLSOUTH AGREED TO PROVISION SUPERGROUP TWO-WAY TRUNK GROUPS TO ACCOMMODATE DIFFERENT TYPES OF TRAFFIC. WHAT MAKES MCI'S REQUEST IN THIS INSTANCE DIFFERENT FROM ITS REQUEST UNDER ISSUE 35?

A. There is a significant difference between these two issues. Under Issue 35, although the traffic exchanged between BellSouth and MCI's local switch using a Supergroup may contain local, transit and switched access traffic, it is BellSouth that exchanges the switched access traffic directly with the IXCs. In this issue, MCI wants access traffic to be delivered to BellSouth through MCI's local switch and not from MCI's access tandem to BellSouth's access tandem. If such traffic is not exchanged through the companies' respective access tandems, but is delivered to BellSouth end offices over local interconnection trunks, BellSouth is unable to identify and properly bill switched access traffic.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority adopt BellSouth's proposed language that makes clear when it states MCI will not "deliver switched access to BellSouth for termination except over MCI ordered switched access trunks and facilities." Such language is necessary for BellSouth to identify and properly bill switched access traffic.

Issues 45 & 48: How should third party transit traffic be routed and billed by the parties?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth understands that Issue 45 has been resolved. With respect to Issue 48, BellSouth understands that this issue pertains to the routing and billing of third party local transit traffic by the parties. While BellSouth is willing to route local transit traffic, MCI wants BellSouth to pay reciprocal compensation for such traffic terminating to MCI, which BellSouth is not obligated to do. MCI should seek such compensation from the originating carrier, which in this instance is not BellSouth.

Q. DOES BELLSOUTH PROVIDE A LOCAL TRAFFIC TRANSITING FUNCTION?

A. Yes. Since the introduction of CLECs interconnecting with its network, BellSouth sought to assist CLECs in their efforts to reduce their speed to market time as well as their interconnection costs by allowing CLECs to access other LECs via BellSouth's network. However, BellSouth is not required to provide this function. When BellSouth performs a transit network function, CLECs do not have to establish direct interconnection with the other LECs, which eases CLECs' recording and billing requirements.

Q. SINCE BELLSOUTH OFFERS TO PROVIDE A LOCAL TRANSIT FUNCTION, WHAT IS THE DISPUTE?

A. In addition to handling the traffic, MCI wants BellSouth to pay reciprocal compensation for local traffic originated from another carrier terminating to MCI so MCI does not have to execute an interconnection agreement with the originating carrier. Section 251(b) of the 1996 Act requires all LECs to negotiate interconnection contracts to set the terms and conditions of traffic exchange. If a CLEC desires that BellSouth perform the transit function, the CLEC is responsible for ordering from and payment to BellSouth for the applicable transiting interconnection charges. Additionally, the CLEC is responsible for negotiating an interconnection agreement with other CLECs with which they intend to exchange traffic. BellSouth should not be asked to relieve MCI of its obligations under the 1996 Act.

Further, BellSouth has initiated the multiple bill approach for local traffic based upon the Multiple Bill, Multiple Tariff process designed and implemented by the national Ordering and Billing Forum ("OBF"). This was accomplished in order to avoid interfering with the contract arrangements negotiated and agreed to between CLECs and third party LECs. Accordingly, as the "transit company," BellSouth provides the records needed by the CLECs to bill a third party carrier for terminating traffic from that third party carrier. In turn, BellSouth recovers its transit traffic costs from the originating LEC. CLECs (including MCI) and BellSouth already utilize the OBF Multiple Bill, Multiple Tariff Meet Point Billing process to bill Interexchange Carriers ("IXCs") for originating and terminating switched access traffic. The same billing and record exchange systems are used to bill for transit local traffic, and has been used for the past three years with MCI and the other CLECs.

Q. WHAT ACTION IS BELLSOUTH ASKING THE AUTHORITY TO TAKE ON THIS ISSUE?

A. BellSouth respectfully requests that this Authority reject MCI's attempt to require BellSouth to perform MCI's legal obligation to negotiate local interconnection contracts (and perform all associated billing and administrative activities) with third party LECs. MCI should seek reciprocal compensation from the originating carrier.

Issue 46: Under what conditions, if any, should the parties be permitted to assign an NPA/NXX code to end users outside the rate center in which the NPA/NXX is homed?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is not attempting to restrict MCI's ability to allocate numbers out of its assigned NPA/NXX codes to its end users. BellSouth is indifferent to the way MCI chooses to allocate its numbers to its end users. Because of this freedom, MCI can elect to give a telephone number to a customer who is physically located in a different local calling area than the local calling area where that NPA/NXX is assigned. If MCI chooses to give out its numbers in the manner previously described, calls originated by BellSouth end users to those numbers are not local calls. Consequently, such calls are not local traffic under the agreement and no reciprocal compensation applies. Further, MCI should identify such long distance traffic and pay BellSouth for the originating switched access service BellSouth provides on those calls.

Q. WHAT DO YOU MEAN WHEN YOU SAY AN NPA/NXX IS ASSIGNED TO A RATE CENTER?

A. When MCI or any other carrier is given an NPA/NXX code by the North American Numbering Plan Administrator, the carrier must assign that NPA/NXX code to a rate center. All other carriers use this assignment information to determine whether calls originated by its customers to numbers in that NPA/NXX code are local or long distance calls. For example, assume that the administrator assigned the 423/336 NPA/NXX to MCI. MCI would tell the administrator where 423/336 was assigned. Let's say MCI assigned the

423/336 code to the Copper Basin, Tennessee rate center. When a local carrier's customer called a number in the 423/336 code, the local carrier would bill its customer based upon whether a call from the location where the call originated to the Copper Basin, Tennessee rate center was a local call or a long distance call. If a BellSouth customer in the Copper Basin local calling area called a number in the 423/336 code in this example, BellSouth would treat the call as a local call for purposes of billing its Copper Basin, Tennessee customer. Likewise, if a BellSouth customer in Chattanooga called a number in the 423/336 code, BellSouth would bill the customer for a long distance call.

Q. IS MCI LIMITED TO GIVING NUMBERS, ASSIGNED TO A PARTICULAR RATE CENTER, TO CUSTOMERS WHO ARE PHYSICALLY LOCATED IN THAT SAME RATE CENTER?

A. No. In the example above, MCI is not limited to giving numbers in the 423/336 code only to customers that are physically located in the Copper Basin, Tennessee rate center. MCI is permitted to assign a number in the 423/336 code to any of its customers regardless of where they are physically located. Again, BellSouth is not attempting to restrict their ability to do this.

Let's see what happens if MCI disassociates the physical location of a customer with a particular telephone number from the rate center where that NPA/NXX code is assigned. Let's continue to use the hypothetical case of the 423/336 code that MCI assigned to the Copper Basin, Tennessee rate center. Now, assume that MCI gives the number 423-336-2000 to one of its customers in Chattanooga. If a BellSouth customer in Copper Basin calls 423-336-2000, BellSouth would treat the call as if its Copper Basin customer had made a local call. However, BellSouth would hand off the call to MCI at a BellSouth designated point of interconnection. MCI would then carry the call from that point of interconnection to its end user in Chattanooga. The end points of the call are in Copper Basin and Chattanooga. More extreme, MCI could elect to assign another number, say 423-336-3000 to one of its customers who is physically located in New York. A call from a BellSouth customer in Copper Basin, Tennessee to 423-336-3000 would be treated as if he made a local call, but the call would actually terminate in New York. MCI proposes for BellSouth to pay reciprocal compensation on those calls from Copper Basin to Chattanooga or Copper Basin to New York that I have just described, even though such calls are clearly long distance calls.

In addition to the long distance service described above that MCI could provide, they could also provide local service using that same 423/336 code. MCI could elect to assign another number, say 423-336-5555 to one of its customers who is physically located in Copper Basin, Tennessee. A BellSouth customer in Copper Basin who called 423-336-5555 would be making a local call. BellSouth agrees that appropriate reciprocal compensation should apply on that call. BellSouth and MCI disagree on what the amount of that reciprocal compensation should be, but that is the subject of Issue 51, not this issue.

Q. IS TRAFFIC JURISDICTION ALWAYS DETERMINED BY THE RATE CENTERS WHERE THE ORIGINATING AND TERMINATING NPA/NXXs ARE ASSIGNED AS INDICATED IN MCI's PETITION?

A. No. Traffic jurisdiction based on rate center assignment is used for retail end user billing, not for inter-company compensation purposes. The FCC has made it clear that traffic jurisdiction is determined based upon the originating and terminating end points of a call, not the NPA/NXXs of the calling or called number. One example is Feature Group A ("FGA") access service. Even though the originating end user dials a number that appears local to him or her, no one disputes that FGA traffic is switched access traffic with respect to jurisdiction and compensation between the involved companies. As the Authority is aware, FGA access service is not a local service.

Another example is Foreign Exchange ("FX") service. Here again, the originating end user believes he or she is reaching a location local to him or her when in fact the terminating location is long distance. Further, because the call to the FX number appears local and the calling and called NPA/NXXs are assigned to the same rate center, the originating end user is not billed for a toll call. Despite the fact that the calls appear to be local to the originating caller, FX service is clearly a long distance service.

Q. WHEN MCI ASSIGNS NUMBERS IN THE MANNER YOU HAVE DESCRIBED, IS IT ATTEMPTING TO DEFINE ITS OWN LOCAL CALLING AREA?

A. No. When MCI assigns numbers in the manner described, MCI is not attempting to define the local calling area for its customers. MCI is not necessarily offering a different local calling area to its customers than the local calling area offered by BellSouth. In fact, in our previous hypothetical of the 423/336 code that MCI assigned to Copper Basin, MCI does not need to have any customers at all who are physically located in the Copper Basin local calling area. What MCI is doing is offering "free" interexchange calling to customers of other LECs (i.e. BellSouth). MCI is offering a service that allows BellSouth's local service customers to call selected customers of MCI who are physically located in another local calling area. At best, in the Copper Basin example, MCI is attempting to redefine the local calling area of BellSouth's customers in Copper Basin.

MCI is only permitted to define the local calling area for its customers. If MCI had any of its own local service customers in the Copper Basin example and offered those customers the ability to call Chattanooga without long distance charges, then it could be said that MCI was offering a local calling area in Copper Basin that was different from BellSouth's. However, the local calling area would be defined that way only for those customers to which MCI provided local service. MCI is free to delineate whatever local calling area it wants for its customers. MCI, however, cannot determine the local calling area for BellSouth customers. Specifically, MCI cannot offer interexchange service to BellSouth's local service customers and call that service local service even if it is provided on a toll free basis.

Q. HOW DOES THE SERVICE DISCUSSED ABOVE IMPACT THE DEGREE OF LOCAL COMPETITION?

A. Some CLECs have claimed that BellSouth's position on this issue would impede local competition. However, the service at issue here has nothing to do with local competition. Using the Copper Basin example, the service described in this issue does not create any local service, let alone any local service competition, in Copper Basin. Local service competition is only created where MCI offers local service to its own customers. The service at issue here is offered to BellSouth's local service customers in Copper Basin, regardless of whether MCI has any local service customers physically located in Copper Basin. When MCI allows a BellSouth customer in Copper Basin to make a toll free call to one of its true 800 service numbers, no local competition is created in Copper Basin. Likewise, in the example, when MCI assigns a number out of the 423/336 code to one if its customers in Chattanooga, precisely the same amount of local competition is created in Copper Basin (where the 423/336 code is assigned) as is created by MCI's 800 service offerings; i.e., none. In this case, MCI has no contact or business relationship with the BellSouth customers for use of this service. These customers remain, in fact, BellSouth's local service customers. There is nothing that MCI is providing in this case that even resembles local service. Yet, MCI claims that it should be paid reciprocal compensation for providing this service.

Q. WHAT OTHER STATE COMMISSIONS HAVE ADDRESSED WHETHER THE SERVICE DESCRIBED IN THIS ISSUE IS LOCAL OR INTEREXCHANGE?

A. The Maine, Texas and Illinois Commissions have determined that this is not local service. Texas and Illinois have further stated that reciprocal compensation should not apply in Virtual FX/Virtual NXX situations.

Q. BRIEFLY DESCRIBE THE MAINE COMMISSION'S ORDER THAT YOU REFERRED TO ABOVE.

A. The Maine Commission's Order was issued on June 30, 2000 in Docket Nos. 98-758 and 99-593. The service at issue in that order is the same type of service described in this issue. (Order at p. 4). Brooks Fiber ("Brooks" – a subsidiary of MCI WorldCom) had been assigned 54 NPA/NXX codes that it had subsequently assigned to various exchanges that are outside the Portland, Maine local calling area. Brooks then assigned numbers from those codes to its customers who were physically located in Portland. The Maine Commission was trying to determine whether Brooks was entitled to retain the NPA/NXX codes used for the service. If the service was local, Brooks was entitled to the codes; if the service was interexchange, Brooks Fiber had to relinquish the codes. The Maine Commission concluded that the service was interexchange. Since Brooks did not have any customers at all in the rate centers where 45 of the codes were assigned, the Maine Commission ordered the Numbering Plan Administrator to reclaim those codes (Order at p. 29)

Now, there is a potential misunderstanding that could arise when reading the Maine Order. There are several references to ISP in the Maine Order, but that is because Brooks Fiber had only given numbers in the NPA/NXX code to ISPs. Significantly, the Maine Order does not address the ISP reciprocal compensation issue that this Commission has previously addressed. Neither the Maine Commission findings on the nature of this traffic nor BellSouth's position on this issue depend on whether the number is given to an ISP. The same findings and the same position apply regardless of the type of customer who has been given the number. It is just a fact in the Maine case that Brooks Fiber had only given numbers to ISPs; therefore, there are references to ISPs in the Order.

Q. WHAT DO THE ILLINOIS AND TEXAS COMMISSIONS' ORDERS SAY ABOUT THIS ISSUE?

A In the Illinois Commerce Commission's Order in Docket 00-0332, Level 3 Communications, Inc. Arbitration case, dated August 30, 2000, the Commission states at pages 9-10:

> *(b) The reciprocal compensation portion of the issue is straightforward. The FCC's regulations require reciprocal compensation only for the transport and termination of "local telecommunications traffic," which is defined as traffic "that originates and terminates within a local service area established by the state*

> *commission." 47 C.F.R. 51.701 (a)-(b)(1). FX traffic does not originate and terminate in the same local rate center and therefore, as a matter of law, cannot be subject to reciprocal compensation. Whether designated as "virtual NXX," which Level 3 uses, or as "FX," which AI [Ameritech Illinois] prefers, this service works a fiction. It allows a caller to believe that he is making a local call and to be billed accordingly when, in reality, such call is traveling to a distant point that, absent this device, would make the call a toll call. The virtual NXX or FX call is local only from the caller's perspective and not from any other standpoint. There is no reasonable basis to suggest that calls under this fiction can or should be considered local for purposes of imposing reciprocal compensation. Moreover, we are not alone in this view. The Public Utility Commission of Texas recently determined that, to the extent that FX-type calls do not terminate within a mandatory local calling area, they are not eligible for reciprocal compensation. See, Docket No. 21982, July 13, 2000. On the basis of the record, the agreement should make clear that if an NXX or FX call would not be local but for this designation, no reciprocal compensation attaches.* [Emphasis added.]

Q. HOW DOES BELLSOUTH'S POSITION COMPARE TO THE MAINE, ILLINOIS AND TEXAS COMMISSIONS' ORDERS?

A. BellSouth's position is completely consistent with these three orders. Most importantly, the Maine Commission found that the service was interexchange.

(Order at pps. 4, 8-12, 18). The Maine Commission concluded that this service and FX service has some parallels but the closest parallel is 800 service. (Order at pps. 11-12) The Maine Commission found that Brooks is not attempting to define its local calling area with this service. (Order at p 14) Finally, the Maine Commission concluded that this service has no impact on the degree of local competition. (Order at p. 13) The Illinois and Texas Commissions' Orders went a step further, specifying that Virtual FX or NXX calls which do not terminate within a mandatory local calling area are not eligible for reciprocal compensation. Again, none of these findings depend on whether the number is given to an ISP or another type of customer.

Q. HAVE ANY STATE COMMISSIONS IN THE BELLSOUTH REGION ADDRESSED THIS ISSUE?

A. Yes, both the Florida and Georgia Commissions have ruled on this issue.

Q. COULD YOU BRIEFLY DESCRIBE THE FLORIDA AND GEORGIA DECISIONS?

A. The Florida Commission in its order in the Intermedia arbitration case, found that Intermedia should not be permitted to assign numbers outside of the local area with which they are traditionally associated, until Intermedia can provide information to BellSouth necessary for the proper rating of such calls. On July 5, 2000, in Docket No. 11644-U (Intermedia arbitration), the Georgia Commission ordered that Intermedia be allowed to assign its NPA/NXXs in accordance with the establishment of its local calling areas, provided that it furnish the necessary information to BellSouth and all other telecommunication carriers that they may identify local and toll traffic and provide for the proper routing and billing of those calls.

Q. WHAT IS BELLSOUTH REQUESTING OF THE AUTHORITY?

A. BellSouth requests that the Authority find that, if MCI chooses to give out its numbers in the manner previously described, calls originated by BellSouth end users to those numbers are not local calls. Consequently, such calls are not local traffic under the agreement and no reciprocal compensation applies.

Issue 47: Should reciprocal compensation payments be made for ISP bound traffic?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Reciprocal compensation should not apply to ISP-bound traffic. Based on the 1996 Act and the FCC's Local Competition Order, reciprocal compensation obligations under Section 251(b)(5) only apply to local traffic. ISP-bound traffic constitutes access service, which is clearly subject to interstate jurisdiction and is not local traffic. BellSouth recognizes that the Authority has previously ruled in the NEXTLINK arbitration proceeding that calls to ISPs are considered local traffic and are subject to the payment of reciprocal compensation. In this arbitration proceeding, on an interim basis, BellSouth is willing to abide by the Authority's previous decision until the FCC establishes final rules associated with ISP-bound traffic. In doing so, BellSouth does not waive its right to seek judicial review on this issue. Upon establishment of an appropriate inter-carrier compensation mechanism, the parties would engage in a retroactive true-up based upon the established mechanism.

Issue 51: Under what circumstances is BellSouth required to pay tandem charges when MCI terminates BellSouth local traffic?

Q. PLEASE BRIEFLY EXPLAIN THIS ISSUE.

A. The FCC's rules established that, when two carriers are involved in delivery of local traffic, the originating carrier would compensate the terminating carrier for certain additional costs incurred to transport and terminate local calls from the originating carrier's customers. The FCC limited such compensation to be symmetrical unless the CLEC could demonstrate that it was using an efficient configuration to transport and terminate the calls and that such configuration justified asymmetrical rates. Under symmetrical reciprocal compensation, the CLEC applies the ILEC's rate for transport and termination. The FCC determined that there should be two rates for transport and termination. One rate applies where tandem switching is involved (tandem rate) and the other rate applies where tandem switching is not involved (end office rate). The tandem rate simply consists of both the end office switching rate and the tandem switching rate. As a surrogate for these two rates, many commissions have used the UNE rates of the involved network components as the basis for reciprocal compensation. This is a reasonable surrogate when both parties' switches are in the same local calling area.

Q. HOW DOES BELLSOUTH USE TANDEM SWITCHES?

A. BellSouth has both local and access tandems. First, I will address local tandems. Sometimes there are so many local switches in a given local calling area that it makes economic sense to create a local tandem to help handle the flow of calls between the end office switches. In this case, the local tandem is connected to numerous end office switches in the local calling area, thereby eliminating the need to have every end office switch in that local calling area connected directly to every other end office switch in that local calling area. In this situation, a caller who is served by one end office switch can place a local call to a subscriber served by another end office switch, and the call can be routed through the local tandem, rather than being trunked directly to the called party's local end office switch. Obviously, if there are a lot of end office switches in a local calling area, using a tandem switch to aggregate traffic and to act as a central connection point makes economic sense and avoids a lot of extra trunking that would otherwise be required to ensure that call blockage was limited to acceptable levels.

The local tandem is functionally quite similar to what is often referred to as an access tandem. An access tandem is a tandem switch that is also connected to all of the local central offices in a given area. The difference is that the access tandem handles both local and long distance traffic while the local tandem only handles local traffic.

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. In order for MCI to appropriately charge for tandem switching, MCI must demonstrate to the Authority that: 1) its switches serve a comparable geographic area to that served by BellSouth's tandem switches and that 2) its switches actually perform local tandem functions. MCI should only be compensated for the functions that it actually provides.

BellSouth proposes to bill MCI for use of a tandem only when BellSouth incurs the cost of tandem switching on a particular local call. Further, BellSouth proposes to pay MCI the tandem switching rate only when MCI incurs the cost of tandem switching on a particular local call. To incur this cost, MCI must provide the functionality of a tandem switch, as opposed to an end office switch, and MCI must be serving a geographic area comparable to a BellSouth tandem.

Q. WHAT IS MCI'S POSITION ON THIS ISSUE?

A. MCI's position is that when its local switch covers a geographic area comparable to BellSouth's tandem, MCI should always receive the rate for tandem switching, transport and end office switching. MCI totally disregards the FCC's second criteria for qualifying for tandem switching compensation –

that MCI's switch actually perform a tandem function on a given call. In addition, in Attachment 4, Section 10.4.2.2 MCI proposes that the price of common transport between the parties be based upon the average mileage between end offices subtending BellSouth's tandem versus the actual mileage between an end office and the tandem.

Q. WHAT IS THE BASIS FOR BELLSOUTH'S POSITION ON THIS ISSUE?

A. In its Local Competition Order, the FCC stated that the "additional costs" of transporting and terminating local traffic vary depending on whether or not a tandem switch is involved. (¶ 1090) As a result, the FCC determined that state commissions can establish transport and termination rates that vary depending on whether the traffic is routed through a tandem switch or directly to a carrier's end-office switch. *Id.* To that end, BellSouth has separate rates for transport and termination depending upon whether tandem switching is involved. When a CLEC's end user originates a local call that terminates on BellSouth's local network, BellSouth charges the CLEC a different rate for reciprocal compensation based on whether or not local tandem switching is involved in that call. When a BellSouth end user originates a local call that terminates on the CLEC's network, the CLEC should only charge the tandem rate when the CLEC actual provides the tandem switching function.

The FCC, of course, recognized that a CLEC might not use the same network architecture as BellSouth or any other incumbent carrier. In order to insure that a CLEC would receive the equivalent of a tandem switching rate <u>if it were</u>

warranted, the FCC directed state commissions to do two things. First, the FCC directed state commissions to "consider whether new technologies (e.g., fiber ring or wireless network) performed functions similar to those performed by an incumbent LEC's tandem switch and thus whether some or all calls terminating on the new entrant's network should be priced the same as the sum of transport and termination via the incumbent LEC's tandem switch." (Local Competition Order ¶ 1090) (emphasis added). Second, the FCC stated that "[w]here the interconnecting carrier's switch serves a geographic area comparable to that served by the incumbent LEC's tandem switch, the appropriate proxy for the interconnecting carrier's additional costs is the LEC tandem interconnection rate." Id.

Therefore, the FCC posed two requirements that must be met before a CLEC would be entitled to compensation at both the end office and the tandem switching rate, as opposed to only the end office rate, for any particular local call. The tandem switch involved has to serve a comparable geographic area, and it has to perform the tandem switching function for the local call for which compensation is sought.

BellSouth notes that in Section 51.711(a)(1) of its Rules, the FCC states that "symmetrical rates are rates that a carrier other than an incumbent LEC assesses upon an incumbent LEC for transport and termination of local telecommunications traffic equal to those that the incumbent LEC assesses upon the other carrier for the same services." (emphasis added) Again, in Section 51.711(a)(3), the Rule states that "[w]here the switch of a carrier other than an incumbent LEC serves a geographic area comparable to the area served by the incumbent LEC's tandem switch, the appropriate rate for the carrier other than an incumbent LEC is the incumbent LEC's tandem interconnection rate." The FCC clearly has two requirements that must be met before the tandem rate for transporting and terminating traffic applies.

Q. HAS THE FCC DEFINED WHICH FUNCTIONS A TANDEM SWITCH MUST PROVIDE?

A. Indeed it has. In its recently released Order No. FCC 99-238, the FCC's rules at 51.319(c)(3) state:

Local Tandem Switching Capability. The tandem switching capability network element is defined as:

(i) Trunk-connect facilities, which include, but are not limited to, the connection between trunk termination at a cross connect panel and switch trunk card;

(ii) The basic switch trunk function of connecting trunks to trunks; and

(iii) The functions that are centralized in tandem switches (as distinguished from separate end office switches), including but not limited, to call recording, the routing of calls to operator services, and signaling conversion features.

Of course, this definition of tandem switching capability has long been accepted and applied within the telecommunications industry. The introduction of local competition has no effect on the definition of tandem switching capability.

Q. HOW DOES THE FCC'S DEFINITION OF TANDEM SWITCHING APPLY TO THIS ISSUE?

A. To receive reciprocal compensation at the tandem rate, a carrier must be performing the functions described in the FCC's definition of tandem switching. It is not enough that the switch "can" provide the function of a tandem switch; it has to actually be providing those functions for the local call for which compensation is sought. This is true if for no other reason than because the difference between the end office and tandem rates for reciprocal compensation is the same as the UNE rate for tandem switching. That rate recovers the cost of performing, for local calls, the functions described in the FCC's definition. If the CLEC were not performing those functions, the CLEC would simply be receiving a windfall.

MCI's switches are not providing a tandem function to transport <u>any</u> local calls, let alone <u>all</u> local calls, but are only switching traffic through MCI's end office switches for delivery of that traffic from those switches to the called party's premises. As stated in the FCC's definition, to provide transport utilizing tandem switching, MCI's switch must connect trunks terminated in one end office switch to trunks terminated in another end office switch. In other words, a tandem switch, as defined by the FCC, provides an intermediate switching function.

Q. PLEASE DESCRIBE MCI'S PROPOSAL TO CHARGE COMMON TRANSPORT BASED ON THE AVERAGE MILEAGE BETWEEN END OFFICES.

A. Although not discussed in its Petition, MCI's proposed agreement language under Attachment 4, Section 10.4.2.2 contains the following statement:

> For the purposes of this Section, both Parties shall bill each other the average mileage of all End Offices subtending the applicable BellSouth Tandem Office.

This language refers to MCI's contention that when its switch serves a geographic area comparable to BellSouth's tandem switch, MCI should be able to charge BellSouth the same rates BellSouth would charge MCI for transport and termination of local traffic.

First, MCI's proposal is evidence that it does not have a tandem switch performing tandem switching functions. If MCI did have a switch functioning as a tandem, it would also have its own common transport and would charge BellSouth for common transport based upon the distance from MCI's tandem switch to each of MCI's end office switches. Instead, MCI proposes using an average distance between BellSouth's end offices subtending a BellSouth tandem switch.

Second, the issue of billing common transport only arises in the event the Authority determines that MCI can charge BellSouth for tandem switching even though MCI's switch does not perform a tandem switching function. The reason is, when MCI is not actually performing a tandem function (switching calls from the tandem to its end office switches), MCI has no common transport it can bill to BellSouth. BellSouth is certainly not obligated to pay common transport to MCI when MCI has no physical common transport connections. MCI cannot recover costs from BellSouth that it has never incurred.

Finally, common transport mileage should be applied on a per call basis and, based on the V&H coordinates of its central office locations, BellSouth can and does bill common transport based on actual mileage.

Q. WHAT DOES BELLSOUTH REQUEST THE AUTHORITY DO?

A. BellSouth believes that each CLEC's request for the tandem rate must be decided based on the specifics of that carrier's network, because the decision of whether the tandem rate applies is dependent upon how a particular carrier's network handles each individual local call. Importantly, BellSouth is not disputing MCI's right to compensation at the tandem rate where the facts support such a conclusion. However, in this proceeding, MCI is seeking a decision that allows it to be compensated for functionality it does not provide. Absent real evidence that MCI's switches actually serve the same geographic area as BellSouth's tandems, and absent evidence that MCI's switches do perform the functions of a tandem switch, BellSouth requests that the Authority determine that MCI is only entitled, where it provides local switching, to the end office switching rate.

In addition, the Authority should deny MCI's proposed language that would base charges for common transport on the average mileage of all end offices subtending a BellSouth tandem because MCI is not entitled to recover costs for common transport that it does not incur.

Issue 52: Should BellSouth be required to pay access charges to MCI for non-presubscribed intraLATA toll calls handled by BellSouth?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. When an end user served by an Independent Telephone Company ("ICO") originates an intraLATA toll call transported by BellSouth to MCI, BellSouth is jointly providing the toll call with the ICO. When an ICO customer calls an MCI customer, the transaction should be between the ICO and MCI. In Tennessee, ICOs do not send all call records to BellSouth. For example, they do not send BellSouth EAS or countywide calls. Therefore, although MCI wants to bill BellSouth instead of the ICO, BellSouth has no way to validate the bill. These arrangements have been in effect since the de-pooling of intraLATA toll by incumbent local exchange carriers and the establishment of intraLATA toll competition by the Authority.

Q. HOW IS MCI's POSITION DIFFERENT FROM BELLSOUTH'S POSITION?

A. MCI wants to transfer to BellSouth the responsibility to pay access charges to other carriers involved in transporting and terminating a non-presubscribed toll call. Although MCI claims BellSouth should pay access charges and collect money from the originating carrier, BellSouth should not be MCI's banker.

Q. WHAT ACTION DOES BELLSOUTH DESIRE THE AUTHORITY TO TAKE ON THIS ISSUE?

A. For the reasons provided above. this Authority should accept BellSouth's contract language on non-presubscribed intraLATA toll. This will keep in place the existing technical and compensation processes for intraLATA toll already established.

Issue 54: Should security charges be assessed for collocation in offices with existing card key systems, and how should security costs be allocated in central offices where new card key systems are being installed?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. The costs for security card key systems, should be allocated among all parties in the central office, including BellSouth and a projected number of collocators. This is a reasonable approach because it acknowledges that a party obtains access to the entire central office building, not just its collocation arrangement. This method of allocating costs is simple, easy to administer and provides access on a nondiscriminatory basis to all parties in the central office.

BellSouth recognizes that the Authority has indicated its intention to adopt the AT&T collocation model in Docket No. 97-01262. Unless the Authority reconsiders its position, there is no issue regarding security access, because security access is included within the AT&T collocation model. However, should the Authority adopt BellSouth's collocation model, BellSouth's position, as stated above, is that security access should be allocated among all parties in the central office including BellSouth and a projected number of collocators.

Q. MCI PROPOSES THAT SECURITY COSTS BE ALLOCATED BASED ON THE SQUARE FOOTAGE OCCUPIED BY BELLSOUTH AND EACH COLLOCATOR. IS THIS A REASONABLE APPROACH TO SECURITY ACCESS PRICING?

A. No. MCI's approach is unreasonable and unworkable. Using MCI's method of allocation, security access costs would constantly have to be recalculated and reassessed each time an additional party established a collocation arrangement in a particular office and each time an existing collocator changed the square footage of its collocation arrangement. Because prices for security access are contained in interconnection agreements, which typically have two-year contract terms, such an allocation method would be impossible to maintain. Further, allocating security access costs, as MCI proposes, does not consider that certain space within an office cannot be used for the placement of telecommunications equipment by any party, including BellSouth. MCI proposes allocating costs on a square footage basis, but does not offer any method by which its proposal could be effectively implemented.

The benefits of accessing BellSouth's central offices via a security card key system is not a function of how much space the carrier occupies in that central office. Such access provides equal value to all parties.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority find that security access costs be allocated among all parties in the central office based upon a projected number of collocators and not on a per square foot basis as proposed by MCI. BellSouth's proposed method of allocation is simple, easy to administer and provides access to all parties in the central office on a nondiscriminatory basis.

Issue 67: When MCI has a license to use BellSouth rights-of-way, and BellSouth wishes to convey the property to a third party, should BellSouth be required to convey the property subject to MCI's license?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth should be able to sell or otherwise convey its property without restriction so long as BellSouth gives MCI reasonable notice of such sale or conveyance.

Q. WHAT IS THE BASIS FOR BELLSOUTH'S POSITION?

A. The property in question includes BellSouth's poles, conduit or ducts to or in which MCI has attached or placed facilities pursuant to a license. As reflected in the Rights of Way agreement, such license to MCI does not constitute an easement; does not give MCI ownership rights of this property; and does not give MCI the right to restrict BellSouth's sale or conveyance of its own property.

Q. WHAT DOES BELLSOUTH REQUEST THE AUTHORITY DO?

A. The Authority should reject the language that MCI proposes which would allow MCI to control the disposition of BellSouth's property.

Issue 94: Should BellSouth be permitted to disconnect service to MCI for nonpayment?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth should be permitted to disconnect service to MCI or any CLEC that fails to pay billed charges that are <u>not</u> disputed. Also, MCI should not be, and by terms of the 1996 Act, cannot be treated differently from any other CLEC with respect to disconnection of service for nonpayment. Terms and conditions for handling billing disputes is covered under Section 4.2.12 of Attachment 8 to the proposed interconnection agreement. Billing disputes that are handled under Section 4.2.12 are not at issue here. What is at issue here is disconnection due to nonpayment of undisputed charges.

Q. PLEASE GIVE SOME REASONS WHY BELLSOUTH MUST BE ALLOWED TO DISCONNECT SERVICE FOR NON-PAYMENT.

A. It would not be a reasonable business practice for BellSouth to operate "on faith" that a CLEC will pay its bills. A business could not remain viable if it were obligated to continue to provide service to customers who refuse to pay lawful charges. BellSouth must be able to deny service in order to obtain payment for services rendered and/or prevent additional past due charges from accruing.

Further, BellSouth must consider that this is a larger issue than just MCI. BellSouth must provide nondiscriminatory service to all CLECs. If BellSouth were to exempt MCI from this requirement, from a parity perspective, it could hardly disconnect any other CLEC for non-payment of undisputed charges. Further, BellSouth must also consider that the terms and conditions of any agreement it reaches with one CLEC is subject to being adopted by another CLEC. The FCC's Rule 51.809 requires that, subject to certain restrictions, BellSouth must, "make available without unreasonable delay to any requesting telecommunications carrier any individual interconnection, service, or network element arrangement contained in any agreement to which it is a party that is approved by a state commission pursuant to section 252 of the 1996 Act, upon the same rates, terms, and conditions as those provided in the agreement." This "pick and choose" requirement makes it imperative that BellSouth include language addressing disconnection of service for non-payment in each of its interconnection agreements, without exception.

The simple way to resolve this issue is for MCI to pay undisputed amounts within the applicable time frames, and this portion of the agreement will never become an issue. BellSouth encourages the Authority to adopt BellSouth's proposed language and permit BellSouth to disconnect the service of CLEC customers that fail to pay billed charges that are not disputed.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority to adopt BellSouth's proposed language that allows BellSouth to disconnect service to MCI or any CLEC that fails to pay billed charges that are not disputed. Due to BellSouth's requirement to provide parity, it could not treat MCI differently than other CLECs. By approving this language, the Authority preserves BellSouth's right to disconnect any CLEC for nonpayment of charges that have not been disputed.

Issue 105: What performance measurement system should BellSouth be required to provide?

Q. WHAT ASPECT OF THIS ISSUE DOES YOUR TESTIMONY ADDRESS?

A. My testimony addresses the application of an appropriate remedy mechanism, should the Authority determine such a mechanism is necessary at this time. Mr. Coon addresses BellSouth's position on this issue and discusses service quality measurements in his testimony. With respect to a remedy mechanism, BellSouth has proposed its voluntary self-effectuating enforcement ("VSEEM III") to MCI for inclusion in the parties' interconnection agreement.

Q. WHAT IS VSEEM III?

A. VSEEM III is a plan developed by BellSouth in response to the FCC's expressed preference for enforcement mechanisms and penalties as a condition of 271 relief. The plan incorporates the FCC's desired characteristics, addresses various CLEC comments and considers the collaborative work efforts by state commissions in BellSouth's region and elsewhere. Without waiving its right to assert its legal position that performance remedies are not a requirement of Section 251 of the 1996 Act, BellSouth has voluntarily included this plan into its interconnection agreements with a number of CLECs, including ICG, KMC and e.spire, among others. BellSouth's enforcement plan is designed to provide an additional incentive to prevent BellSouth from backsliding on proper delivery of service to CLECs once

BellSouth has attained interLATA authority from the FCC. The remedies in BellSouth's proposal are designed to have a significant impact on BellSouth should they need to be applied.

Q. PLEASE BRIEFLY DESCRIBE THE THREE TIERS OF ENFORCEMENT MEASURES CONTAINED IN VSEEM III.

A. VSEEM III consists of a three-tiered enforcement mechanism of escalating remedies. Each tier operates independently, so the onset of a Tier-2 remedy, for example, will not cease payout of applicable Tier-1 remedies. Tier-1 remedies are monetary in nature and paid directly to the CLEC when BellSouth delivers non-compliant performance on any one of the VSEEM III measures for any month as calculated by BellSouth. Tier-2 remedies are monetary in nature and paid to a state Commission (in this instance, the Authority) or its designee. Tier-2 remedies are triggered by three consecutive monthly failures in a quarter in which BellSouth performance is out of compliance or does not meet the benchmark for the aggregate of all CLEC data as calculated by BellSouth for a particular VSEEM III measure. The Tier-3 remedy is the voluntary suspension of additional marketing and sales of long distance services triggered by excessive repeat failures of specific sub-measures.

Q. WHEN SHOULD BELLSOUTH'S PROPOSAL TAKE EFFECT?

A. The FCC has consistently identified the implementation of enforcement mechanisms to be a condition of 271 relief. The FCC believes such a plan would be an additional incentive to ensure that BellSouth continues to comply with the competitive checklist after interLATA relief is granted. Enforcement mechanisms and penalties, however, are neither necessary nor required to ensure that BellSouth meets its obligations under Section 251 of the 1996 Act, and the FCC has never indicated otherwise.

Because performance remedies serve no purpose until after interLATA 271 relief is granted, it is appropriate that no part of the VSEEM III proposal take effect until the plan is necessary to serve its purpose – i.e., until after BellSouth receives interLATA authority. Under BellSouth's proposal, payment to Tennessee CLECs that have incorporated the plan into their interconnection agreements will commence, if necessary, at such time as BellSouth obtains interLATA relief.

Q. HAS BELLSOUTH AGREED TO A DIFFERENT IMPLEMENTATION SCHEDULE FOR TIER-1 REMEDIES IN ANY INTERCONNECTION AGREEMENTS?

A. Yes, as part of an overall contract negotiation and settlement process, BellSouth has included a different implementation schedule in the interconnection agreements of some CLECs. Under these agreements, those CLECs would be eligible to receive Tier-1 payments in all states once BellSouth receives long distance authority in any state in BellSouth's region.

BellSouth is willing to incorporate a similar provision in its agreement with MCI.

Q. SHOULD THE AUTHORITY IMPOSE ADDITIONAL ENFORCEMENT MECHANISMS BEYOND THOSE THE AUTHORITY ROUTINELY HAS USED TO ENFORCE ITS ORDERS AND RULES?

A. No. The Authority has provided adequate means to CLECs to ensure the enforcement of the Authority's Orders and Rules.

Further, nothing in the 1996 Act requires a self-executing enforcement plan. The FCC has acknowledged as much in its orders. In its August 1996 Local Competition Order, the FCC notes that several carriers advocated performance penalties. *See Local Competition Order, 11 FCC Rcd at 15658 [¶ 305].* The FCC did not adopt such performance penalties in the Local Competition Order. Instead, it acknowledged the wide variety of remedies available to a CLEC when it believes it has received discriminatory performance in violation of the 1996 Act; *see FCC's Local Competition Order ¶ 129, 11 FCC Rcd. at 15565 (emphasizing the existence of sections 207 and 208 FCC complaints for damages, as well as actions under the antitrust laws, other statutes and common law);* and "encourage[d]" the States only to adopt reporting requirements for ILECs. Likewise, in its order approving Bell Atlantic's entry into long distance in New York, the FCC analyzed Bell Atlantic's performance plan "solely for the purpose of determining whether the risk of post-approval non-compliance is sufficiently great that approval of its section 271 application would not be in the public interest." Bell Atlantic Order, at ¶433 n.1326.

Furthermore, in its October 13, 1998 order regarding BellSouth's Section 271 application for Louisiana, the FCC reiterated that the existence of such an enforcement plan is not a pre-requisite to compliance with the competitive checklist, but rather is a factor that the FCC will consider in assessing whether the RBOC's entrance into the interLATA market would serve the "public interest." See FCC's Louisiana II Order, at ¶363 and n.1136. The FCC stated that "evidence that a BOC has agreed in its interconnection agreements to performance monitoring" (including performance standards, reporting requirements, and appropriate self-executing enforcement mechanisms) "would be probative evidence that a BOC will continue to cooperate with new entrants, even after it is authorized to provide in-region, interLATA services." Id. at ¶¶363-64.

In a recent Ninth Circuit decision, when discussing objective performance standards, the Court held that:

> Neither the Act nor any FCC rule affirmatively requires states to do so, however. The FCC might have wanted the WUTC to impose more specific requirements, such as objective performance standards, on an incumbent like U.S. West, but again, our review seeks to determine solely whether the lack of those requirements violates the Act. In the absence of an FCC rule, the law does not require them.

MCI Telecommunications, Inc. et al v. U.S. West Communications, 204 F.3d 1262 (9th Cir. March 2, 2000).

The FCC has made it clear that the primary, if not sole, purpose of a voluntary self effectuating remedy plan is to guard against RBOC "backsliding"; that is, providing discriminatory performance after it has received the so-called "carrot" of long distance approval. BellSouth's proposal is consistent with this approach.

Q. HAS THE AUTHORITY PREVIOUSLY, IN AN ARBITRATION PROCEEDING, ADDRESSED THE ISSUE OF PERFORMANCE MEASUREMENTS AND PENALTIES?

A. In its deliberations in the ITC^DeltaCom arbitration, the Authority determined that additional performance measurements were needed and that an enforcement mechanism was appropriate. BellSouth respectfully disagrees with the Authority's finding. On May 22, 2000, as directed by the Authority, BellSouth filed its Best and Final Offer, along with a Motion for Reconsideration. The Authority has not yet issued a final Order in the ITC^DeltaCom proceeding.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority adopt its proposed VSEEM III proposal to be effective after BellSouth receives interLATA authority in Tennessee.

Issue 107: Should the parties be liable in damages, without a liability cap, to one another for their failure to honor in one or more material respects any one or more of the material provisions of the Agreement?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. The issue of a liability cap for damages is not subject to the Section 251 requirements of the 1996 Act. MCI's proposed language is not appropriate for inclusion in the Interconnection Agreement, therefore, BellSouth proposes that the Authority reject MCI's language.

Q. HAVE THE PARTIES AGREED TO LANGUAGE CONCERNING A LIABILITY CAP?

A. Yes. The parties had reached agreement on a liability cap. However, MCI has proposed language that would exempt a "material" breach of contract. BellSouth is willing to accept MCI's proposed language if MCI will accept additional language that would address BellSouth's concerns. MCI has refused.

Q. WHAT DOES BELLSOUTH REQUEST THE AUTHORITY DO?

A. Again, BellSouth's position is that this issue is not subject to arbitration. However, should the Authority choose to arbitrate the issue and should the Authority include MCI's requested language, BellSouth requests the Authority also adopt the additional language proposed by BellSouth. In other words, if the Authority is inclined to adopt the language proposed by MCI to which BellSouth has not agreed, BellSouth requests that the Authority also adopt the language proposed by BellSouth to which MCI has not agreed.

Issue 108: Should MCI be able to obtain specific performance as a remedy for BellSouth's breach of contract?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Specific performance is a remedy, but is not a requirement of Section 251 of the 1996 Act nor is it an appropriate subject for arbitration under Section 252. To the extent MCI can show that it is entitled to obtain specific performance under Tennessee law, MCI can make this showing without agreement from BellSouth.

Issue 109: Should BellSouth be required to post on its website all BellSouth's interconnection agreements with third parties within fifteen days of the filing of such agreements with the Authority? Should BellSouth be required to permit MCI to substitute more favorable terms and conditions obtained by a third party through negotiation or otherwise, effective as of the date of MCI's request.

Q WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. Because approved interconnection agreements are available from the Authority, BellSouth should not be required to post these agreements on the web, as MCI has requested. MCI should be permitted to substitute more favorable terms and conditions consistent with the 1996 Act and applicable FCC rules.

Q. EXPLAIN THE BASIS FOR BELLSOUTH'S POSITION.

A. With respect to posting filed agreements on BellSouth's website, BellSouth is simply not obligated under the 1996 Act or the FCC's rules to do so. Although the 1996 Act addresses the provision of agreements to CLECs, the obligation to provide the agreements is placed upon the state commission. Section 252(h) of the 1996 Act states:

> A State commission shall make a copy of each agreement [negotiated or arbitrated] approved under subsection (e) and each statement [Statement of Generally Available Terms and Conditions] approved under subsection (f) available for public inspection and copying within 10 days after the agreement or statement is approved.

MCI readily can obtain copies of the agreements from the Authority just like any other CLEC. Beyond the fact that BellSouth has no obligation to post interconnection agreements on its website, BellSouth certainly has no obligation to post filed agreements that have not even been approved by the Authority.

With respect to substituting more favorable terms and conditions, under Part A, Section 2.5 of the Interconnection Agreement, BellSouth agrees to make available, pursuant to Section 252(i) of the 1996 Act and FCC Rule 51.809, any interconnection, service, or network element provided under any other agreement at the same rates, terms and conditions as provided in that agreement. This is commonly known as the "most favored nation" or "pick and choose" option. MCI inappropriately seeks to extend this obligation to make the adopted rates, terms and/or conditions effective for MCI when the provision is actually agreed to by BellSouth and the negotiating party rather than when MCI actually adopts the provision for inclusion in its agreement.

The adoption or substitution of a specific provision contained in a previously approved agreement is effective on the date the amendment is signed by BellSouth and MCI. BellSouth is under no obligation to give MCI the benefit of those terms and conditions before such terms and conditions have been incorporated into BellSouth's agreement with MCI.

Q. HOW DOES BELLSOUTH REQUEST THE AUTHORITY RESOLVE THIS ISSUE?

A. BellSouth requests the Authority find that: 1) BellSouth has no obligation to provide CLECs with interconnection agreements reached with other parties, because the 1996 Act places that responsibility upon the state commissions; and 2) the adoption or substitution of a specific provision contained in a previously approved agreement is effective on the date the amendment is signed by BellSouth and MCI.

Issue 110: Should BellSouth be required to take all actions necessary to ensure that MCI confidential information does not fall into the hands of BellSouth's retail operations, and shall BellSouth bear the burden of proving that such disclosure falls within enumerated exceptions?

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth is willing to take all reasonable actions necessary to ensure that MCI confidential information does not fall into the hands of BellSouth's retail operations. The burden of proving that BellSouth has failed to do so should rest with MCI. However, the only actions that BellSouth should be required to take are those that are reasonable. BellSouth should not be strictly liable for taking all actions, as MCI proposes.

MCI's proposed "rebuttable presumption" that BellSouth has done something wrong simply because MCI's confidential information may be disclosed is unreasonable. MCI's information is available from a number of sources, including MCI itself. It is improper to assume that by default an inappropriate disclosure of such information must have come from BellSouth.

Q. EXPLAIN BELLSOUTH'S POSITION ON THIS ISSUE.

A. BellSouth takes seriously its obligation to protect confidential information of MCI and every other CLEC and is willing to take all reasonable measures to protect such information.

Q. WHAT DOES BELLSOUTH REQUEST OF THE AUTHORITY?

A. BellSouth requests the Authority adopt BellSouth's proposed language that BellSouth will take all reasonable actions necessary to ensure that MCI confidential information does not fall into the hands of BellSouth's retail operations. BellSouth requests the Authority reject MCI's language that there be a "rebuttal presumption" that BellSouth has done something wrong simply because MCI's confidential information may be disclosed.

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. Yes.

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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 Cynthia K. Cox – Senior Director – State Regulatory, BellSouth Telecommunications Inc., who, being by me first duly sworn deposed and said that:

She is appearing as a witness before the Tennessee Regulatory Authority in Docket No. 00-00309 on behalf of BellSouth Telecommunications, Inc., and if present before the Authority and duly sworn, her testimony would be set forth in the annexed testimony consisting of 93 pages and 1 exhibit(s).

Cynthia K. Cox

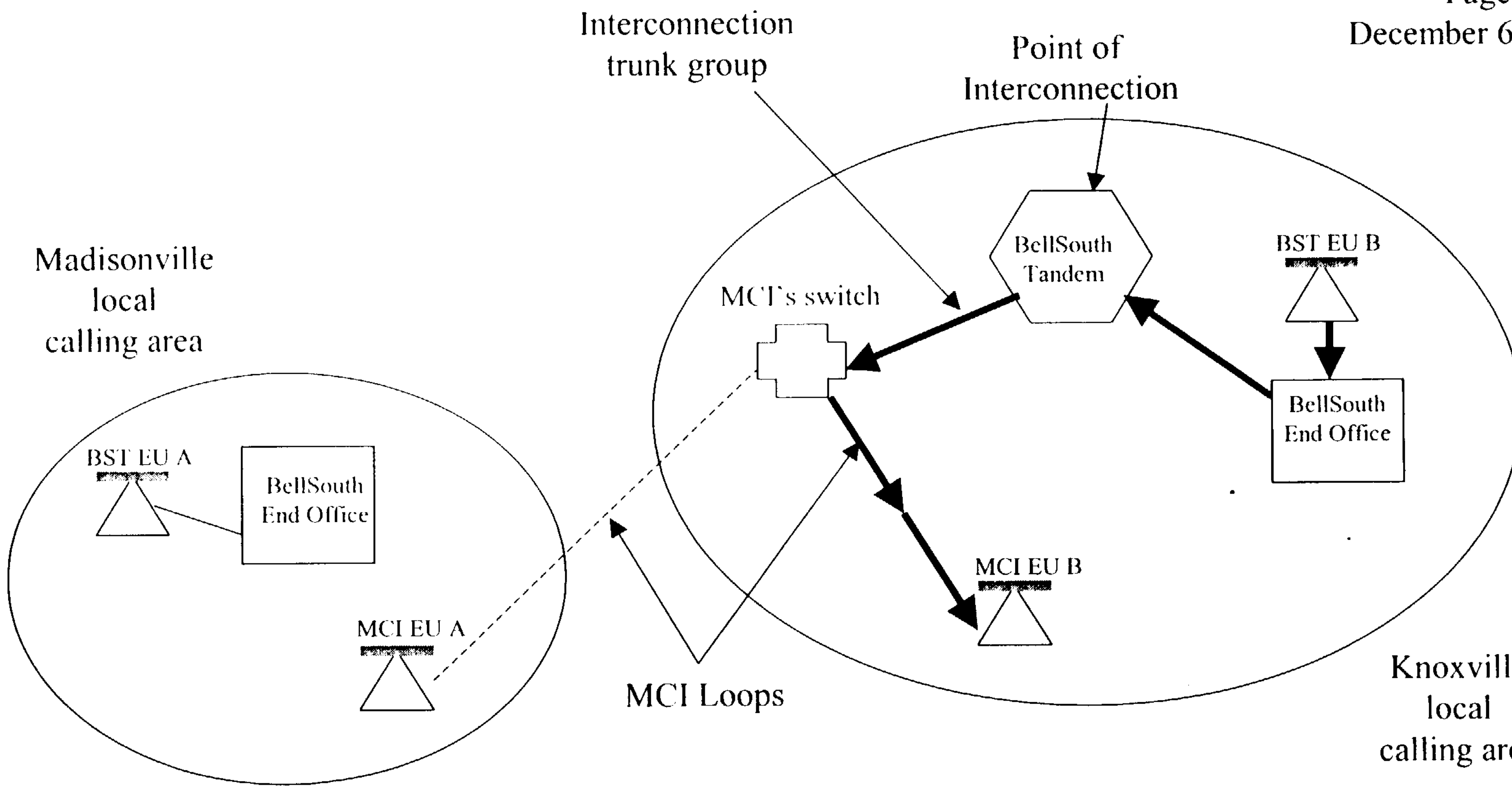
Sworn to and subscribed
before me on [illegible]

NOTARY PUBLIC

MICHEALE F. HOLCOMB
Notary Public, Douglas County, Georgia
My Commission Expires November 3, 2001

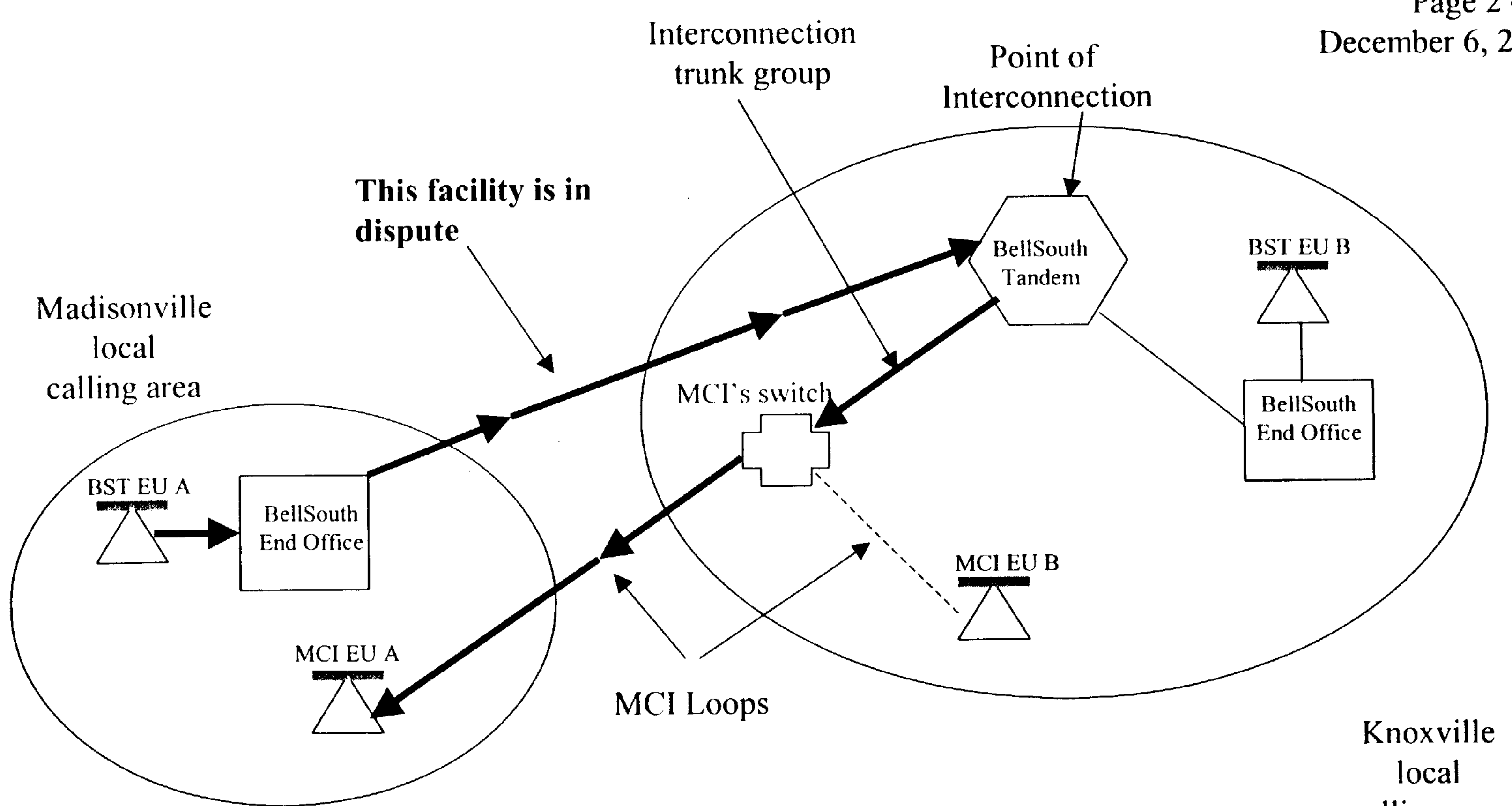
BellSouth Telecommunications Inc.
TRA Docket No.00-00309
Exhibit CKC-1
Page 1 of 3
December 6, 2000

Local Call from Knoxville BST EU to Knoxville MCI EU



#237686

Local Call from Madisonville BST EU to Madisonville MCI EU



#237686

Local Call from Madisonville BST EU to Madisonville BST EU