AT&T

Jim Lamoureux
Senior Attorney
Law and Government Affairs
Southern Region
jlamoureux@att.com

Promenade 1
1200 Peachtree Street N.E.
Atlanta, GA 30309
404 810 4196
FAX: 404 877 7648

November 15, 1999

Mr. David Waddell, Executive Secretary
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37245

Re: *Third Party Testing of BellSouth's Operational Support Systems;*
        Docket No. 99-00347

Dear Mr. Waddell:

Following up on AT&T's presentation during the TRA's Third Party Testing hearing on October 26, 1999, enclosed please find fourteen copies of some recent filings AT&T made in Georgia and Florida concerning issues in those states' proceedings relative to Third Party Testing. The following filings are enclosed:

- Georgia: AT&T's Supplement to the Motion for Reconsideration of the Commission's Order for Third Party Testing filed on November 5, 1999; and
- Florida: AT&T's Comments on the Draft Master Test Plan filed on October 29, 1999.
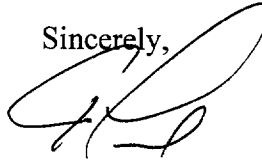
Please note that this is not a complete compilation of all the filings AT&T has made in those proceedings. This is simply an attempt to keep the TRA abreast of some of the most salient topics in those proceedings.

Also enclosed for your information is a copy of a letter Philip Bradley, Chairman of the South Carolina Public Service Commission sent to Joe Garcia, Chairman of the Florida Public Service Commission, in response to Chairman Garcia's letter dated October 29, 1999.

FILE

Copies of the enclosed are being provided to counsel of record for all parties. If you have any questions, please do not hesitate to call me.

Sincerely,

Jim Lamoureux

Enclosures

CERTIFICATE OF SERVICE

I hereby certify that on November 15, 1999, a copy of the foregoing document was served on counsel for the petitioner and the entities seeking intervention, via the method indicated, addressed as follows:

[ ] Hand
[ ] Mail
[ ] Facsimile
[✓] Overnight

Richard Collier, Esquire
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0500

[ ] Hand
[✓] Mail
[ ] Facsimile
[ ] Overnight

Guy Hicks, Esquire
BellSouth Telecommunications, Inc.
Suite 2101, 333 Commerce Street
Nashville, TN 37201

[ ] Hand
[✓] Mail
[ ] Facsimile
[ ] Overnight

James Wright, Esq.
United Telephone - Southeast
14111 Capitol Blvd.
Wake Forest, NC 27587

[ ] Hand
[✓] Mail
[ ] Facsimile
[ ] Overnight

H. LaDon Baltimore, Esquire
Farrar & Bates
211 Seventh Ave., N, #320
Nashville, TN 37219-1823

[ ] Hand
[✓] Mail
[ ] Facsimile
[ ] Overnight

Henry Walker, Esquire
Boult, Cumming, et al.
P.O. Box 198062
Nashville, TN 37219-8062

[ ] Hand
[✓] Mail
[ ] Facsimile
[ ] Overnight

Jon E. Hastings, Esquire
Boult, Cummings, et al.
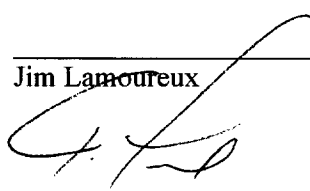P.O. Box 198062
Nashville, TN 37219-8062

[ ] Hand
[✓] Mail
[ ] Facsimile
[ ] Overnight

Vincent Williams, Esquire
Consumer Advocate Division
426 5th Avenue, N., 2nd Floor
Nashville, TN 37243

[ ] Hand
[✓] Mail
[ ] Facsimile
[ ] Overnight

Terry Monroe
Competitive Telecom Association
1900 M St., NW, #800
Washington, DC 20036

Jim Lamoureux

The Public Service Commission
State of South Carolina

PHILIP T. BRADLEY
COMMISSIONER, FOURTH DISTRICT
CHAIRMAN

P.O. DRAWER 11649
COLUMBIA, S.C. 29211
Phone: (803) 896-5220
Fax: (803) 896-5168

October 29, 1999

Chairman Joe Garcia
Florida Public Service Commission
Capital Circle Office Center
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Chairman Garcia:

Thank you for your letter of October 5 and for the opportunity to comment on the Florida draft Master Test Plan.

South Carolina is a very interested in the progression of events in Florida. We, too, are considering implementing a third-party test within our state and perhaps will take advantage of some of the information contained in the Florida plan as a starting point for our own third-party test. Indeed, I am pleased to see that Florida is encouraging active participation from CLECs in the development of the test plan and agreed with your approach of having the third-party tester accountable solely to the PSC instead of BellSouth. I also believe that Florida's including CLECs in all phases of test development and execution is an important step in developing a test that will have maximum impact on the development of competition in your state. I hope that your Commission will ultimately decide to proceed with the test plan now being developed.
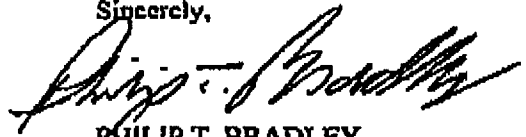
South Carolina is also interested in promoting competition in our state and obtaining state-specific, complete data. I thus am considering ordering an independent third-party tester not only to develop a comprehensive test plan, but also to move forward with its implementation. For maximum impact, I want to make sure that our test includes a thorough review of performance measures for South Carolina and other pivotal issues, such as collocation and provisioning, which directly affect the level of service that will be received by our citizens. I also believe that we in South Carolina should use the third-party test environment to fully review BellSouth's progress in complying with each of the fourteen points in the Section 271 checklist.

Chairman Joe Garcia
October 29, 1999
Page Two

Congratulations on your successful start in developing a third-party test in Florida. South Carolina will be anxious to learn from your experience.

Sincerely,

PHILIP T. BRADLEY
CHAIRMAN

RECEIVED

≡ AT&T

Law & Government Affairs

Suite 8100
1200 Peachtree Street. N.E
Atlanta, GA 30309-3579

November 5, 1999

BY HAND DELIVERY

Helen O'Leary
Executive Secretary
Georgia Public Service Commission
47 Trinity Avenue, Room 520
Atlanta, GA 30334-5701

> Re: **Investigation Into Development of Electronic Interfaces for BellSouth's Operational Support Systems; Docket No. 8354-U**

Dear Ms. O'Leary:

Enclosed please find an original and fifteen (15) copies of AT&T's Supplement to the Motion for Reconsideration of the Commission's Order for Third Party Testing in the above-referenced docket. I have also enclosed a diskette containing the document on Word 6.0. After filing the originals, please return two additional copies stamped "filed".

Thank you for your assistance in this matter.

Very truly yours,

Suzanne W. Ockleberry

Enclosures
cc: Parties of Record

Recycled Paper

In re: Investigation into Development)
Of Electronic Interfaces for BellSouth's)   Docket No.: 8354-U
Operational Support Systems)
)

AT&T'S COMMENTS ON KPMG'S REVISED
THIRD PARTY MASTER TEST PLAN

Comes Now AT&T Communications of the Southern States, Inc. (AT&T), and

files its Comments on KPMG's Revised Master Test Plan (RMTP) and shows this

Commission as follows:

1.

On May 20, 1999, this Commission took a giant step toward furthering the

development of competition in the local telecommunications market by doing what no

other Commission in the Southeastern region had previously done – ordering third party

testing of BellSouth's OSS.

2.

To comply with the May 20th Order, BellSouth and Hewlett-Packard (HP) filed

master test plans that were woefully inadequate. The test plans omitted an evaluation of

critical areas, processes and transactions that would address the basic question as to

whether or not BellSouth's OSS provides nondiscriminatory access to CLECs.[1]

3.

On October 18, 1999, KMPG, in its new role as Test Manager, filed its OSS

Evaluation Master Test Plan 3.0 and Flow-Through Evaluation Plan 2.0. AT&T has

reviewed the document and provides comments in the attachments to this Petition. Although Version 3.0 is an improvement, in some respects, over the previous MTP and RMTP, serious deficiencies and problems remain. Indeed, any test performed in accordance with the RMTP Version 3.0 will not be in compliance with the Federal Communications Commission (FCC) Staff's guidance[2] on third party testing and will not provide this Commission with the information needed to properly and completely evaluate BellSouth's OSS.

4

To assist this Commission with an evaluation of the RMTP- Version 3.0, AT&T has included, as part of its comments, a Summary of Issues and Recommendations for Improvements in the RMTP – Version 3.0 (Tab 1), an Overview of the Georgia Third Party Test Plan (Tab 2), Additional Comments on the Georgia Third Party Test Plan Revisions – Version 3.0 (Tab 3), and a Comparison of the Georgia RMTP and the FCC Staff Letter of September 27, 1999 (Tab 4).

WHEREFORE, AT&T moves this Commission to modify the RMTP-Version 3.0 in accordance with the comments herein and attached hereto.

Respectfully submitted this 5th day of November, 1999.

SUZANNE W. OCKLEBERRY
AT&T COMMUNICATIONS OF THE
SOUTHERN STATES, INC.

---

[1] See AT&T Motion for Reconsideration of the Commission Order for Third Party Testing dated June 1, 1999.

[2] See Tab 4, a comparison of this version of the Plan to the letter by Lawrence Strickling, Chief of the Common Carrier Bureau to Nancy Lubamersky, U.S. West, dated September 27, 1999.

1200 Peachtree Street, N.E.
Suite 8100
Atlanta, GA 30309
(404) 810-7175

<u>CERTIFICATE OF SERVICE</u> - Docket No. 8354-U

This is to certify that a copy of **"Comments of AT&T Communications of the Southern States, Inc."** has been served upon the parties of record by depositing a copy of same in the U.S. Mail, postage prepaid, addressed as follows:

Charles A. Hudak
Gerry Friend & Sapronov
Three Ravinia Drive, Suite 1450
Atlanta, GA 30346-2131

William R. Atkinson
Sprint Communications Company L.P
3100 Cumberland Circle
Mailstop GAATLN0802
Atlanta, GA 30339

Mark Middleton
Mark Middleton, P. C.
Suite 130, Peachtree Ridge
3500 Parkway Lane
Norcross, GA 30093

Jim Hurt, Director
Consumers' Utility Counsel Division
2 Martin Luther King, Jr. Drive
Suite 356, Plaza Level, East Tower
Atlanta, GA 30334

Enrico C. Soriano
Kelley, Drye & Warren, LLP
1200 19th Street, N.W.
Suite 500
Washington, D. C. 20036

Dan Walsh
Tom Bond
Assistant Attorney General
Department of Law
40 Capitol Square
Suite 132
Atlanta, GA 30334

Fred McCallum Jr
BellSouth Telecommunications
Suite 376, 125 Perimeter Center West
Atlanta, GA 30346

Frank B. Strickland
Wilson Strickland & Benson, P. C.
Suite 1100
One Midtown Plaza
1360 Peachtree Street, N. E.
Atlanta, GA 30309

Dean R. Fuchs
Newton M. Galloway & Associates
Suite 400 First Union Tower
100 South Hill Street
Atlanta, GA 30224

Robert A. Ganton
Regulatory Law Office
Department of Army
901 N. Stuart St., Suite 700
Arlington, VA 22203

Mark Brown
Director of Legal and Government Affairs
MediaOne Inc.
2925 Courtyards Drive
Norcross GA 30071

Allan C. Hubbard
300 W. Service Road
P.O. Box 10804
Chantilly, Virginia 20153-0804

Stephen C. Schwartz
ATA Communications
1461 Hagysford Road
Atlanta, GA 30246-2131

Charles V. Gerkin Jr.
Chorey Taylor & Feil
Suite 1700, The Lenox Building
339 Peachtree Rd NE
Atlanta, GA 30326

James Tennant, President
Low Tech Designs, Inc.
1204 Saville St.
Georgetown, SC 29440

John P. Silk
Georgia Telephone Association
1900 Century Boulevard, Suite 8
Atlanta, GA 30345

Stephen G. Kraskin
Thomas J. Moorman
Kraskin & Lesse
2120 L Street, N. W. Suite 250
Washington, D. C. 20037

Richard M. Rindler
Swidler & Berlin
3000 K Street, N. W. Suite 300
Washington, D. C. 20007

Peter C. Canfield
Dow Lohnes & Albertson
One Ravinia Drive, Suite 1600
Atlanta, GA 30346

Pamela C. Melton
LCI International Telecom
8180 Greensboro Drive
Suite 800
McLean, VA 22102

Charles F. Palmer
Troutman Sanders, LLP
5200 NationsBank Plaza
600 Peachtree Street, N. E.
Atlanta, GA 30308-2216

This 5th day of November, 1999.

Suzanne W. Ockleberry
Suzanne W. Ockleberry

Summary[1] of Issues with Version 3.0 of Georgia Third Party Test Plan

ISSUE: The test is not independent because BellSouth engaged the Third Party testers and prepared the test plan.

RECOMMENDATION FOR IMPROVEMENT: Order the third party testers to work only at the direction of the Commission and have the testers seek specific input for test plan modifications from CLECs to modify the limitations put in place by the BellSouth plan.

ISSUE: The test scope does not allow for parity determination with BellSouth's retail operations.

RECOMMENDATIONS FOR IMPROVEMENT:

BellSouth's Service Quality Measures (SQM) should be reviewed to insure it complies with the Commission's Order. Additionally, input from the CLECs should be sought regarding BellSouth's implementation of the Commission's Order as well the adequacy[2] of the measures currently included in the SQM. Additionally the following should be included in the Master Test Plan (MTP):
1) A performance metrics review section which includes retail measurements such as the one included in the Florida draft MTP. (see Section IV of the Florida draft MTP filed on September 30, 1999, in Florida PSC Docket 960786-TL and Docket 981834-TP);
2) A comparison of the results of all transaction tests to BellSouth retail data and live CLEC data; and
3) A comparison of processes BellSouth uses to provide services to CLECs to the analogous processes it uses to provide service to itself.

ISSUE: The process is not open. Although the revised test plan added a few opportunities for CLEC input, CLECs remain virtually uninvolved and uninformed about the test.

RECOMMENDATION FOR IMPROVEMENT: The test plan should establish a comprehensive and on-going role for the CLECs in the testing process. At a minimum, the CLEC participation should include the following:
1) Participation in weekly conference calls held by Staff, BellSouth, KPMG, and HP.

---

[1] This summary represents a high level view of AT&T's issues with Version 3.0 of the Master Test Plan as well as its recommendations for improvement. Also see Tabs 2, 3, and 4 for additional details regarding concerns with Version 3.0 of the test plan.

[2] The Commission conducted hearings regarding performance measures in Docket 7892-U in November 1997, a full two years ago. Much experience has been gained by CLECs attempting market entry since that time. This experience reveals that BellSouth's current performance measures offering is inadequate to monitor its provision of service to CLECs. AT&T requests that the Commission address these inadequacies by allowing new CLEC input into the measures used for this test as well as for the monitoring of commercial activity.

2) Face-to-face meetings with CLECS, BellSouth, KPMG and HP to be held monthly or on an as needed basis, to comprehensively address issues;

3) Timely CLEC access to all test transactions, data, reports, and other materials generated during the course of the test.

4) Notice of and an opportunity to monitor discussions and exchanges of information between KPMG, HP, and BellSouth to be provided to CLECs.

ISSUE: The test plan is not sufficiently detailed. Version 3.0 in some cases clarified the test, but in other areas restricted or failed to define certain processes.

RECOMMENDATION FOR IMPROVEMENT: CLECs should be given an opportunity to file questions regarding the plan, and receive comprehensive responses that would be incorporated into the test plan.

ISSUE: The test does not appropriately evaluate the processes by which BellSouth provides service to CLECs.

RECOMMENDATION FOR IMPROVEMENT: The test plan should be modified to reinstate or add the process issues of the test identified in the documents in Tabs 2, 3, and 4 attached to this filing. The test should evaluate all aspects of how BellSouth provides service to CLECs.

CLECs should be involved in the plan modification.

ISSUE: The test does not appropriately evaluate the products and interfaces provided by BellSouth.

RECOMMENDATION FOR IMPROVEMENT: The test plan should be modified to reinstate or add the product and OSS issues of the test identified in the documents in Tabs 2, 3, and 4 attached to this filing. The test should evaluate all aspects of how BellSouth provides products and interfaces to CLECs.

CLECs should be involved in the plan modification.

ISSUE: The revised test plan is not in compliance with the guidance provided by the FCC letter to US West. (Also see Tab 4)

RECOMMENDATION FOR IMPROVEMENT: The plan should be modified to comply with the FCC letter.

ISSUE: The exception process remains undefined and it appears that CLECs will only be provided summary exception information as part of the unscheduled interim reports.

RECOMMENDATION FOR IMPROVEMENT: The exception process should be designed to include the following elements.

1) Early identification of issues (pre-exception) to be shared with BellSouth and CLECs for discussion and response

2)   Military style testing, including regression testing

3)   Exceptions, with corresponding details, should be provided simultaneously to BellSouth and CLECs for discussion and response.

Overview of Georgia Third Party Test (TPT) Plan

Essential Elements of a Third Party Test Plan	Concerns with Initial Plan Version 1.0	Concerns with Revised Master Test Plan (RMTP) Version 3.0
There should be a neutral, independent tester. The value of third party testing can only be achieved if that party is seen as credible and its evaluation will be seen as objective and unbiased.	**The roles of the testers are limited and lack independence.** 1. BellSouth engaged the third party testers (TPTs) and prepared the test plan, eliminating independence. The TPTs merely follow BellSouth's plan.	1. KPMG provided revisions to the plan in Version 3.0, in some cases incorporating HP's revisions of Version 2.0, in other cases eliminating HP's revisions, as well as making additions. KPMG's cover letter to the Georgia PSC states the plan provides "additional *detail* about various aspects of the evaluations, and *reflects the changes in the respective roles and responsibilities* of KPMG and Hewlett Packard." It also states that the *"updated material does not constitute a change in direction with respect to the testing nor is it in conflict with the Commission's July 2, order approving BellSouth's Third Party Test Plan."* In sum, the plan, while modified, remains BellSouth's plan, and while the roles of KPMG and HP have changed, their relationship to BellSouth has not. The roles of the TPT's are now similar to their

roles in New York, but continue to be more limited than the New York test due to scope of the Georgia Order and limits of BellSouth's plan.

2. The roles of the TPTs are different – and more limited – than in the NY test.

3. In NY, for example, KPMG prepared and managed the test, and also fulfilled the functions of the pseudo-CLEC's marketing, sales and customer service organizations, preparing and making all test case inputs for the interface systems. In contrast, the GA plan does not provide for a Test Manager other than BellSouth, and KPMG functions as an auditor.

4. In NY, HP's role was that of the pseudo-CLEC's Information Technology group, building and maintaining the interfaces and inputting the KPMG-prepared test cases when required. The GA plan calls for HP to conduct the test using BellSouth's interfaces, rather than building its own, and to fulfill roles outside its area of expertise and beyond those played in NY, including acting as a surrogate marketing, sale and customer service organization by preparing and constructing test case inputs.

4. The plan still appears to call for the utilization of BellSouth's test tools "due to operational and time constraints of the procedural Order." (page II-2). AT&T is unaware of any constraints in the Order that would prohibit building interfaces. Additionally, unlike the New York test, there is no stated requirement for the Test Transaction Generator (TTG) to document its ability to build, test, and place in operation the functionality to process transactions using the RBOC's documentation, account management, help desk, and training support.

| The neutral, independent third party should develop the test plan. The third party responsible for monitoring and evaluating BellSouth's performance should be the party responsible for developing the test plan, after taking input from all parties, including BellSouth. | 1. E&Y appears to have developed the test plan on BellSouth's behalf. There was no input to the plan development from the named testers, or the CLEC community. Therefore, the parties responsible for implementing the plan or who would benefit from a comprehensive plan has not been involved in its design. | 1. KPMG provided revisions to the plan in Version 3.0, in some cases incorporating HP's revisions of Version 2.0, in other cases eliminating HP's revisions, as well as making additions. KPMG's cover letter to the Georgia PSC states the plan provides *"additional detail* about various aspects of the evaluations, and *reflects the changes in the respective roles and responsibilities* of KPMG and Hewlett Packard." It also states that the *"updated material does not constitute a change in direction* with respect to the testing *nor is it in conflict with the Commission's July 2, order* approving *BellSouth's* Third Party Test Plan." (emphasis added) In sum, the plan, while modified, remains BellSouth's plan, and all changes must be approved by BellSouth.

Moreover, the CLECs remain virtually uninvolved in any aspect of this test. While the revised test has occasional references to CLEC input and use of CLEC switches for LNP testing, the plan falls woefully short in terms of necessary CLEC involvement. This is particularly evident in comparison to the CLEC input and involvement in the New York and Pennsylvania plans, and the Florida draft plan. CLECs have not been involved at all |

		in the development of the Georgia test plan.
		1. The roles of the TPT's are now similar to their roles in New York, but continue to be more limited than the New York test due to scope of the Georgia Order, their business relationship, and with the contents of BellSouth's plan. 2. The plan now indicates that KPMG was designated as the test manager on September 2, 1999.
	The roles of the TPTs are circumscribed by the plan, limiting the test to those circumstances and scenarios prescribed by BellSouth. Additionally, the plan includes conflicting information regarding whether HP will build an interface or use BellSouth test facilities. 1. KPMG's assigned roles are to approve the test plan and to audit, monitor, evaluate and report, while HP is to conduct feature, function and volume testing using BellSouth's interfaces. These are not the roles performed by these parties in the NY test, and the assigned roles fail to utilize their expertise. 2. The test plan does not address the test manager role.	**The revised test plan includes enhancements in some areas and further limitations in others.** --net reduction in the number of test scenarios for UNEs by 25% (See Appendix B-3 of RMTP) --reduced the number of billing activities to be reviewed, e.g. eliminated Billing Usage Returns Evaluation (Eliminated in Version 2.0)
The test must be conducted by the third party, not just monitored by it. Using existing new entrants to conduct the test, with their specific market plans and interfaces, will not test the broad range of functionality and support required of an RBOC, nor will it test the RBOC's current state of readiness.	**The test should cover all OSS and support processes needed by the new entrant to enter the market.** Operations support systems include systems, information and personnel that support network elements or services. They are the automated and manual processes required to make resale services and unbundled network elements, among other items, meaningfully available to competitors.	

4

--further limited repair testing to include only test cases (Eliminated in Version 2.0)
--eliminated billing from the change management review (Eliminated in version 2.0)
--reduced the types of pre-order transactions to be tested, e.g. eliminated scenarios calling for the retrieval of CSRs for CLEC's existing customers. (Eliminated in Version 2.0)

1. Concerns not remedied.

2. Concerns not remedied.

3. Concerns not remedied.

4. Concerns not remedied.

5. Concerns not remedied.

6. Concerns not remedied.

1. Only five UNE products will be tested, although the test plan states that BellSouth offers 80 UNEs.

2. Functionality testing will occur only within the 2-wire analog world, which represents only 5-7% of the products CLECs currently order.

3. There is no testing of resale functions, despite the fact that most CLECs currently compete via resale.

4. There is no testing of manual ordering despite the fact that BellSouth requires that the majority of the products and services it offers CLECs be ordered manually and receives 50% of its overall orders and over 90% of its UNE orders manually.

5. The plan does not call for testing interconnection OSS, or the majority of BellSouth information and services that CLECs rely upon to enter the market.

6. LENS will not be tested, despite the fact

that the majority of competitors use it to order service today. 7. It appears that the 3PT tester will not build an interface to test BellSouth's OSS, but will instead will use BellSouth provided test tools. 8. It appears that EDI-mainframe will not be tested.	7. Concerns not remedied. There is no test objective that evaluates BellSouth methods and procedures for developing, providing and maintaining OSS interfaces. 8. Concerns not remedied. Although the test now contains language about a LAN to LAN EDI, there is no test objective that evaluates BellSouth methods and procedures for developing, providing and maintaining OSS interfaces.
The test plan should allow the TPT to 'stand in the shoes' of a CLEC entering BellSouth's market, so it will be able fairly to evaluate BellSouth's performance with regard to all tasks normally performed in conjunction with a CLEC's market entry, including such areas as: • Interconnection, and network planning • Account management process • Training • Interface development, including BellSouth's documentation, with review of such items as technical specifications, business rules, CLEC handbooks, etc. • Change Control Processes – all changes to systems, processes and documentation during the test must be made through the	**The test plan will not allow the TPT to assess BellSouth's performance on most areas critical to CLECs' ability to enter the local market, which have been the subject of much dispute at state commissions.** Unlike the NY plan, 1. The business needs of CLECs are not represented in the GA test, since CLECs were not polled during plan development, nor do they have a defined and meaningful role in the implementation of the test. 2. There is no evaluation (not even a document review) of the processes necessary to establish a CLEC account and business relationship with BellSouth; instead, the testers will be provided with a pre-existing set of identifiers, 1. Concerns not remedied. 2. Although the RMTP makes a reference in Section II, page 4 to utilization of the account team, it will not evaluate this function. There are no test processes described elsewhere in the document that address evaluation of those functions, as are included in KPMG test plans

established Change Control or Account Management Process, whether initiated by BellSouth or requested by the TPT or a CLEC	in other states.
• Test plan should include an evaluation of BellSouth's compliance with its established procedures.	3. Although the RMTP makes a reference in Section II, page 4 to utilization of the account team, it will not evaluate this function. There are no test processes described elsewhere in the document that address evaluation of those functions, as are included in KPMG test plans in other states.
3. There is no evaluation of processes necessary to conduct business with BellSouth on an on-going basis through an assigned account team.	
4. No test activities address network design, collocation, or interconnection planning, which are areas of great concern to CLECs.	4. Concerns not remedied.
5. The test will use BellSouth's internal systems testing tools, including BellSouth's internal sending and receiving simulators, but the functionality of BellSouth's internal simulators (unlike its interfaces) is not at issue.	5. Concerns not remedied. The test attributes the use of internal testing tools to "operational and time constraints of the procedural Order" in Section II, page 2 of the RMTP. However, a review of the PSC Orders in this matter reveals no operational or time constraints that would dictate the use of test tools.
6. BellSouth's plan to review change control is inadequate. Not only is BellSouth's decision to "maintain a stable OSS environment for the duration of the test" inconsistent with CLEC's experience of constant change, its change control	6. Concerns not remedied. Although carrier notifications were added, the test was further limited through the elimination of billing from the review. Review should not be limited to use of EICCP and Carrier Notification, but should also include items such as day to day

changes that impact CLECs. Further, there are no test activities, objectives or required reporting associated with BellSouth's own OSS development, implementation or change management of the system components supporting CLECs. Additionally, it is not clear that this objective will meet the change management test requirements of the FCC letter to US West regarding CLEC involvement in change management, release implementation (such as OSS), and dispute resolution.	1. Concerns not remedied. Despite the revisions to Appendix D of the RMTP to include a copy of an unapproved version of BellSouth's SQM, the RMTP does not establish any objective performance standard or benchmark for any test activity. 2. Concerns not remedied. (However, a wholesale/retail process review was added to M&R) 3. Concerns not remedied.
proposal is designed to ignore the way changes are made. By focusing only on the Electronic Interface Change Control process, the review will not address the manner in which most changes are made to interfaces and related documentation needed by CLECs. Further, the review of the change management process involves only document review and interviews, with no observation or usage of the process. **The test must be designed to determine parity.** The test must not only be designed to objectively and accurately capture and analyze performance data that reveals how BellSouth is providing service to new entrants, but also how those results compare to the service BellSouth provides itself and its affiliates.	**The BellSouth test plan provides no way to assess parity.** 1. The plan will not allow an independent assessment of BellSouth's internal performance and does not provide for validation of BellSouth's existing performance measures and results for either retail or wholesale performance. No performance standards are established for the test. 2. There is no review of or comparison to any aspect of BellSouth's retail operations. 3. Thus, the test will not allow CLECs or

regulators to determine the relative level of BellSouth's performance.

4. The flow-through audit does not comply with the GA PSC's order in that it provides only for a self-contained audit of the transactions generated by the test, rather than an audit of the last three months of the operational flow through data currently reported monthly by BellSouth to the GA PSC.

4. Concerns not remedied. Although a flow-through analysis of July-September flow through reports was added to the test, concerns remain. The test was changed from Audit to Evaluation. While the intent of this change is unclear, the section no longer complies with the language in the Commission's Order which requires a "full audit". Minimally, a full audit of the reports filed monthly would include an audit of BellSouth's retail flow-through as well as that of the CLEC, but the evaluation does not appear to cover retail orders. For the three months selected there has been no data reported for BellSouth's retail flow-though. Therefore the accuracy of BellSouth's retail reporting or parity cannot be evaluated. An audit or evaluation of any performance measure should also evaluate whether this measure is being implemented in compliance with the Commission's Order in Docket 7892-U, but that also does not appear to be covered.

The test plan procedures for the evaluation are extremely brief and vague, more general descriptions than procedures, and are impossible to specifically comment on (They are the same as in the operational analysis test framework description on page III –2 of RMTP). It does not appear that this evaluation will comply with the performance measures

evaluation criteria outlined in the 9/27/99 FCC letter to US West.

The test addresses how the accuracy of this performance measure will be assessed. It is unclear if the test plan combines two separate assessment activities into one sentence or is actually using transaction data in some combination with raw data for each of the three months of the evaluation period. (July, August and September). If the test plan is referring to the test transaction data in combination with the historical data, this seems to be a meaningless exercise. If the test plan intends two separate activities, the second, replicating the calculations using BellSouth data, is insufficient to determine the accuracy of BellSouth's flow-through as reported monthly to the Commission. Such a process would not appear to include a review of BellSouth's error analysis, as is required by the Commission's Order, and does not constitutive a "full audit."
(Also see comments on page 9 of TAB 3).

5. Concerns not remedied.

5. BellSouth ensures its success by structuring the test so that if it cannot perform the function or perform it effectively, it declares that the outcome to be the expected result, or declares the function outside the scope of the test. For example, billing ; usage accuracy is tested not by whether the data is accurate, but how fast it is sent, the evaluation of the

	Maintenance and Repair processes does not test the actual maintenance and repair of service, etc..	
All Operations Support Systems and OSS versions that actually will be used should be tested. All OSS functions, (i.e., pre-order, ordering, provisioning, billing and repair) must be tested. Omission of any of these items leaves critical gaps in the processes necessary to provide service to the customer. For example, if a service can be provisioned but billing information is inaccurate or untimely, the CLEC receives discriminatory treatment. This comprehensive testing necessarily includes all operational support systems, including all procedures, processes and systems offered by BellSouth for use by new entrants.	**The limited interfaces, processes and product types being tested, discussed above, severely limit the usefulness and effectiveness of the test.** 1. Additionally, the test does not cover critical improvements needed by CLECs in the OSS 99 upgrade. 2. LENS is not tested, although it is the sole interface used by the majority of CLECs. 3. The test covers only a small subset of BellSouth's OSS.	1. Concerns not remedied. 2. Concerns not remedied. 3. Concerns not remedied.
The test must cover the full range of products, including services BellSouth offers or is required to offer, but is not providing today. Any limitation on testing runs the risk of favoring one market entry mode over another. As BellSouth is required to support all forms of market entry, all forms should be tested. And because these processes constantly being modified, BellSouth's change control processes must also be subject to review.	**Functionality testing is limited to 2-wire analog loops and ports, separately and in combination with number portability.** 1. Testing of these limited numbers of UNEs is further limited in that they will not be tested over the full range of pre-ordering, ordering, provisioning, billing, maintenance and repair processes. 2. Since BellSouth will "maintain a stable OSS environment" during the test, the test results cannot be extrapolated to predict BellSouth's continued ability to process even these limited types of orders unless	**Concerns not remedied.** 1. Integration has been added to the test. However, there is insufficient detail to determine the if the test is sufficiently robust. 2. Concerns not remedied.

its change control process is reviewed.		
Test the ability of BellSouth to provide non-discriminatory support at commercial volumes. The goal of testing is not simply to confirm that a particular functionality or new methodology exists, but to determine if new entrants can use these items to create meaningful competition. Therefore no test is complete without simulating the demands of a robust marketplace on BellSouth's operations support systems, including its procedures and its people who perform the work.	**The test plan allows BellSouth to determine what constitutes normal and peak transactions of volumes and numbers of users.** 1. The plan is extremely vague on this subject. 2. Additionally, the test clearly is not "blind", so BellSouth would be well able to prepare for test dates and volumes/types of orders that will arrive on any given date. Thus, it cannot neither simulate nor test BellSouth's performance in a production environment.	1. Concerns not remedied. 2. Concerns not remedied. KPMG removed HP's claims in Section II, page 3 of the RMTP that testing will be "blind". Test orders will be uniquely identified, and the plan states that the "Test Cycle Manager will coordinate with BellSouth to ensure that BellSouth's and KPMG's performance measurements system are prepared to track test transaction performance prior to beginning the Test." This phrase or something similar appears in the description of every transaction oriented test cycle. (For example, see RMTP, Section V, page 3, last paragraph) Additionally, provisioning is very orchestrated, with KPMG to "verify the provisioning appointment date and time" and "meet BellSouth provisioners for appointment." (See RMTP, Section V, page 25) No CLEC live orders, the only actual blind orders, will be used in the test.
Don't just test it, fix it. The purpose of the test is to facilitate market entry. BellSouth therefore should be required to promptly	**The plan only requires re-testing of failures or defects related to program errors.** Thus, if the program works as designed, but the	

12

correct all deficiencies uncovered by the test.	design is flawed, no re-testing is required. Similarly, if the program works as designed but BellSouth's documentation is incorrect, no re-testing is required. 1. The test plan is designed to "prove the existence" of specified functionalities, with no provision for correction of deficiencies unrelated to program or system errors. Basic design or execution flaws would be neither detected nor corrected.	1. Concerns not remedied. The exception process was revised to delete the severity levels, and to state the interim status reports would "include a summary of exceptions." It is unclear how frequently the summaries will be made available. Additionally, a summary of exceptions may well provide CLECs with insufficient information to make a meaningful response. The exception process remains largely undefined.

**Additional comments on Georgia Third Party Test Plan Revisions
Version 3.0**

The following comments are provided on a section-by-section basis of Version 3.0 of the
Master Test Plan.

I. Document Control

The revised test plan does not appear to be approved by the PSC. However, the status
reports indicate that work is underway.

II.   Introduction

Test Manager's Interfaces (Page II-2)

The test now gives some indications that HP will build to EDI and TAG. However, the
test also still calls for the utilization of BellSouth's test tools as opposed to building of
interfaces "due to operational and time constraints of the procedural Order." AT&T is
unaware of any constraints in the Order that would prohibit building interfaces. While
the plan indicates that the "test client is made available to all CLECs", it was developed
by BellSouth and is made available for testing, not for production. The plan states the
"testing will evaluate the accuracy of the technical and business rule documentation
provided by BellSouth to support the interfaces specified in the Georgia Order," however,
unlike the New York test there is no test objective that the Test Transaction Generator
(TTG) document its ability to build, test, and place in operation the functionality to
process transactions using the RBOC's documentation, account management, help desk,
and training support.

Volume Testing Environment (Page II-3)

The volume testing takes place outside the production environment (except for CRIS)
Therefore the testing environment is not representative the operating environment of
CLECs.

Other Support Functions (Page II-3)

While this section references that it will be utilizing the LCSC, the Account Team, and
CLEC training, it does not state that it will be evaluating those functions. Additionally,
there are no test processes described elsewhere in the document that address evaluation of
those functions.

Scope (Page II-3)

Appropriately, the word "scope" was deleted and replaced with "design" inserted to
describe the relationship of the Georgia Master Test Plan (MTP) to the New York test.

Test Objectives (Pages II 9 and 10)

Interestingly, the word "non-discriminatory" was deleted from the test objective for interface test, but the words "meaningful opportunity to compete" were left in the functionality test objective.

Deliverable Scope (Page II-10)

The exception process was revised to delete the severity levels, and to state the interim status reports would "include a summary of exceptions." While the Commission's Order provides for CLECs to respond to interim reports[1], the process is deficient in at least two major aspects; 1) there is no schedule for interim reports[2], leaving CLECs in the dark as to how timely or meaningful their responses can be in terms of input to the Commission, and 2) a "summary" of exceptions may well provide CLECs with insufficient information to make a meaningful response.

This section confirms that Version 3.0 of the MTP is consistent with the Commission's May 20 Order, which stated that "the Commission does not believe that a full third party audit of all interfaces and services is necessary at this time."

Test Scope (Page II-14)

The military style testing was revised to eliminate the severity level testing, and added "or until a determination is made to halt testing of a target" to its conditions for regression testing.

III. Test Plan Framework

Test Tools (Page III-4)

The issue that test tools to be used are provided to CLECs is indicated again in this section. However, these tools are developed by BellSouth, not CLECs based on BellSouth-provided documentation, and are not provided for use in a production environment. Therefore, they are not dispositive of CLEC experience in the marketplace.

---

[1] There have been three interim reports since the Commission's Order of June 28 approving BellSouth's June 9 revised test. The first was filed on July 22, 1999, the second on September 10, 1999 (A revision was filed to the September 10 report on September 21, but it only contained one minor change.), and the third on October 25, 1999. This is in stark contrast to the weekly or more frequent communication occurring in Florida and Pennsylvania.

[2] The September 27 letter from the FCC Staff to US West calls for formal, **predictable**, and public mechanisms for the third party tester to communicate to both the BOC and the CLEC community issues identified by the third party tester that arise during the course of testing.

This section indicates that <u>volume</u> testing will be done via TTGs. It is unclear who built these TTGs and why they are not used for used for functional testing.

Results Assessment (Page III-5)

The exception process has been modified. It now indicates that software, documentation, and processes will be subject to the exception process. However, the process itself remains undefined, stating that "KPMG, the Commission, and BellSouth will address exceptions through a process defined by the three parties." It is unclear whether this process definition has taken place. However, the establishment of an exception process is a global entrance criterion, and therefore should have occurred before any testing takes place. An appropriate exception process should be detailed, real-time, and have a realistic opportunity for meaningful CLEC involvement.

Evaluation Criteria (Page III-6)

The following reference to statistical analysis was deleted, "In those cases where results deviate, statistical analysis will be undertaken to determine the significance of the deviation." There appears to be no statistical analysis as is contained in the New York test and the Florida draft test plan.

Global Entrance Criteria (Page III-7)

The revised test plan does not appear to be approved by the PSC. However, the status reports indicate that work is underway.

An entrance criteria present in the New York and Florida plans, but not included in the Georgia MTP, was that the TTG (or CSI[3] in Florida) must be operationally ready.

The service quality measurements entrance criteria states, "Before many portions of the test can begin, these metrics must be agreed to and fully defined." It is not clear who must agree to the metrics, however, it is clear that they are not fully defined, as no analogs or benchmarks exist in BellSouth's SQM for many measures such as FOCs, rejections, and UNEs.

IV. Pre-Ordering Test Section

Overview (Page IV-1)

---

[3] The entrance criteria description for the Certified Software Interface or CSI in Florida states, "The CSI is to be developed by the Phase II test manager based on the specifications and documentation provided by BST. The successful operation of the CSI will demonstrate the feasibility of developing, testing, and operating the CLEC side of the OSS interface based on documentation supplied by BST."

The wording was changed to add that the tests would be undertaken to evaluate the systems and operational elements associated with BellSouth's *establishment* and maintenance of business with CLECs. However, there is no objective to evaluate the methods and procedures for the development and provision of OSS interfaces (See Test PPR5 in the Florida draft test plan). Additionally, there is no account establishment and management objective as is included in the New York and Florida tests. These are critical elements of a CLEC's business relationship with BellSouth and should be evaluated.

TAG Pre-Order Documentation Criteria (Page IV-14)

The TAG test agreement should also be reviewed. If KPMG used such an agreement, it should be compared to the one used by CLECs.

V. Ordering and Provisioning Test Section

Overview (Page V-1)

The wording was changed to add that the tests would be undertaken to evaluate the systems and operational elements associated with BellSouth's **establishment** and maintenance of business with CLECs. However, there is no objective to evaluate the methods and procedures for the development and provision of OSS interfaces (Test PPR5 in the Florida draft test plan). Additionally, there is no account establishment and management objective as is included in the New York and Florida tests. These are critical elements of a CLEC's business relationship with BellSouth and should be evaluated.

EDI-Functional Test Description (Page V-3)

Although the description states that a "limited number of resale scenarios will be tested to evaluate the functional elements of the ordering and provisioning process for resale orders, this same section later states that "the test scenarios to be used in the EDI functional test are described in Appendix B-3: UNE Ordering Scenarios."[4]

Scenarios for LNP and CLEC-to-CLEC migrations will use company data and central office data from CLECs operating in Georgia. It is unclear that CLECs will have any involvement other than the provision of this information for future use by KPMG.

Entrance Criteria (Pages V-4 and 5)

---

[4] Appendix A - Product Descriptions also indicates that resale orders will only be used for volume testing. (See page A-2)

The following sentence was deleted, "PC EDI and or EDI LAN to LAN must be configured and installed" and replaced with, "Transaction submission tools installed and confirmed." This type of general language adds to the lack of clarity of the document.

The following entrance criterion was deleted, Account and security access to EDI must be established" and EDI connectivity must be established."[5]

Test Scope (Page V-6)

Eliminated the portion of the evaluation which tests cancelling an order. (also eliminated in the TAG test)

O&P -5 - Provisioning Verification Test (Page V-23)

While the following sentence was added to the description, "Real CLEC provisioning activities will be observed to test end-to-end provisioning process on UNE-Loop orders", there is no mention in test activities of CLEC involvement.[6]

VI. Billing Test Section

The revised test plan appears to have added process activities to the functional activities for invoicing and usage, but the detail that appears in other test plans such as New York and Florida draft plan are missing. This lack of detail makes it impossible to gauge the effectiveness of the addition. It also appears to have added test calls to the review of billing.

The plan still does not address the billing work center evaluation, including the vital and troublesome area of claims handling for invoices, nor does it address the evaluation of daily usage feeds return or the bill certification process. It does not compare performance to retail, or validate the metrics.

The plan still does not address invoicing or usage for resale.

It is unclear how the performance results comparison can be administered using BellSouth generated metrics. For example, BellSouth measures invoice accuracy by determining what % of total billed revenues were subject to billing adjustments, while the test plan asserts that the results of "service orders and usage will result in invoice detail subject to evaluation by the Test Manager." Similarly, the plan states that port usage will be used to determine Usage Delivery Timeliness, but BellSouth's metric only measures

---

[5] These entries were not deleted from the EDI/TAG Normal and peak volume testing.

[6] Unlike the Georgia test, the draft test plan in Florida for this test target also calls for CLECs to be asked to provide data on their experiences with provisioning, includes the identification of CLEC volunteers in the entrance criteria, and states in the test activities that the test data be compared to BST retail and other CLECs.

the % of the data packs sent that had to be re-transmitted, not whether the contents were timely received based on when the usage was initiated.

The test has made numerous revisions to this objective and has added process review to the transaction activities. However, the detail that exists, for example, in the Florida draft test plan for billing process review, is not present in this document for the functional test, and hinders the process of analysis of this section.

VII. Maintenance and Repair Test Section

TAFI Functional Test (Page VII-3)

The objective of the Georgia test is to validate the *existence* of TAFI trouble *reporting and screening*... while the objective of the New York and Florida draft tests is to validate the *existence and behavior* of (TAFI) functional elements and evaluate the equivalent of CLEC (TAFI) functionality to RBOC residence and business equivalent retail systems. This more robust approach is needed in Georgia as well.

ECTA Functional Test (Page VIII-10)

The objective of the Georgia test is to validate the *existence* of ECTAI trouble *reporting and screening*... while the objective of the New York and Florida draft tests is to validate the *existence and behavior* of (ECTA) functional elements and evaluate the equivalent of (ECTA) functionality to RBOC trouble entry systems. This more robust approach is needed in Georgia as well.

Several test processes, e.g. access to test capability, access error reports, and some trouble report capability, were eliminated from the ECTA test.

KPMG/HP is not building an ECTA interface the actual interface being tested is EC-CPM (Exchange Carrier – Common Presentation Manager). EC-CPM was designed by BellSouth as a test tool, has never been used by any CLEC, and does not have the same functionality as ECTA (it is a GUI interface, not machine to machine).

There is no volume test for TAFI.

ECTA Normal Volume Test (Page VIII-14) and ECTA Peak Volume Test (Page VIII-19)

Several processes were eliminated from the test.

M&R Performance Results Comparison (Page VII-27)

It is unclear how the results of the TAFI and ECTA functional and volume tests can be used to compare to the provisioning M&R measures such as on page VII-28 when no

provisioning activities are listed in the test activities. Additionally, there do not appear to be test activities to generate results for the average answer time listed on page 28.

The Georgia MTP does not include the evaluations of the M&R work centers and network surveillance and support as do the New York and Florida plans.

M&R 10 Process Evaluation (Pages VII-34-36)

A new sub-objective was added to compare the end-to-end processes of wholesale and retail repair. However, the process is a paper review combined with BellSouth only interviews[7] It does not include review of historic metrics, sampling of CLEC trouble reports, and evaluation of trouble ticket fall-out as did this objective (M&R-5) in the New York test.

A new sub-objective was also added to evaluate BST's performance in making repairs. It is not clear how this will be measured as there is no indication that SQM measures will be used. (Also see M&R7—M&R Performance Results Comparison which does not reference this test objective)

VIII-Change Management Test Section

Change Management Practices Review (Page VIII-3)

Review should not be limited to use of EICCP and Carrier Notification, but should also include items such as day to day document changes and other more routine changes that affect CLECs. It should include usage and implementation and well as documents review.

Further, there are no test activities, objectives or required reporting associated with BellSouth's own OSS development, implementation or change management of the system components supporting CLECs.

Additionally, it is not clear that this objective will meet the change management test requirements of the FCC letter to US West regarding CLEC involvement in change management, release implementation, and dispute resolution.

Appendix A – Product Selection and Description

No substantive changes.

Appendix B (Scenarios)

---

[7] It is unclear how an interview with BellSouth personnel could be used to "ascertain parity in M&R process between retail and wholesale." See page VII-36 of test plan.

CLECs were not consulted in scenario development as indicated by FCC letter to US West.

Appendix B-1 Pre-Ordering Scenarios

CSR inquiries for CLEC customers has been removed from scenarios. Timely updating of these types of CSRs continues to be a serious problem for AT&T and other CLECs and should be a part of this test.

There are no scenarios for service availability, such as loop qualification.

Appendix B-2 Resale Ordering Scenarios

Although the products and services listed on pages B2-2&3 lists a limited set of complex resale products to be tested for one activity type (migrate as specified), all but POTS resale has been deleted from the ordering scenarios. This appears to violate the Commission's Order.

There are no CLEC to CLEC migrations.

As stated earlier, the test only calls for volume testing of resale. Functionality is not evaluated.

Appendix B-3 UNE Ordering Scenarios

Scenarios for UNEs have been reduced by more than 25% from earlier versions, including all inside and outside moves for UNE w/LNP and stand-alone port orders, and migrate as is for loop/port combinations.

Flow through is defined "as orders that have less than 25 lines" on page B3-4, however, that definition does not match the SQM in Appendix D-2 nor the scenario descriptions later in this section.

Includes only 2 wire analog loops, 2 wire analog ports and loop/port combinations. Does not include other UNE types and combinations, including xDSL as required by the FCC letter to US West.

The plan does not comply with the guidance in Item 6 of the FCC letter to US West, which states "Third party testing can be conducted using orders from a combination of existing CLECs and a pseudo-CLEC."

Appendix B-4 Billing Scenarios

No substantive changes. This section only contains four scenarios.

Appendix B-5 M&R Scenarios

Appendix C – Volume Testing

The plan has no details other than the year-end 01 for normal volume testing. Peak testing will include only flow-through orders, and will not include volume testing of provisioning or manual orders. No stress testing will occur. Also see earlier comments on page 1 regarding volume testing environment.

Appendix D-1 - Evaluation Criteria

The test techniques on page D1-3 do not include performance comparisons (between test manager collected results and BellSouth collected results) for rejections and FOCs. Billing also has no performance comparison. (See Page D1-5)

Additional detail was added to this section of the test plan. However, this section uses undefined terms such as "timely", "that are relevant to a CLEC", and "intervals that are reasonable" to describe evaluation measures.

Appendix D-2-Service Quality Measurements

The BellSouth SQM is not complete. It does not contain standards of performance for many measures. It is not disaggregated appropriately to correspond to the products being tested, e.g. switching and number portability. It is not in full compliance with the Georgia Order. And although the SQM references retail measures, no comparison is made between CLEC and retail performance in the test. Indeed, only one aspect of BellSouth's retail performance is compared to wholesale (Sub-test 1 of M&R10), no other retail documentation is reviewed, no on-site observation is conducted of the performance it provides itself, and no comparison or review of its own performance measures data.

Flow-Through Evaluation Plan

This heading was changed from Audit to Evaluation. While the intent of this change is unclear, the section no longer complies with the language in the Commission's Order which requires a "full audit". Minimally, a full audit of the reports filed monthly would include an audit of BellSouth's retail flow-through as well as that of the CLEC, but the evaluation does not appear to cover retail orders. Therefore the accuracy of BellSouth's retail reporting or parity cannot be evaluated. An audit or evaluation of any performance measure should also evaluate whether this measure is being implemented in compliance with the Commission's Order in Docket 7892-U, but that also does not appear to be covered.

The test plan procedures on page 6 are extremely confusing. They are presented in two parts. The first is entitled transactional, and evaluates the flow-through of the MTP test

transactions only. While this is in addition to the Commission's order, it appears similar to test objectives in New York and the Florida draft test plan.

The second procedure is entitled operational. The procedures state only that the operational analysis "is a multi-dimensional test method focused on the form, structure and content of the test target. The test addresses the organizational and process aspects of flow-through reporting. The Operational dimension of the test also specifically includes the calculation of the Flow-Through Measurement and the technology supporting it." These general descriptions are not procedures, and are impossible to specifically comment on. Due to the lack of information, it is unclear whether this evaluation will comply with the performance measures evaluation criteria outlined in the FCC letter to US West.

The last paragraph on page 6 describes how the <u>accuracy</u> of this performance measure will be assessed. It is unclear if the test plan combines two separate assessment activities into one sentence or is actually using transaction data in some combination with raw data for each of the three months of the evaluation period. (July, August and September). If the test plan is referring to the test transaction data in combination with the historical data, this seems to be a meaningless exercise. If the test plan intends two separate activities, the second, replicating the calculations using BellSouth data, is insufficient to determine the accuracy of BellSouth's flow-through as reported monthly to the Commission. Such a process would not appear to include a review of BellSouth's error analysis, as is required by the Commission's Order, and does not constitute a "full audit." Further, for the three months selected there has been no data reported for BellSouth's retail flow-though making a comparative evaluation impossible.

Other activities of a full audit to insure accuracy would include:

--An assessment of the accuracy and completeness of the raw data
--An assessment of the process by which the raw data is filtered and transformed into results
--An assessment of whether the data collection and metric calculation are consistent with regulatory orders (FCC NRPM and Georgia Performance Measures Order[8])
--An assessment of internal controls over the data collection processes and the software programs that process the data

Other issues with this section:

---

[8] For example, neither the FCC NPRM nor the Georgia Performance Measures Order call for the exclusion of orders that BellSouth has designed for fall out for manual handling; indeed such an exclusion defeats the purpose of measuring flow-through. However, BellSouth has elected to exclude such orders. (See Part C of Flow Through Plan entitled Description of BellSouth's Flow-through Percent Calculation, pages 2 and 3)

The chart on page 3 does not appear to indicate that errors can also generate from SOCs, or indicate LSRS which are routed through the LNP platform (which is illustrated on page 26 of the MTP.)

Information on page 4 appears to indicate that fatal rejections are subtracted from the LSRs, however, BellSouth has previously indicated that fatal rejections are outside the flow-through calculation process.

Comparison of Georgia Master Third Party Test Plan (Version 3.0) to September 27, 1999 letter from FCC Staff to US West

1.   Performance Measures Evaluation

Key Requirements of FCC Letter[1]	Compliance of Version 3.0 Plan
• An evaluation would include an assessment of whether the raw data being collected by the BOC is accurate, which could be tested by observing the raw data collection processes and by comparing the BOC's raw data to independently-collected data.	• A limited data comparison is being conducted on the test data for the very restricted services and order types subject to the test. Other than flow-through, this analysis is being conducted using no commercial data. It is unlikely that even the flow-through evaluation will include a review of retail data because for the three months selected for the evaluation (July, August, and September), BellSouth provided no retail data. There is no indication of observation of BellSouth's data collection processes to verify accuracy of the data
• The evaluation would assess the processes by which the raw data is filtered and transformed into final, reported results.	• Again, there appears to be no analysis of BellSouth's processing of information for performance measures purposes, only a comparison of BellSouth's test data collection to the tester's data collection for specific transactions is required by the test. Again, no retail data will be reviewed.
• The evaluator would assess whether the BOC's data collection and data processing functions are consistent with the published performance measurement business rules.	• There are no test objectives in the Georgia plan necessary for this evaluation to occur.
• The evaluator would assess the adequacy and functioning of the BOC's internal controls over the data collection processes and the software programs that process the data (such as the controls over personnel access to the databases, and the controls that ensure that the programs and program modifications are properly authorized, documented, tested and approved).	• There are no test objectives in the Georgia plan necessary for this evaluation to occur.
• The evaluation would include an independent quantitative verification of the reported performance data. To accomplish this, the evaluator could be provided with the BOC's raw data and independently process the data,	• There are no test objectives in the Georgia plan necessary for this evaluation of reported performance data to occur except for possibly the flow-through evaluation. Business rules necessary to calculate this measure are not

---

[1] The letter is "intended to provide a summary of *key* elements of a third party test which could assist our determination that a BOC's OSS is operationally ready and capable of efficiently supporting ever-increasing volumes of transactions. *It is not, however, intended to be an exhaustive list* of the necessary elements for a successful third party test." (Emphasis added)

pursuant to the business rules, to ensure that the stated calculations and algorithms have been accurately applied.	included in BellSouth's SQM. No retail data is being evaluated.
• We note that a comprehensive evaluation of the BOC's performance measure processes may include elements in addition to those listed above, as determined by the states or by an independent evaluator. Accordingly, we encourage BOCs to make the details of the proposed evaluation available to the Commission, and to the public, as they are developed.	• There are no test objectives in the Georgia plan necessary for this type of comprehensive evaluation to occur such as Section IV of the Florida draft MTP.

2. Change Management Test

Key Requirements of FCC Letter	Compliance of Version 3.0 Plan
• Review of change management process and procedures • Review of implementation of these procedures. • Evaluate the methods and procedures that the BOC employs to communicate with CLECs regarding OSS system performance and system updates • Assess the BOC's change management processes and should include, but not be limited to, a review of the BOC's ability to implement at least one significant software release.	The Georgia MTP conducts a review of change management for the Electronic Interface Change Control Process and Carrier Notifications. However, it excludes the myriad of other changes made by BellSouth which affect CLECs. It is unclear how the implementation of change management will be evaluated. There appears to be no usage or observation of the change control process, merely a document review. There appears to be no evaluation of the implementation of a software release such as OSS99. There appears to be no opportunity for CLEC input regarding their experience with BellSouth's change practices. It does not appear that the evaluation will analyze the process regarding availability of dispute resolution. There is no evaluation of BellSouth's change management process for new interface software or changes that have been mandated by regulatory bodies. Further, there are no test activities, objectives or required reporting associated with BellSouth's own OSS development, implementation or change management of the system components supporting CLECs.

3. xDSL Testing

Key Requirements of FCC Letter	Compliance of Version 3.0 Plan
The third-party test would test significant volumes of xDSL orders (*i.e.*, xDSL capable loops).	There is no testing of xDSL orders.

4. Normal, High, Stress Volume Testing

Key Requirements of FCC Letter	Compliance of Version 3.0 Plan
• Normal and High Volume Testing: The third-party test would test projected normal and high volumes of pre-order and order transactions that flow-through the BOC's systems. The mix of transactions would replicate expected CLEC ordering patterns by including, for instance, error conditions and change orders, and by covering the process end-to-end (*i.e.*, through the receipt of order confirmation notice or electronic error notice). "Normal" volumes would be based on the BOC's reasonable estimate, with input from CLECs, of daily order volumes. "High" volumes would be significantly greater than normal volumes and based on the BOC's reasonable estimate, with input from CLECs, of forecasted demand.	• Normal and volume testing are being conducted. However, they are being conducted in a test environment (RSIMMS), not BellSouth's production environment. Although a new test objective (O&P-10) appears to attempt to offset this deficiency, the plan contains contradictory language as to whether this test for production capacity will occur for YE01 (e.g. "normal") or under current transaction loads. Neither scenario tests peak volumes. The methodology for calculating YE01 and peak volumes is unclear, and CLECs were not involved in establishing the volumes. The volumes and transaction mixes have not been provided.
• Capacity or Stress Testing: The third-party stress test would assess scalability of the BOC's OSS systems by testing a mix of transactions similar to those in the normal and high volume testing. These volumes would be significantly greater than the high volume test and be sufficient to identify potential weak points in the systems.	• There is no stress test in Georgia.

5. Pseudo CLEC

Key Requirements of FCC Letter	Compliance of Version 3.0 Plan
If no CLEC has constructed an interface with whatever OSS system the BOC is relying on to meet the nondiscriminatory obligations set forth in the 1996 Act, the third-party tester should build a pseudo-CLEC. The pseudo-CLEC should build an interface *not only to test the quality of the BOC's documentation* for such OSS systems but also to ensure that these systems are capable of submitting and receiving valid transactions. The pseudo-CLEC should build the interface(s) using the BOC's documentation and business rules to determine whether any CLEC can build an interface based upon these materials. Third-party testing can be conducted using orders from a combination of existing CLECs and a pseudo-CLEC.	It appears that EDI and TAG interfaces are being built to conduct some transaction testing. However, there are no test objectives in the Georgia plan necessary for an evaluation of the quality of BellSouth's documentation and a CLEC's ability to build using publicly available information to be conducted as part of the EDI/TAG build. (By contrast, see RMI2 in New York MTP and PPR5 in Florida draft MTP.) Additionally, the build necessarily only covers the limited products and services being tested. OSS99 will not be tested.

It does not appear that any existing or "live" CLEC orders will be used in the Georgia test.

No repair interface is being built. |

6.   Dissemination of Information

Key Requirements of FCC Letter	Compliance of Version 3.0 Plan
A third-party test of OSS should include a formal, predictable and public mechanism for the third-party tester to communicate to both the BOC and the CLEC community issues identified by the third-party tester that arise during the course of testing. Staff proposes the following options for reporting problems: • Report issues as they arise; or • Issue reports pursuant to a specified time-frame (*i.e.*, weekly or bi-weekly); or • Issue an interim report in the middle of the test and a final report at the end. Combinations of these options could provide optimal balance between frequency and detail.	KPMG currently issues interim reports. However, they are issued on an unspecified and infrequent basis. Three reports have been issued to date: July 22, September 10, and October 25. Issues are not reported as they arise, nor are reports issued pursuant to a specified time frame. Reports are not detailed and are therefore frequently unclear. This lack of clarity is exacerbated due to overall lack of communication and CLEC involvement in the process. Additionally, despite indications of difficulties in the interim reports, no exception reports have been issued.

7.   Functionality

Key Requirements of FCC Letter	Compliance of Version 3.0 Plan
• CLECs would be consulted in developing the test scenarios to reflect their market entry and growth and expansion scenarios in a particular region. • Functionality testing would be conducted for pre-ordering, ordering, provisioning, maintenance and repair, and billing transactions. The transaction mix should replicate CLEC ordering patterns and include, for instance, orders that fall out for manual processing, orders that contain errors, and order changes and supplements. Functionality testing also would test these transactions end-to-end (*i.e.*, orders should be actually provisioned), as applicable.	• CLECs were not consulted as part of the test plan development. • Some functionality testing is being conducted. However, it is very limited and therefore does not replicate CLEC ordering patterns for resale nor for UNE services. Any testing of flow through as part of functionality testing does not evaluate wholesale flow through compared to retail flow through. (See flow through definitions included in footnote 2 of FCC letter to US West.).

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Consideration of) Docket No. 960786-TL
BellSouth Telecommunications,)
Inc.'s entry into interLATA)
services pursuant to Section 271) Filed: 10/29/99
of the Federal Telecommunications)
Act of 1996)
_____)

AT&T'S COMMENTS
ON DRAFT MASTER TEST PLAN

AT&T Communications of the Southern States, Inc.

("AT&T"), hereby files its comments on the Draft Master Test

Plan prepared by KPMG.

AT&T commends Staff and KPMG on the first draft of the

Florida Master Test Plan ("MTP"). AT&T believes that with

improvement, the Draft MTP can form the basis for a robust

and independent test of BellSouth's Operations Support

Systems ("OSS"). AT&T welcomes the opportunity to provide

input into the formulation of the test, to ensure that test

results are meaningful and helpful to CLECs and BellSouth as

well as regulatory authorities.

Priority of Issues

Staff requested that parties indicate the relative

priority of issues discussed in comments. Although AT&T

believes that the test would be improved in response to all

of its comments, four overriding concerns must be addressed

in the MTP in order to assure the integrity and usefulness of the test: (1) performance measures, (2) open communication process, (3) an exception process with military-style testing, and (4) level of detail in the MTP.

Performance measures:

The Florida PSC should implement collaboratively-established and/or Commission-ordered performance measurements and standards, prior to the implementation of third party test, that then can be utilized and evaluated in the test. Clearly BellSouth should not be the source of the measures used to evaluate its own performance

As it is currently constructed, the draft test plan suffers from a major flaw as it does not use any such measures. It instead seeks to subject BellSouth's offered service quality measurements to a test before service quality measurements have been definitively established by the Commission. This is not a flaw that KPMG can remedy. Rather, it is up to the Commission to remedy this situation by establishing performance measures on the basis of a fully developed evidentiary record in accordance with the due process and procedural requirements established under Florida law. Until the Commission establishes this predicate, any testing would be premature. Accordingly, the Commission should not proceed to finalize the test plan or with the testing itself. The draft plan should be amended

to specify the collaboratively-established and/or Commission-ordered performance measurements and standards that will be utilized and evaluated in the test, once those appropriate performance measures are established. **Please see Tab 4a for further discussion regarding AT&T's position on performance measures and suggested alternative approaches.**

Open communication process:

The test plan should establish a comprehensive and on-going role for the CLECs in the testing process. At a minimum, the MTP should provide for the following:

- Continuation of the weekly conference calls held by staff, which would allow BellSouth, CLECs and other interested parties to update the status of testing and provide an opportunity for feedback related to issues arising in the testing process (including negative findings that may or may not have resulted in an exception) or in real world transactions;

- Face-to-face meetings held monthly or on an as needed basis, to comprehensively address these issues;

- The plan must also give all parties to the test, including the CLECs and other interested parties, access to all test transactions, data, reports, and other materials generated in the course of the test during the course of the test;

- CLECs should have notice of and an opportunity to monitor each discussion and exchange of information that takes place between the Phase II test manager and BellSouth;

- Exceptions (and all associated supporting detail) should be provided simultaneously to the CLECs and BellSouth and both be given an opportunity to respond;

- Multiple opportunities for on-going CLEC participation should be established, including ability to provide specific transaction scenarios and business issues, ability to respond formally and informally to issues arising throughout the course of the test, ability to provide experience and feedback in document and process reviews, have its live orders, including provisioning and its performance results be reviewed as part of the test, etc.

AT&T also recommends that Florida implement the weekly calls among the test manager, the Commission and the CLECS implemented in Pennsylvania to further expand the value CLECs can add to the testing process.

This level of involvement will result in a more effective test that is firmly grounded in the "real world" of CLECs operating in Florida. The diversity of perspectives and experience will serve as a vital complement to the professional experience and independent judgement of the Phase II manager. As KPMG stated in the Pennsylvania of

CLEC live test involvement in the Pennsylvania test, "It also provides a means to help control for test bias."

<u>Exception process and military-style testing</u>:

A robust Exception Process was a significant feature of the NY OSS test, and was improved upon the Pennsylvania test by the addition of "Observations". Lack of this important process is a major disappointment in the Draft MTP. The Observation process allows the BOC, CLECs and PSC Staff an opportunity to obtain a clear understanding of an area of concern identified by the Test Manager, so that they may provide early, useful input to problem resolution. If the Observation is not resolved, the Test Manager proceeds to the Exception process. In Pennsylvania, however, the parties were able to resolve some Observations without the need for a formal Exception.

The MTP also should include a "military-style" testing regime as part of the issue resolution process. Military testing, an essential component of the New York and Pennsylvania tests, is intended to test a system until it works, rather than simply proving that it is broken.

When the Test Manager identifies a flaw in BellSouth's OSS, BellSouth should be given the opportunity to remedy the problem. Once BellSouth determines that the flaw has been remedied, the MTP should require repeated regression testing until the critical flaw is resolved or BellSouth elects not

to clear the exception. Something like…It is also essential that as in Pennsylvania, exceptions, and the associated supporting detail are provided simultaneously to both BellSouth and CLECs for their response. Level of detail in the MTP:

Although the Draft MTP provides an excellent starting point, AT&T believes that the level of detail provided in the test is insufficient to meet the requirements of Order No. PSC-99-1568-PAA-TL. The Draft MTP relies excessively upon the Phase II Test Manager to determine the scope of the test and to develop processes and procedures. AT&T believes that this is not only inappropriate, but also is inconsistent with the Commission's order.

The Florida PSC determined the scope of the test in Order No. PSC-99-1568-PAA-TL. The Commission further ordered that the test plan should be both detailed and comprehensive, rather than an outline of steps the Phase II Test Manager may or may not choose to take. For example, the Phase I vendor is required by the order to develop a "detailed test plan document, which shall provide a comprehensive plan". The Phase II Test Manager then is required to execute the test "in full compliance" with the plan. The Draft MTP, however, lacks the level of detail that is both required by the Commission and will be

necessary for the Phase II Test Manager - particularly if KPMG is not selected as the Phase II Test Manager.

Unless the approved MTP addresses the meaning of terms, the details of tests to be performed, the standards to be applied and the procedures required of the Test Manager, there is no assurance that the test ultimately will be carried out in accordance with the Commission's order. Such detail must be included in the MTP, where it can be reviewed by BellSouth and CLECs, and voted on by the Commission. Review by BellSouth and CLECs will contribute toward a robust test, and Commission review and approval of a detailed MTP prior to initiation of the test is not only required by Order No. PSC-99-1568-PAA-TL, but necessary in order for the Commission to be aware of what it will be asked to approve.

AT&T has attempted to identify areas of the Draft MTP where more detail is necessary. The goal, however, should be to meet the Commission's requirement for a "detailed and comprehensive" test plan that is sufficient to direct the actions of a Test Manager who may not have been involved in its development. In those instances where it simply is not possible to supply specific details, the MTP should describe the procedure to be used, type of information to be considered or the "decision tree" to be employed. AT&T notes, however, that KPMG was selected through a sole-source

procurement process on the basis of its knowledge and experience regarding OSS testing, so there should be few instances in which it is unable to supply detailed information for the benefit of the Test Manager.

RESPECTFULLY SUBMITTED this 29th day of October, 1999.

Marsha E. Rule
101 N. Monroe St.
Suite 700
Tallahassee, FL   32301
(904)   425-6365

ATTORNEY FOR AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

AT&T's Comments
and Requests for Amendment
of Florida Draft Master Test Plan

October 29, 1999

INDEX

TAB 1: **Comments Relating to Previously-Submitted Questions**

Comments regarding Introduction section of Draft Master Test Plan (MTP)

1. [No. 16 in the workshop question list] Please clarify that the results of the third party test will provide input into the determination of whether BellSouth provides just, reasonable, and non-discriminatory access to its OSS rather than establishing whether such access exists.

2. [17] The MTP should specify the standards and criteria that will be used in the test. See AT&T Comments in Tab 4a as input to quantitative standards and criteria. Additionally as details are constructed regarding qualitative standards and criteria during the implementation of the test, CLECs should be given the opportunity to participate and comment.

3. [18] Section B, Scope, states that the plan will evaluate BellSouth's OSS systems, interfaces and processes that enable CLECs to compete. KPMG has stated that while there are tests included to evaluate manual processes, they are not meant to evaluate the <u>efficiency</u> of the processes. If, however, the tests are not meant to evaluate efficiency, AT&T believes that the MTP is flawed, in that it will provide no way to determine parity through comparison of processes. For example, one must determine whether a manual process in use by BellSouth for itself is more efficient than a manual process BellSouth uses when handling the same transaction for CLECs in order to determine whether parity exists. The complex services pre-order/order process in particular should be fully investigated for discriminatory impact when compared to the BellSouth-only process. See AT&T Comments in Tab 3.

4. [21] The Objectives section states that the "test plan is intended to provide adequate breadth and depth to evaluate the entire CLEC/ILEC relationship under real world conditions." Commercial volumes of loop cutovers and commercial volumes of orders that must be submitted either manually or on two orders should be tested in order to evaluate these processes under real world conditions. In practice, loop cutovers have proven to be the cause of customer service outages in Florida and other states, and one cannot properly evaluate BellSouth's ability to provision service on the basis of a limited number of loop cutovers. Similarly, manual and two-part orders must be tested in volume to provide a real-world evaluation.

5. [22] The MTP should specify what processes and systems or services used by CLECs will not be evaluated by KPMG due to the limitations described in the

MTP and what processes, systems, or services used by CLECs are not being evaluated because they are considered to be outside the scope of the draft test plan. The Commission's order requires a detailed and comprehensive MTP, so AT&T believes that it is inappropriate to leave this determination to the Phase II Test Manager. AT&T also requests that the impacts the limitations impose throughout the implementation of the test be clearly detailed in any interim and final test reports.

6. [23] The MTP should describe all systems to be tested, and is incomplete without this information. In order for the MTP to be complete and useful, it must specify the existing processes, centers and systems that will be tested. This need not limit the Phase II Test Manager to the named systems; AT&T agrees with KPMG that "all relevant systems at the time of the test" should be included. The MTP must be specific in order to ensure that existing processes, centers or systems are not inadvertently omitted, to allow for intelligent dialogue where the inclusion/exclusion of a specific process is at issue, and to provide a common understanding and point of reference for initiation of testing. Further, the Commission's order requires a detailed and comprehensive MTP, so AT&T believes that it is inappropriate to leave this decision to the Phase II Test Manager.

7. [24, 25] The MTP should adequately define terms and include details necessary to implement the test. The Audience section indicates that CLECs will use the MTP to understand the depth and breadth of the test, but the document does not appear to include the details needed to implement the test. CLECs (and the Phase II Test Manager, if not KPMG) must know what the document means by "adequate performance", a "stable OSS environment, etc". These and other terms should not be left up to the Phase II Test Manager to define. Nor is it appropriate for KPMG to provide the necessary detail by meeting with the Phase II Test Manager to answer questions about the MTP. Unless the approved MTP addresses the meaning of terms, the details of tests to be performed, the standards to be applied and the procedures required of the Test Manager, there is no assurance that the test ultimately will be carried out in accordance with the Commission's order. Such detail must be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

8. [26] The plan should include details on the "test bed" and "requirements BST-FL must satisfy to prepare for and execute the tests", as well as how accuracy of BellSouth's preparation will be determined and "blindness" of the test will be protected. These and other terms should not be left up to the Phase II Test Manager to define. Nor is it appropriate for KPMG to provide the necessary detail by meeting with the Phase II Test Manager to answer questions about the MTP. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

9. [27] See Page 5, 3rd bullet: This item should be clarified to indicate that BellSouth will not set up the CLEC interface, and that the necessary resources will be obtained from BellSouth in the same way a CLEC would obtain them.
The MTP should specify that the Phase II Test Manager should not operate in a location provided by BellSouth. Further, the MTP should specify that BellSouth must use the same processes in providing space, equipment, IDs, security access, and appropriate company codes for the Test Manager that uses for any CLEC entering the market, rather than unique procedures. If there are circumstances in which a unique process is unavoidable, the MTP should require the Phase II Test Manager to specify why such procedures or other modifications to BellSouth normal procedures could not be applied to new entrants in the real world.

10. [28] See Page 6, 3rd bullet: The Draft MTP should be modified to provide for observations of CLECs as well as BST, as specified in the Staff Recommendation. To ensure that the test includes real-world conditions, observations of BST should be unscheduled whenever possible.

11. [29] See Page 6, 6th bullet: The reference to a stable environment should be clarified in the MTP as in KPMG's written response. In order to best evaluate the BellSouth/CLEC relationship and properly evaluate BellSouth's change management process, the test should proceed in the real-world environment.

12. [30] The following provision from the Staff Recommendation should be included in the MTP:
    *   "One or more CLECs will volunteer to participate and provide facilities required to execute those live scenarios necessitating CLEC participation."

Comments regarding Test Plan Framework section of Draft MTP

1. [31] The MTP should specify the opportunities for CLEC input into the design of specific test scenarios, cases, and instances. It is inappropriate to leave this basic process issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

2. [32] In order to comply with Order No. PSC-99-1568-PAA-TP, the MTP should include scenarios designed to test all the service and product offerings required to be put forth by BellSouth to establish 271 compliance. It is inappropriate to leave the decision of whether or not to test a particular service or product offering to the Phase II Test Manager. See AT&T's Comments Tab 5 for input on additional scenarios.

3. The MTP should require the Test Manager to obtain a number of test lines in addition to the test bed of telephone numbers to test provisioning, repair, restoration, call performance and billing. Residence test lines should be provisioned to CLEC and BellSouth employees as customers in order to allow testing on actual working lines. These lines should be non-critical second lines established for test purposes. New lines should be provisioned to a location(s) that the TPT may access for verification of ordering, provisioning and repair.

4. [33] The MTP should either include test volumes or describe how the Test Manager will validate and use CLEC forecasts, BST forecasts, and historical data to develop volumes to be tested. AT&T and the CLEC's should have access to the processes proposed to develop operational ratios (error rates, pre-order to order rates, etc.) to be used in volume testing in order to provide input through comparison to real world experience. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

5. [34] The MTP should specify how the 500+ test cases will be distributed across 1) functionality testing, 2) normal volume testing and 3) stress testing. It is inappropriate to withhold this information from the Commission and the CLECs whose input on real world experience is critical to a proper distribution. Shielding of the information from BellSouth is appropriate to protect the "blindness" of the test. KPMG's recommendation that the CLEC's provide written prioritization of the test cases for distribution can not be implemented until the test cases themselves are shared with the CLECs. The Commission could establish a procedure by which the scenarios and distribution are shared among KPMG, the Commission, and the CLECs during testing and made public upon conclusion of the test.

6. [35] The MTP should establish the principle that the test be as "blind" as possible, while allowing meaningful participation by CLECs. AT&T suggests that one way to facilitate this process would be through periodic conference calls in which BellSouth would not participate, as was done in Pennsylvania. Minutes could be kept of such meetings and made publicly available upon the conclusion of the test. Additionally, the MTP could establish a procedure by which certain written information could be provided by CLECs to KPMG, with such information to be released upon conclusion of the test.

7. [36] The MTP should describe all systems to be tested, and is incomplete without this information. In order for the MTP to be complete and useful, it must specify the existing processes, centers and systems that will be tested. This need not limit the Phase II Test Manager to the named systems; AT&T agrees with KPMG that "all relevant systems at the time of the test" should be included. The MTP must be specific in order to ensure that existing processes, centers or systems are not inadvertently omitted, to allow for intelligent dialogue where the

inclusion/exclusion of a specific process is at issue, and to provide a common understanding and point of reference for initiation of testing. Further, the Commission's order requires a detailed and comprehensive MTP, so AT&T believes that it is inappropriate to leave this decision to the Phase II Test Manager

8. [37] The domain descriptions should be clarified to include "systems, processes, and other operational elements such as documentation and other relevant publicly available information. . . . "

9. [38] In the POP domain three purposes for the tests are listed. The third is "to provide a basis for comparing this operational area to parallel systems and processes supporting BST-FL's Retail Operations." The MTP should specify that the Test Manager will calculate metrics using the data generated during the test.

10. [39] Tests associated with the POP domain are intended to evaluate functionality, evaluate compliance with prescribed measurements, and provide a basis for comparison. Tests for the M&R domain, however, will only provide a basis for comparison. The MTP should specify that the M&R domain will be tested to evaluate functionality and compliance with prescribed measurements.

11. [40] Similarly, the MTP should specify that the Billing domain will be tested to evaluate functionality, evaluate compliance with prescribed measurements and provide a basis for comparison. The MTP should clarify the rationale behind the stated purpose of the billing tests (evaluate compliance to measurement agreements and ensure adherence to sound management principles).

12. [41] The MTP should be clarified to indicate that tests for the RMI Domain are included in the PPR Section and should specify that the RMI domain will be tested to evaluate on-going operational support to CLECs in a manner both adequate to the CLEC business needs as defined by CLEC input and comparable to that provided to BST-FL Retail Operations.

13. [43] The MTP should indicate that the CSI will build interfaces to BellSouth, using the BellSouth-provided CLEC documentation and specifications while following the BellSouth certification process. AT&T does not understand KPMG's statement that the Test Manager will build interfaces "where possible and practical." It is not clear how CLECs entering the local market could build an interface if the Test Manager found it either not possible or not practical to do so.

14. [45] The MTP should be clarified to indicate that the Test Manager will conduct a thorough examination of the metrics definitions and the way in which the definitions are operationalized in order to ensure that performance measures used to compare BST/CLEC performance are comparable. If they are found not to be comparable, the Test Manager should issue and exception report and retest following correction of the deficiency.

15.   [46] AT&T requests that KPMG include in the MTP a description of how it has directed the documentation of the experience of the CSI (TTG) where KPMG has performed the role or has served as the Test Manager.

16.   [48] AT&T strongly disagrees with KPMG's assertion that evaluation criteria based on "Good Management Practices" are not material to the MTP or that such an statement was agreed to at the Workshop.

17.   [49] Entrance Criterion No. 2 requires all legal dependencies to have been resolved. The MTP should be clarified to indicate that Phase II of the test will not proceed until this condition has been satisfied.

18.   [51] The use of Georgia source documentation should not be a global entrance criteria of the Florida MTP as there is no assurance that such information will be publicly available in a timely manner. Entrance Criterion No. 6 should be deleted.

19.   [53] The Draft MTP does not include all opportunities for CLEC involvement that were specified in the Staff Recommendation and the PA Test Plan upon which it was based, e.g. see "CLEC Involvement in Transaction Testing" from the Test Framework Section of the PA MTP which was omitted from the FL Draft. At a minimum, the MTP should include all such opportunities.

20.   [54] The MTP should specify when, where and how it will be appropriate to use historical data in transaction generation and report review. The Commission's order requires a detailed and comprehensive MTP, so AT&T believes that it is inappropriate to leave this determination to the Phase II Test Manager.

Comments regarding Performance Metrics Review section of Draft MTP

1.   Please see Tab4a - c for AT&T's Performance Measures input to the MTP, which states AT&T's recommended approach, describes deficiencies of BellSouth's current performance measures, and proposes options for performance measure analysis. Tab 4c also includes the LCUG 7.0 SQMs.

2.   [55] At a minimum, the MTP should specify sources known at this time that will be used to develop Standards and Definitions. The Commission's order requires a detailed and comprehensive MTP, so AT&T believes that it is inappropriate to leave this determination to the Phase II Test Manager.

3.   [57] AT&T agrees with KPMG that the best method for developing performance measures is through a collaborative process managed by a regulatory body that

includes participation by both CLECs and BellSouth. In the absence of such a process, however, AT&T proposes the options set forth in Tab 4a.

4.   [58] The staff recommendation requires that an "analysis should be performed of the adequacy and appropriateness of the measures provided in BST's SQM." The section cited by KPMG as that which addresses the recommendation (p. 22, para 2, Section IVD), however, merely states this as an objective and fails to provide a plan to accomplish the objective. The Commission's order requires a detailed and comprehensive MTP, so AT&T believes that the MTP should set forth the plan for accomplishing this objective.

5.   [59] The MTP should be clarified to indicate that the phrase "calculation of the metrics" would apply to any wholesale data, including that of CLECs and that the phrase "calculation of retail analogs" applies to BellSouth retail data.

6.   [62] PMR2: The MTP should be clarified to include KPMG's definitions of "official standards", "working standards", and "technical definitions", as shown in KPMG's response to Question No. 62.

7.   [63] AT&T believes that KPMG may have misunderstood AT&T's question and now asks KPMG if it would agree that Test PMR5 Metrics Calculation Verification and Validation would determine if the standards distributed were being followed?

8.   [64] The MTP should describe the "mathematical techniques" in PMR5 that will be used to verify and validate the reporting of the metrics. Re-calculation (replication) is already listed as a method in KPMG's test description. AT&T is seeking to understand the other mathematical techniques KPMG would recommend to the Phase II Test Manger to perform this test. The Commission's order requires a detailed and comprehensive MTP, so AT&T believes that it is inappropriate to leave this determination to the Phase II Test Manager.

9.   [65] Table IV-5 should specify that the ability to recreate metrics evaluation measure will be applied to both CLEC and BST data.

Comments regarding the Processes and Procedures Section of Draft MTP

1.   [67] PPR1 should be clarified to require an analysis of changes made by BellSouth over the last 12-18 months to determine
   • if those subject to EICCP procedures were handled according to those procedures,
   • that changes made outside EICCP were properly not subject to EICCP
   • that all changes implemented conformed to good management practices

During this period BellSouth did not submit any changes to the EICCP process but implemented numerous changes to systems, documents and processes.

2. [68] PPR1 should be clarified to require the Test Manager to consider all CLEC input into the change management test, including but not limited to information such as change control documentation and meeting notes.

3. [69] PPR1 should specify that the Test Manager would evaluate the "implementing change" attribute of the change management test by tracking a major software release, such as OSS99, from initiation through implementation .

4. [70] PPR2 should be clarified to indicate that CLEC will input be sought in the account management test from a review of calls and letters as well as historical data. The review should include the response interval for calls and letters. The Commission's order requires a detailed and comprehensive MTP, so AT&T believes that this information should be provided for the benefit of the Phase II Test Manager.

5. [71] PPR2 should specify that the effectiveness of the escalation process be will be reviewed. The Commission's order requires a detailed and comprehensive MTP, so AT&T believes that it is inappropriate to leave this determination to the Phase II Test Manager.

6. [72] PPR2 should be modified such that performance expectations and improvement plans of wholesale account team members will be compared to those of retail account team members. KPMG states that it does not assume that retail and wholesale account manager responsibilities must have equivalent performance expectations and improvements plans, but AT&T suggests that CLEC account teams are key players in the manual processing of orders for complex services, and that retail account teams perform analogous services. Please see the affidavit of BellSouth employee Ron Pate, found in Tab 3a, relating to BellSouth's handling of complex services for itself and CLECs. The MTP should require the Test Manager to evaluate carefully the effectiveness and efficiency of both processes to provide a basis for comparison and parity.

7. [73] PPR2 should be clarified to include the types of transactions that occur between CLECs and BellSouth will be considered in PPR2. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

8. [74] PPR3 should be clarified to indicate how the quality of answers provided by the help desk will be evaluated. It is inappropriate to leave this issue to the Phase

II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

9. [75] PPR3 should be clarified to indicate that all help desks that provide system administration support will be evaluated.

10. [76] PPR4 should be clarified to indicate that the process improvement sub-process will include an evaluation of the training materials to insure they are up-to-date, and that CLEC input is incorporated into future classes. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

11. [77] PPR5 should be expanded to evaluate the extent to which BellSouth has followed and is current with industry standards be evaluated, and that CLEC input will be sought for this test. PPR5 also should be modified to include a review of the history of TAG, EDI 7, and OSS99.

12. [79] PPR6 should be modified to require the Test Manager to seek CLEC input, including documents, and interview CLECs regarding their experience in planning and implementing network designs. It is inappropriate to leave the decision of whether or not to seek input to the Phase II Test Manager. Since KPMG anticipates that the Test Manager will seek input from CLECs, this information should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

13. [80] PPR7 should be clarified to require that the Test Manager consider factors including but not limited to accuracy of error and FOC messages, including rejections due to rejection of "illegible" faxes from BST's fax server, frequency with which BellSouth requests a faxed copy of an electronically submitted order, frequency with which complex orders are not provided to the appropriate work group in a timely manner (see AT&T change control request dated June 23, 1999) and handling of electronically submitted manually processed ordering. Since KPMG anticipates that the Test Manager will consider these factors and it is KPMG's intent that the plan includes such factors, this information should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

14. [81] PPR8 should be modified to include assessment of the accuracy of the responses of the support centers and a determination of the effectiveness of the monitoring and performance management processes for work center personnel. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

15.   [82] PPR8 should be clarified to indicate its scope includes all applicable work centers.

16.   [84] PPR9: Should be clarified to list which provisioning processes will be evaluated separately It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

17.   [86] PPR9 should be clarified to include an evaluation of whether a physical disconnection occurs on the migration of a loop/port combination order and whether directory assistance listings are deleted/restored. It is inappropriate to leave this essential issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

18.   [87] PPR9 should be clarified to include an evaluation of the consistency with which BellSouth has followed its methods and procedures on a historical basis, e.g. frequency with which it has notified CLEC 48 hours prior to cut-over of test results, the frequency with BellSouth has historically issued and worked timely and appropriate disconnect orders and/or established the 10 ten digit trigger associated with LNP orders, and the following:
- 1 hour prior to cut calls
- completion calls
- completion notices
- acceptance process
- post completion database updates – LIDB/911/DA, etc.

It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

19.   [88] PPR9 should be clarified to include an evaluation of the accuracy of BellSouth's CFA database.

20.   [89] PPR9 should be modified to include a review of the policy and availability of personnel for after-hours cut-overs for CLEC orders and for retail orders.

21.   [90] PPR9 should be clarified to indicate that an evaluation of completeness and consistency would assess whether a process appears to have all necessary elements and whether the process is performed consistent with expectations, and that such an assessment would normally address adequacy as well as frequency of compliance.

22.   [91] PPR9 should be modified to reinstate the specific objective found in the Staff Plan to "determine the degree to which the provisioning environment support CLEC and Reseller orders is on parity with internal [BST-FL] provisioning."

Although AT&T understands KPMG's response to indicate that such objective need not be included because "parity" is used as a criteria type for one of the Process Areas included in this section, AT&T believes that inclusion of this objective will provide valuable information to the Test Manager regarding the overall objective of PPR9.

23. [92] PPR9 should be clarified to define and give examples of CLEC case studies, which should include sets of live CLEC orders.

24. [93] PPR9 should be clarified to indicate that field observations will be made of scenarios implemented during TVV testing and of case studies. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

25. [95] PPR15 should be clarified to include an evaluation of the adequacy as well as the existence of M&R coordination processes. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

Comments regarding the Transaction Verification and Validation Section of Draft MTP

1. [96] TVV1: AT&T inquired whether LENS would be tested if the TAG GUI interface was not available, and if a substantial amount of electronic LSRs continue to be placed via LENS. KPMG responded, in part, that BellSouth does not claim LENS to be a nondiscriminatory interface. AT&T notes that BellSouth, in an ex parte filing with the FCC dated 10/1/99, specifically listed LENS as a "proof" of nondiscriminatory access for resale pre-ordering, ordering and provisioning, based on retail volumes. Until BellSouth declares that it is not relying upon LENS as a part of its proof of OSS parity it should be included in interface testing. Numerous complaints regarding LENS performance were presented by CLECs in the May 1999 OSS Workshop. In order that LENS users and their end user customers can benefit from the improvements that will result from Third Party Testing, LENS should be included in the test.

2. [98] The MTP should be clarified to indicate that the Test Manager will investigate error responses, and that errors believed to be BellSouth mistakes would be called in to the BellSouth help desk for resolution.

3. [100] TVV1 should be modified to include enhanced extended loops (EELs) in the "other Unbundled Network Elements" to be tested. It is inappropriate to leave

this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

4.   [101] TVV1 should be amended to ensure (at a minimum) that the MTP incorporates the requirements of the FCC Staff letter to US West dated September 27, 1999.

5.   [102] TVV1 should be amended to require the Test Manager to determine the availability of pre-ordering functionality that BellSouth makes available to its affiliates and customers, not just what its retail units have elected to use. Pre-qualification of loops for ADSL is one example. Further, the MTP should provide for testing pre-ordering functionality for all products and services that BellSouth has been ordered to provide, including UNE combinations.

6.   [104] TVV1 should specify what will be evaluated in the consistency with retail capability POP evaluation measure, and this measure should include comparable levels of flow-through, timeliness of rejections, FOCs (or their equivalent) and completion notification, as well as a comparison of those services CLECs must order manually. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

7.   [105] TVV1 should be clarified to indicate that wherever possible, retail analogs will be used to make parity determinations. Further, the MTP should include KPMG's recommendation for retail analogs. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

8.   [106] TVV2 The Objectives section states that the "test plan is intended to provide adequate breadth and depth to evaluate the entire CLEC/ILEC relationship under real world conditions." The MTP should include volume tests of BST's LCSC capability for non- and partially mechanized orders and volume tests of BST's provisioning process. AT&T recognizes that volume tests for work centers would have to be different from the types and levels of volume tests applied to systems. Perhaps the testing required, which does not exist in this Draft MTP, might better be described as or included under "Capacity" or "Resource" Management Testing or even "Production Volume" Testing. As will be discussed below, this Draft MTP also does not include Capacity, Resource or Production Volume Testing. See Other Comments Regarding Draft MTP Item No. 3.

Additionally, AT&T requests that KPMG note in it MTP that in the "real world" BST-FL would be subject to significant volumes of manual order and

provisioning requests, and this test does not verify its ability to appropriately handle these volumes.

9.   [107] TVV2 should be clarified that the volume LSRs will include orders with errors and those designed by BellSouth to fall out.

10.   [109] TVV2 should be clarified to include KPMG's explanation of these items 12 and 13 in outputs.

11.   [110] TVV3 should not be limited to an evaluation of what BellSouth states will flow through, but should include a determination of what should flow through, in order to identify instances in which lack of parity was designed into the system. See Tab 2 for further comments regarding electronic flow-through. Additionally, the requirements of the FCC's 9/27 letter should be incorporated into this section, rather than assume or require the Test Manager to take it "into consideration".

12.   [111] TVV3 should be amended to indicate that flow-through will be evaluated on a parity basis since there are no standards of performance in interconnection agreements. See FCC NPRM 98-72 and FCC letter to US West dated 9/27. Also see Tab 2 for further comments regarding electronic order flow-through.

13.   [112] TVV4: AT&T agrees that not all measurements associated with TVV testing need be driven by the BellSouth SQM. However they do need to be based upon clearly defined measures that are capable of being tracked by both BellSouth and the Test Manager. Please see AT&T's input and recommendations in Tab 4 to remedy deficiencies in BellSouth's SQM. It is inappropriate to leave this issue to the Phase II Test Manager. Instead, such detail should be included in the MTP, where it can be reviewed by CLECs and BellSouth, and voted on by the Commission.

Comments regarding Appendix B, Normal and Peak Volume of Draft MTP

1.   [114] The MTP should be modified to indicate that the Phase II test manager will evaluate the ability of the processes associated with unavoidable manual processes (orders submitted electronically and processed manually by BellSouth by design). The MTP also should specify how this will be accomplishedThis is not an appropriate determination for the Test Manager; rather, it should be included in the Test Plan. See AT&T's Comments above related to Question 106 in the Transaction Verification and Validation Test Section.

2.   [116] The MTP should include the minimum historical data sources to be used to determine the relative volumes of supplements and order changes/disconnect and moves for these tests. This is not an appropriate determination for the Test

Manager; rather, it should be included in the Test Plan. See AT&T's Comments above related to Question 33 in the Test Plan Framework Section.

3. [117] The MTP should describe how the ratio of pre-order/order transactions will be determined. This is not an appropriate determination for the Test Manager; rather, it should be included in the Test Plan. See AT&T's Comments above related to Question 33 in the Test Plan Framework Section.

4. [118] The MTP should describe how the percentage of electronically submitted/manually processed orders will be determined. This is not an appropriate determination for the Test Manager; rather, it should be included in the Test Plan. See AT&T's Comments above related to Question 33 in the Test Plan Framework Section.

5. [119] The MTP should describe how will the percentage of erred orders will be determined. This is not an appropriate determination for the Test Manager; rather, it should be included in the Test Plan. See AT&T's Comments above related to Question 33 in the Test Plan Framework Section.

Comments regarding Appendix C, Statistical Methodology of Draft MTP

1. [122] The MTP should describe generally how the critical value will be established. This is not an appropriate determination for the Test Manager; rather, it should be included in the Test Plan.

2. [124] The MTP should describe how non-discriminatory treatment for measurements with benchmark standards will be determined. This is not an appropriate determination for the Test Manager; rather, it should be included in the Test Plan.

Other Comments regarding Draft MTP

1. [125] The MTP should be updated to add a "military style" approach to the testing, with identification of exceptions, corrections, and re-testing until passing, in compliance with the Commission's requirements.

2. [127] The MTP should specify that CLECs have access to test transactions, data, reports, and other materials generated in the course of the test and that CLECs will have access to data provided to the Phase II test manager by BST. This is not an appropriate determination for the Test Manager; rather, it should be included in the Test Plan.

3. In its remarks to the Staff and industry at the Third Party Test Workshop held on October 15, 1999, KPMG carefully described how it was replacing "Scalability" testing with "Capacity Management" testing. KPMG described capacity management as a mechanism to track consumption of resources, anticipate increases in demand, and respond in a timely fashion. KPMG stated that an evaluation of capacity management would not guarantee perfect quality of service at a capacity, but would demonstrate that a realistic ability to perform at capacity in the future (two year out) existed.

It appears that in producing the Florida Draft MTP, KPMG has inadvertently omitted the Capacity Management test sections. AT&T had seen such test sections in other KPMG prepared test plans and is eagerly awaiting the opportunity to comment on the plan when KPMG makes them available.

In the plans that AT&T has seen the objective statement typically refers to analysis of capacity management functions in relation to processing functions and associated workforce to determine whether the procedures are adequate to identify and implement capacity increments to satisfy projected customer business volumes on a timely basis.

The inclusion of "workforce" in the capacity management objective statement raises the possibility that this might be one type of testing useful in the evaluation of centers such as the LCSC.

4. AT&T also believes that another type of testing not present in the Florida Draft MTP would be useful in evaluating work centers. In other test plans a "Production Volume Performance Test" has been proposed for use against systems. AT&T believes that the underlying concept of such tests – submit transactions equal to the stated capacity of the system to validate that capacity estimate – also has application to evaluating work centers.

The Florida Commission will likely remember that BellSouth submitted evidence of LCSC capacity in its 271 Application based upon fictitious workload generated by a device (The Hopper) simulating CLEC orders. Production Volume Testing of the LCSC would be analogous to BellSouth's 1997 LCSC order simulation.

5. The MTP should be modified to include evaluation of the LCSC and other similar work centers using techniques from Capacity Management and Production Volume Testing.

Tab 2: Electronic Order Flow-Through

Flow-Through of electronically submitted orders is a critical component of nondiscriminatory access. The Draft MTP most directly addresses this issue in TVV-3: Order "Flow Through" Evaluation, which was addressed by Questions 110 and 111 submitted before the Staff OSS Workshop. TVV-3 states that "Only orders that qualify as "flow through", orders not needing manual action, will be tested." (Draft MTP, page 82). That is, BellSouth's designation alone will determine the types of orders to be tested: "The flow through test shall only measure what BellSouth states will flow through." (KPMG response to Question 110). A comprehensive evaluation of the parity of flow through must include all order types, including those needing manual intervention, and not just those designed by BellSouth to flow through the interfaces it provides. An outline for such an evaluation is provided below.

TVV-3 Activity 5 states that when a BST-FL error causes an order not to flow through such errors will not be corrected. Clearly such a situation should be cause for the opening of a documented exception, the initiation of efforts by BST-FL to correct the situation, and re-testing until the condition is cleared. CLECs need to be assured that BellSouth processes are sufficient to prevent such errors.

In contrast, TVV-3 Activity 6 correctly calls for the correction and resubmission of errors caused by the Phase II Test Manager. Both Activities 5 and 6 should be subject to a clearly documented error correction process. Documentation of BST-FL caused errors and their correction are fundamental to the purpose of the Third Party Test – improvement of the interfaces. Documentation and correction of Phase II Test Manager caused errors is fundamental to the objectivity of the test.

The results of TVV-3 are not compared to a public standard or parity with BST-FL's retail capability, but should be. One could argue from the design of this test that the only passing grade is 100% flow-through. It may be that KPMG intends to evaluate the parity of flow-through in another test, for example in TTV-1 discussed below. Control orders containing errors and order types not designed to flow through should be included in the test transactions, if the ultimate design of this test (TVV-3) remains only to evaluate the effectiveness of BellSouth's software performance for a specific set or order types.

Flow-Through will also be evaluated in TVV-1: POP Functional Evaluation which was addressed by Question 101 submitted before the Workshop. Orders for all types of transactions, both flow-through and non-flow-through, will be submitted over GUI and machine-machine interfaces as well as manually for order types that can not be submitted electronically. An output of this test will be "Flow through" orders by order type, product family, etc." This data and the other data in the outputs of TVV-1 contribute to the output "Measure of parity performance between retail and wholesale" (Draft MTP page 79) and should therefore be included in the Flow Through evaluation. However, KPMG's answer to Question 101 defers to the Phase II Test Manager.

In the Performance Metrics Review Test Section, tests PMR1 – PMR5 must each be applied to the Standards and Definitions, Data Processing, and Data Retention associated with BST-FL retail flow-through and CLEC flow-through.

However, in Appendix D, the proposed metric for Percent Flow-Through Service Requests reflects:

- BellSouth's current regulatory position related to its internal flow-through for its business orders,
- flow-through reporting for CLEC orders submitted over EDI, TAF and LENS with business and residence orders aggregated, and
- Staff requirements that BellSouth provide disaggregation of CLEC data by business and residence and return to providing its own business flow-through data as it did through March of 1999.

The Staff requirements are clearly aimed at enabling a parity comparison. However, the Draft MTP does not provide testing or an evaluation of results that allows such a comparison to be made.

A recent BellSouth 10/1/99 ex parte filing at the FCC indicates that BellSouth possesses the data to provide disaggregation of CLEC data by business resale, residence resale and UNE. Flow through data for BellSouth's own residence and business retail operations were filed in its prior 271 Applications and before other state regulatory bodies until March of this year, which proves that the data for a parity comparison exists. BellSouth should be required to produce this data for use in the third-party test.

The Florida Commission's Order requires KPMG to provide an objective opinion of the adequacy and appropriateness of proposed metrics. Further, even if KPMG were operating only within its own stated primary and preferred role as a finder of fact, it is clear that the Commission would expect KPMG to conduct a thorough investigation as to the parity of electronic order flow through. As related to the Electronic Order Flow Through metrics, KPMG should be directed to investigate and/or determine the following:

- What are the Retail Residence/Business Services and Features that BellSouth cannot request through entry to the RNS or DOE Interface?

- What Residence/Business Services and Features does BellSouth allow CLECs to request through electronic entry (EDI/TAG)?

- What Residence/Business Services and Features can BellSouth enter into RNS or DOE that cannot be requested by CLECs through electronic entry?

- What percentage of CLEC requests for Residence/Business Services and Features through electronic entry are subsequently subject to human intervention by BellSouth because BellSouth has not provided for mechanization?

- What percentage of BellSouth requests for Residence/Business Services and Features though entry to RNS or DOE are subsequently rejected by SOCS?

- What percentage of CLEC requests for Residence/Business Services and Features through electronic entry are subsequently rejected by 1) the Gateway (EDI/TAG), 2) its Transmission Links (LEO/LESOG/BSOG), 3) SOCS

    - Because of CLEC input errors?
    - Because of BellSouth system errors?

The resulting factual record and objective opinion should be used to establish definitions, design the proper metric for flow-thorough reporting, revise the structure of tests TVV-1 and TVV-3, and establish the parity comparison envisioned by the Florida Commission and the FCC in its 2/10/99 letter to BellSouth and 9/27/99 letter to US West.

Tab 3: Processing Orders for Complex Services and UNEs

The processing of orders for complex services and UNEs is a critical element of nondiscriminatory access. Orders for many such services can only be submitted manually and require manual handling by the BST-FL wholesale account team and work center personnel. Orders for a small subset of such services can be submitted electronically for subsequent manual handling by the BST-FL work center. Orders for an even smaller subset of such services can be ordered electronically and will flow through to the provisioning process. Thus the review of the process for ordering complex services and UNEs is spread across a number of proposed tests in the Draft MTP:

- PPR2: Account Establishment & Management Verification and Validation Review which was addressed by AT&T Workshop Questions 18, 70 – 73;

- PPR7: POP Manual Order Process Evaluation which was addressed by AT&T Workshop Questions 18, 80 and 114;

- PPR8: POP Work Center Support Evaluation which was addressed by AT&T Workshop Questions 81, 82 and 114;

- TVV1: POP Functional Evaluation which was addressed by AT&T Workshop Questions 100 and 104;

- TVV3: Order Flow Through Evaluation which was addressed by AT&T Workshop Questions 110 and 111.

BST-FL has not made any information available concerning how orders for complex services and UNEs are distributed across the three possible required/permitted input variations – manual, electronic-manual and electronic-flow through. However recent information filed by BellSouth in a 10/1/99 ex parte at the FCC indicates that the required use of manual ordering, particularly for UNEs, is likely very significant. Thus a significant number of manual test scenarios will need to be designed, implemented and specifically measured to evaluate the parity/efficiency of these processes.

Product Grouping	Manual Orders	Electronic Orders	Total Orders	Percent Manual
Resale Residential	61,274	86,331	147,605	41.5%
Resale Business	5,199	6,201	11,400	45.6%
UNEs (including NP)	22,782	2,359	25,141	90.6%

Data extracted from BST Ex Parte filed at the FCC, Re:CC Docket No. 98-121 on October 1, 1999.

Additionally, historical data indicates that under current interface design, approximately 7% of electronically submitted orders fall out for manual processing. We believe that most of these are associated with electronic-manual handling for complex services and UNEs. Thus, electronic-manual handling test scenarios will need to be designed, implemented and specifically measured to evaluate the parity/efficiency of these processes.

Following this document in Tab3a is an extract from an Affidavit of Ronald M. Pate (BellSouth) filed in Georgia on April 23, 1999. In the text (Paragraphs 21-26) and diagrams (Exhibit RMP-4 and 5), Mr. Pate describes the processes in place for the processing of complex retail services for BellSouth retail customer and for CLECs and their customers. The specific example selected, MultiServe, can only be ordered using manual processes. Examples of electronic-manual manual handling can be found in the Second Louisiana Section 271 Affidavits Mr. Pate references in paragraph 21. These are the processes that the manual and electronic-manual handling scenarios must be designed to test for parity and efficiency.

BellSouth claims that the processes BellSouth applies to CLEC orders for complex services and UNEs provide CLECs with the ability to order such services in the same time and manner as to its (BellSouth's) retail customers or provide CLECs with a meaningful opportunity to compete. However, the Draft MTP does not currently provide for testing that would allow BellSouth's claim to be evaluated. A process for validating this claim should be included in the Draft MTP. Ideally a new Transaction Verification and Validation Test (TVV-n: Ordering for Complex Services and UNEs) should be created utilizing the manual and electronic-manual handing scenarios discussed above. Alternatively TVV-1 could potentially be revised to specifically address this need. In either case changes to several other tests would be required as discussed below.

For the specific proposed tests included in the Draft MTP, the following observations are offered:

- PPR2: Account Establishment and Management Verification and Validation Review does not address the account team's role in the processing of complex orders. Further in its written response to Question 72, KPMG makes the assumption that retail and wholesale account managers do not have equivalent performance expectations and improvement plans. This deficiency should be corrected.

- PPR7: POP Manual Order Process Evaluation would consider manual orders only, but according the KPMG's response to Question 18, would not attempt to evaluate the efficiency of the process. The processing of electronic-manual handled orders is not addressed. Both of these areas should be addressed.

- PPR8: POP Work Center Support Evaluation does not address the processing of electronic-manual orders. This should be included.

- TVV1: POP Functional Evaluation contains language that indicates testing of this process will be attempted, but KPMG's abdication to the Phase II Test Manager in its written responses makes it impossible to determine how the attempt will be implemented. More details and clarity should be included in the Draft MTP.

- TVV3: Order Flow Through Evaluation is impacted because a significant portion of order types BellSouth excludes from flow through by design are associated with complex services and UNEs.

The Master Test Plan must correct each of the deficiencies associated with the inability to perform an evaluation of the processing of orders for complex services and UNEs. Failure to do so will impact the effectiveness and validity of the Draft MTP.

Before the
Georgia Public Service Commission
Atlanta, Georgia

In Re:

Investigation into Development	)	
Of Electronic Interfaces for BellSouth's	)	Docket No. 8354-U
Operations Support Systems	)	
Interim Telecommunications	)	
Certificates of Authority to Provide	)	Docket No. 5778-U
Local Exchange Services	)	
Performance Measurements for	)	
Telecommunications Interconnection,	)	Docket No. 7892-U
Unbundling and Resale	)	
Consideration of BellSouth	)	
Telecommunications, Inc.'s Entry Into	)	
InterLATA Services Pursuant to	)	Docket No. 6863-U
Section 271 of the	)	
Telecommunications Act of 1996	)	

AFFIDAVIT OF RONALD M. PATE

April 23, 1999

Demonstration of "M" Handling

21. BellSouth demonstrated how it handles this type of LSR in its second Louisiana Section 271 application in the Affidavits of William N. Stacy (OSS), Jan Funderburg, and Laura Narducci. In response to Mr. Bradbury's concerns, however, BellSouth provides immediately below another comparison of how LSRs assigned to "M" handling such as complex orders are handled for CLECs and BellSouth's retail customers.

22. It is important to note before engaging in comparisons, that non-discriminatory access does not require that all information and functions for CLECs be electronic and involve no manual handling. Many services, primarily complex services, involve substantial manual handling by BellSouth account teams for BellSouth retail customers. Thus, non-discriminatory access to certain functions for CLECs also legitimately may involve manual processes for these same functions.

23. The manual processes BellSouth uses for complex resold services offered to the CLECs are accomplished in substantially the same time and manner as the processes used for BellSouth's complex retail services. The specialized and complicated nature of complex services, together with their relatively low volume of orders relative to basic exchange services, renders them less suitable for mechanization, whether for retail or resale applications. Complex, variable processes are difficult to mechanize, and BellSouth has concluded that mechanizing many lower-volume complex

16

retail services would be imprudent for its own retail operations, in that the benefits of mechanization would not justify the cost. Since the same manual processes are in place for both CLEC and BellSouth retail orders, the processes are competitively neutral.

24. There are two types of complex services: "Non-designed" and "Designed." A "Non-designed" service is a class of service with a Universal Service Order Code ("USOC") that does not require special provisioning and is served by one central office or wire center. A "Designed" service involves special engineering and provisioning.

25. An example of a "Designed" complex service for which retail handling is not fully mechanized is Multiserv® service, a complex service available to both retail customers and to resellers. In both cases, the pre-ordering and ordering processes are largely manual. Nonetheless, these manual pre-ordering and ordering processes are substantially the same for both retail and CLEC orders. Orders for retail services are handled primarily by the appropriate business unit for retail services – BellSouth Business Systems (BBS) account teams. Orders for CLEC services are handled by the appropriate business unit for CLEC services – CLEC account teams that are part of Interconnection Services (ICS). ICS's account team handling of complex services for CLECs is substantially the same as BBS's account team handling of complex services for BellSouth's retail customers; they both use the substantially same processes as described below.

26.   Attached to this affidavit is Exhibit RMP-4 which depicts the flow of the

process for ordering MultiServ® by CLECs and Exhibit RMP-5 which

depicts the flow of the process for ordering MultiServ® by BellSouth's

retail unit. To perform the pre-ordering activity for complex services,

which is known as a "service inquiry," a systems designer on the

appropriate BBS or ICS account team fills out an extensive paper form

and then provides that form to the project manager for further manual

activities. On approval of either the retail customer or the CLEC, as

appropriate, the paper service inquiry is re-initiated as a firm order, which

also is an extensive paper form with subsequent manual distribution. In

both the retail and the resale cases, the Firm Order Package is manually

handed off to the service center, where paper service order worksheets

are created to assist in initiating service orders in the ordering system. At

that point, orders are typed into the appropriate service order system for

the customer's location, either the Direct Order Entry ("DOE") system (in

North Carolina, South Carolina, Georgia, and Florida) or the Service Order

Negotiation System ("SONGS") (in Alabama, Kentucky, Louisiana,

Mississippi, and Tennessee). This order entry is the same for both the

retail and the resale situations, and thus does not result in a different

customer "experience" in either case. The person who enters the complex

order in BellSouth's systems never has any contact with the end-user

customer, whether the customer belongs to a CLEC or BellSouth. After

the service order is inputted, the account team and project manager are

18

notified by e-mail of the service order numbers and due dates. The account team manually reviews the service order for accuracy and follows up as necessary. These processes, with their substantial reliance on manual handling and paper forms, are common to both retail and CLEC orders. Thus, BellSouth provides to CLECs the ability to order complex services in the same time and manner as it provides to its retail customers.

27.   There are three avenues a CLEC may pursue if it decided to mechanize the ordering of an LSR assigned to "M" handling. If a CLEC, in exercising its independent business judgment, were to reach a different conclusion regarding the costs and benefits of mechanization, it could fund the cost of mechanization for this type of LSR through a bona fide request for additional functionality. A CLEC also could suggest additional capability to an electronic interface through the Electronic Interface Change Control Process ("EICCP"), which was established by BellSouth and the CLECs to determine the priority of the potential changes to BellSouth's electronic interfaces. A third way for a CLEC to suggest changes, such as additional capability to an electronic interface, is via the Ordering and Billing Forum, which sets the standards for ordering. In addition to the processes described above, BellSouth has implemented e-mail service inquiries and ordering for one type of complex service, frame relay, with two CLECs. BellSouth is ready to accept requests from other CLECs for trials for other specific products.

I hereby swear that the foregoing is true and correct in the best of my information and belief.

_____

Ronald M. Pate
Director – Interconnection Services

Subscribed and sworn to before me this 14th day of April _____, 1999.

_____
Notary Public

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

Exhibit. ..o. RMP-4

BST RETAIL: Complex Services – MultiServ

Cust Service Asst (CSA)
RETRIEVES FIRM ORDER FM MAC
accurate & complete

CSA – ORDER ENTRY INTO DOE for MultiServ

SOCS

CSA – PROJECT COORD. / FOC with AE, SC & end user customer

Cust Ops Project Mgr
REVIEW & ASSIGN to Service Consultant

Service Consultant (SC)
ISSUES EOMS SERVICE INQUIRY for MultiServ

SC – REVIEWS DEPT RESPONSES ON SERVICE INQUIRY

SC – ISSUES FIRM ORDER to Major Acct Center (MAC)

SC – PROJECT COORD. / FOC with AE & end user customer

Account Executive PROPOSAL PREPARATION

PROPOSAL PRESENTATION to End User Customer

SIGNED CONTRACT from End User Customer

HAND OFF PACKAGE to Customer Ops Project Manager

Request for Proposal from end user customer

QUICK QUOTE

ORION

RSAG

Color Indicates Manual Processing

Docket No. 981052-TP
Exhibit RMP-1

Exhibit No. RMP-5

BST WHOLESALE: Complex Services – MultiServ

CLEC SUBMITS LSR TO ICS ACCOUNT TEAM

Account Team LSR REVIEW completeness and accuracy

↓

Account Team ISSUES EOMS SERVICE INQUIRY for MultiServ

↓

REVIEW DEPT RESPONSES ON SERVICE INQUIRY

↓

Account Team HAND OFF PACKAGE for Service Center

Cust Service Asst (CSA) RETRIEVES FIRM ORDER accurate & complete

↓

CSA – ORDER ENTRY INTO DOE for MultiServ

↓

SOCS

↓

CSA – SENDS FOC TO ACCOUNT TEAM

↓

Account Team SENDS FOC TO CLEC

CSA – NOTIFIES ICS PROJECT MGR OF PENDING REQUEST

↓

ICS PROJECT MGR
- Verifies order for accuracy
- Verifies personnel are assigned
- Identifies self in WFA log notes
- Monitors critical dates assigned & coordinates problem resolution
- Notifies CLEC if due dates in Jeopardy

↓

ON DUE DATE
ICS Project Mgr notifies CLEC when order activity is complete

---

Color Indicates Manual Processing

Tab 4a: Performance Measures Input into Florida Comments

Performance Measures Background and Recommendations from Florida:

In 1997 Staff determined that BellSouth should use the LCUG SQMs (LCUG) to pattern its performance standards and measures in the interim. Staff believed that the LCUG was far from being comprehensive but that it appeared to be adequate in measuring and monitoring non-discrimination in the interim. Staff Recommendation in Docket 960786-TL, October 22, 1997, page 149.

In Order No. PSC-97-1459-FOF-TL, issued in Docket No. 960976-TL on November 19, 1997, the Commission found that "the LCUG metrics are just a representative sample of a critical few measures that could service as the initial step in an effective measuring plan for non-discrimination. They should not be relied upon indefinitely and solely to determine non-discrimination."

AT&T Position on Performance Measures for a third party test:

The Florida PSC should implement collaboratively-established and/or Commission-ordered performance measurements and standards, prior to the implementation of third party test, that then can be utilized and evaluated in the test. Clearly BellSouth should not be the source of the measures used to evaluate its own performance.

As it is currently constructed, the draft test plan suffers from a major flaw as it does not use any such measures. It instead seeks to subject BellSouth's offered service quality measurements to a test before service quality measurements have been definitively established by the Commission. This is not a flaw that KPMG can remedy. Rather, it is up to the Commission to remedy this situation by establishing performance measures on the basis of a fully developed evidentiary record in accordance with the due process and procedural requirements established under Florida law. Until the Commission establishes this predicate, any testing would be premature. Accordingly, the Commission should not proceed to finalize the test plan or with the testing itself. The draft plan should be amended to specify the collaboratively-established and/or Commission-ordered performance measurements and standards that will be utilized and evaluated in the test, once those appropriate performance measures are established.

AT&T's Recommended Performance Measures Approach:

AT&T continues to support the use of the Local Competition Users Group[1] ("LCUG") metrics as a starting point for monitoring parity and nondiscrimination. Current LCUG measurements are documented in the "Local Competition Users Group, Service Quality Measurements, Version 7.0, found in Tab 4c. These measurements represent the "critical few" measures upon which a truly effective measurement plan can be constructed. Although LCUG has been expanded since the Florida PSC made its findings in 1997, AT&T nonetheless agrees that other useful measures could be applied to BellSouth's performance, and is willing to expand the LCUG measures as the Commission may deem necessary.

Additionally, the comparison of performance results for CLECs to the results for BellSouth's local service operations must be accomplished through generally accepted and documented statistical tests of difference. Graphical displays of results and qualitative discussions of BellSouth and CLEC performance simply are insufficient for the purposes of demonstrating whether BellSouth meets such a fundamental requirement of the Act – nondiscrimination.

The Commission can also look to the cumulative orders of the FCC and the input of the DOJ and find substantial guidance regarding the types of measurements that BellSouth should include in its performance measures plan. In addition, the FCC issued a notice of proposed rulemaking ("NPRM") on performance measurements and is collecting comments to issue a rule. Notice of Proposed Rulemaking, *In the Matter of Performance Measurements and Reporting Requirements for Operations Support Systems, Interconnection, and Operator Services and Directory Assistance*, CC Docket No. 98-56 (rel. April 17, 1998). The NPRM contains many tentative conclusions regarding appropriate performance measurements. These measurements are similar, in many respects, to the key performance measurements advocated by the Local Competition Users Group (LCUG) as documented in Version 7.0 of the group's Service Quality Measurements publication.

---

[1] The Local Competition Users Group ("LCUG") is a group of CLECs that has sought to develop workable solutions to common operational issues related to local market entry. LCUG membership includes AT&T, MCI, Sprint, WorldCom, and LCI International. One subcommittee of LCUG is specifically charged with addressing performance standards. AT&T worked both internally and with the LCUG to develop an appropriate set of performance measurements that would permit CLECs and regulators to assess whether or not ILECs are providing nondiscriminatory support and access to their services and systems.

Deficiencies of Plan's Current Performance Measures Model:

See Tab 4b for details on deficiencies of BellSouth's current performance measures.

Options for Next Steps:

Optimal Solution--

As stated above, AT&T believes that Commission action is necessary to implement its own performance measurements and standards that are established either collaboratively by the industry with Commission oversight, or ordered by the Commission following an appropriate evidentiary proceeding. Either option such should be handled on an expedited basis so as to minimize any potential delay in plan implementation[2].

Alternative approach--

AT&T feels strongly that the solution outlined above would result in the most effective test. However, if the Commission elects not to implement AT&T's recommendation, it could alternatively use BellSouth's SQM as a starting point, with two <u>critical</u> additional steps:

1.   Direct KPMG to conduct the analysis ordered by the Commission of the adequacy and appropriateness of the measures in BellSouth's SQM, as well as issue any necessary exceptions and insure correction, **prior** to using those measures in the test.

2.   Direct KPMG to utilize LCUG, CLEC input and involvement, orders and letters of the FCC and documents from the DOJ, as well as its professional opinion and experience to evaluate the adequacy of the BellSouth's SQM. As stated in Order No. PSC-97-1459-FOF-TL, this analysis should determine whether BellSouth's performance measurement processes "provide the Commission with adequate evidence to make an informed decision regarding nondiscriminatory access to its network and to its OSS." (See Order at page 34)

---

[2] AT&T notes that in the Commission's Order on Process for Third Party Testing in Dockets 960786-TL and 981834-TP, the Commission states "*If and when* we do decide to go forward with Phase II of our staff proposal..." (Emphasis added) (See page 11 of Commission Order)

Update on Louisiana Performance Measures Proceeding

(1) Scope of Audit: In Louisiana the scope of the audit matches the guidance contained within the recent FCC letter to USWest which is as follows:

- Assess whether the raw data being collected is accurate;
- Assess the processes by which the raw data is filtered and transformed into reports;
- Assess consistency of the data collection and processing functions to published performance measurement business rules;
- Assess the adequacy and functioning of internal controls over the data collection processes:
  - personnel access
  - programs
  - program modifications;
- Produce an independent quantitative verification of the reported data to determine that the stated calculations and algorithms have been accurately applied.

The Louisiana audit is estimated to begin in late February and run approximately 90 days. The BellSouth SQM, as implemented on the start date of the audit, will be the target. In addition a number of specific issues have been included in the Audit Plan in an attempt to gather objective information for dispute resolution. These issues as well as overall audit requirements are detailed in the Audit Plan included in the attached Request for Proposals (Tab 4d). The audit does not include a review of a statistical methodology because development work is still underway by the parties, and thus no methodology has been implemented by BellSouth.

(2) The Louisiana Procedural Process and the Next Steps: The LA Workshop process grew out of a LA Performance Measures Order in August, 1998. The Workshops have provided a basis for the on-going clarification of the issues associated with BellSouth's SQM implementation and revisions, the discussions of performance standards (retail analogs and performance benchmarks), the development of a statistical methodology for the determination of meaningful performance differences, and the development of Performance Incentive Proposals (sometimes referred to as "Penalty Plans"). While there has been some resolution of issues and some progress on the development of a statistical methodology through the process, its greatest value has been in the clarification of issues and positions.

The next Workshop will be held in February and a Hearing has been scheduled for May. The Audit Report and the submissions of the parties will be the evidentiary basis for the Hearing with a subsequent Order by the Commission expected in late June or July.

(3)   Using Louisiana Results as a Starting Point for Florida: From the schedule referenced above it would seem unlikely that Florida would want to wait until the Louisiana \Commission acts in June or July.   It is conceivable, however, that Florida might consider use of the Audit Report, which might be available as early as April. Florida also may wish to consider use of BellSouth's 9/15/99 proposed SQM (which contains "enhancements" that are expected to be in place by January 2000) as a replacement for Appendix D of the Florida MTP, if it elects to implement AT&T's alternative approach described above.   And finally, the clarification of issues, documentation of measurement details, learnings and agreements, and progress on a statistical methodology referenced in (2) above would be useful input to any Florida proceeding.

Tab 4b: Deficiencies of BellSouth's Service Quality Measures Performance Measures Plan

The following information illustrates deficiencies in BellSouth's current SQM, (upon which Appendix D of the draft test plan is based), when compared to LCUG requirements. Tab 4b includes the following sections:

A. LCUG measures not provided by BellSouth

B. Insufficient disaggregation or reporting dimensions

C. Inappropriate formulas and calculations

D. Lack of pro-competitive performance standards

E. Insufficient documentation

These issues, as well as any others raised by CLECs, should be addressed and resolved by the Commission in its process of establishing performance measures for use in its third party test.

A. LCUG Measures Not Provided by BellSouth

1. Average Offered Interval

The "average offered interval" shows whether the ILEC offers less favorable timeframes for completions to CLECs than to itself or affiliates. This measure also can be compared to the "mean completion interval" to note disparities in timeframes CLECs are offered but are later changed by the ILEC.

2. Percent Order Accuracy

The "order accuracy" measurement monitors the accuracy of the provisioning work performed by the ILEC in response to CLEC orders.

3. Average Submissions per Order

Measurements of order rejections and resubmissions can highlight problems with ILEC systems or training processes unduly affecting the CLEC.

4. Percent completions/attempts without notice or with less than 24 hours notice

Completion and Completion Attempts include any delivery of service (successful or not successful) for which the CLEC did not receive sufficient prior notification.

5. Percent Service Loss from early Cuts

For hot loop cuts, the same loop is moved from an existing port to what is effectively a different port (The CLEC collocation point). Translation disconnections also are reported if they occur too early or late in a conversion involving local number portability. For each conversion, the ILEC will track whether the cutover time (for facilities and translations) was earlier or later than the committed due date and time that appeared on the FOC.

6. Percent Service Loss from late Cuts

Customers may suffer loss of dial-tone due to early cutovers (ILEC takes down loop before scheduled date for CLEC loop to be ready) in cases where interim number portability is involved. With Permanent Number Portability (PNP), customers may not receive inbound calls if the ILEC (1) does not provide timely disconnection of the ILEC's old translations for routing the number or (2) does not employ or prematurely takes down the 10-digit trigger designed to ensure proper routing during the transition. Service may also be disrupted in conversions from ILNP-to-PNP or through premature disconnects in coordinated cutovers of UNE combinations. The percentage of early and late cutovers must be monitored to ensure that CLECs' customers are not disproportionately losing dialtone or having inbound calling blocked.

7. Mean Jeopardy Interval for Maintenance

The CLEC needs jeopardy notification if repair commitments are not going to be met.

8. Call Abandonment Rate

The Call Abandonment Rate is based on the number of calls received by the call distribution system of the ILEC center for the reporting period, regardless whether the call actually is transferred to ILEC personnel for processing. In addition, a count is accumulated of all calls that are subsequently terminated by the calling party or dropped due to equipment failure before transfer to the service agent for processing.

9. Percent usage accuracy

The records delivered by the ILEC must simultaneously meet the standards relating to content, accuracy and formatting in order to be counted as accurate so that data is usable and end-user billing rendered by CLEC is accurate.

10. Average Time to proof DL

CLECs must be provided the same opportunity to review directory listing updates to catch any errors before publication in white pages directories.

11. Meantime to notify CLEC/Network Outages

ILECs must provide the CLECs with timely and detailed information (pertaining to a network incident) to afford CLECs the opportunity to make prudent business decisions regarding management of their own customer base and networks.

12. Network Performance Parameters

The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNE combinations are employed, will be heavily influenced by the underlying quality of the ILEC network performance. Customers experience the network quality of the service provider each time services are used. This metric, when collected for both the CLEC and ILEC and then compared, will help show whether CLEC network performance is at least at parity with ILEC network performance.

13. Element Functional Availability

As CLECs use individual elements and element combinations to deliver unique services, UNE functionality must operate properly to ensure that those elements support quality CLEC retail services. This measure monitors individual network elements or element combinations.

14. Timeliness of Element Performance

As CLECs use individual elements and element combinations to deliver unique services , it is essential that the UNE functionality operates in a timely manner because of the critical role played by such elements in providing quality retail services.

B. Insufficient Disaggregation or Reporting Dimensions

LCUG Requirements	BellSouth Offering
Pre-Ordering 1. Pre-Order Due Date Reservation (if separate transaction from Appointment Scheduling) 2. Feature Function Availability 3. Facility Availability (if separate transaction from Feature/Function Availability) 4. Qualification of Loops for Advanced Digital Services 5. Street Address Validation 6. Service Availability Information (if separate transaction from Feature/Function Availability) 7. Appointment Scheduling 8. Customer Service Records 9. Telephone Number 10. Rejected or Failed Queries (regardless of type)	*1. BellSouth's SQM does not provide this measure* 2. Provides 3. Provides for resale *4. Does not provide* 5. Provides 6. Provides for resale 7. Provides 8. Provides 9. Provides *10. Does not provide*
Service Order Types New Service Installations Service Migrations Without Changes Service Migrations With Changes Local Number Porting Inside Move Outside Move Records Change Feature Changes Service Disconnects Translation Disconnects Standalone Directory Listing (DL) Standalone Directory Assistance (DA) Listing Standalone DL & DA Activity	BellSouth provides by dispatch and non-dispatch.
Service Types Resold Residence POTS Resold Business POTS Resold BRI ISDN Resold PRI ISDN Resold Centrex/Centrex-like Resold Analog PBX trunks	POTS – Residence POTS—Business ISDN/*Does not disaggregate further* **Centrex** PBX

Resold DID Trunks Resold Voice-Grade Private Line Resold DS1 Services Resold DS3 Services Resold >DS3 Services Other Resold Services	Design/*Appears to aggregate other resold services here*
UNE Platform (at least DS0 loop + local switch + transport elements) UNE Channelized DS1 (DS1 loop + multiplexing) Enhanced Extended Loops (Loop + transport)	Combos (Under development)
Unbundled or UNE-derived 8 dB Analog Loops Unbundled or UNE-derived 2-wire Digital Loops Unbundled or UNE-derived 4-wire Digital Loops Unbundled or UNE-derived ADSL Loops Unbundled or UNE-derived HDSL Loops Unbundled or UNE-derived xDSL Loops Other Unbundled or UNE-derived Loops	UNE 2 wire loop with INP(Design and Non-design) UNE 2 wire loop without INP(Design and Non-design UNE Other with INP(Design and Non-design) UNE Other without INP(Design and Non-design UNE Other (Design and Non-Design)
UNE Analog Switch Port (line side) UNE BRI Capable Switch Port (line side) UNE DS1 Switch Port (line side) UNE PRI Switch Port (trunk side) UNE DID-capable Switch Port (trunk side) UNE Message Trunk Port	Switching (Under development)
UNE Dedicated DS0 Transport UNE Dedicated DS1 Transport UNE Dedicated DS3 Transport Common Transport	Local Transport (Under Development)
Interconnect Trunks (DS0s, DS1s and DS3s, Two-Way Trunking, Inbound Augments, separately)	Local Interconnection Trunks
ILNP PNP ILNP to LNP Conversions	Number Portability (Under Development) /*Unclear if this includes INP*

LCUG Requirements	BellSouth Offering
Maintenance Query Types Create (or confirm logging of) a Maintenance Request Obtain Status Obtain Test Results Cancel Request Rejected of Failed Queries (regardless of type) Clearance Notification Closure Notification	**CRIS** DLETH DLR OSPCM LMOS LMOSUPD MARCH PREDICTOR SOCS LNP
Order Rejection Reason Codes Invalid Address Address Errors End User Name Doesn't Match ILEC Records Incorrect Directory Assistance Listing/Due Date Duplicate PON Winback (Customer Returned to ILEC) ILEC System Problem TN Already Disconnected	None
Transmission Quality Parameter Subscriber Loop Loss Signal to Noise Ratio Idle Channel Circuit Noise Loop-Circuit Balance Circuit Notched Noise Attenuation Distortion	None
Collocation Provisioning Types Physical within CO (space available at time of request) Physical within CO (space created in response to request) Physical outside of CO (space available at time of request) Physical outside of CO (space created in response to request) Virtual Backhauling to neighboring CO	Physical Virtual

Access to GR-303 compatible concentration equipment (leased UNE alternative) Other alternatives to physical	

LCUG Requirements	BellSouth Offering
Databases and Switch Tables E911/911 ALI, Selective Router MSAG LIDB OS/DA DL NXX tables at CO for call completion and NXX routing NXX tables at tandem for call completion and NXX routing	 E911 OS DA
Network Reportable Incidents ***Switching (Local/Tandem):*** Complete loss of call processing capability from a switch (host/remotes) lasting = > 2 minutes or longer. Network Incident (Loss of Dial Tone) affecting one thousand access lines. Media Interest: Any interruption or outage that may cause public or news media attention. ***Transport:*** <u>EQUIPMENT AND/OR FACILITY FAILURES</u> Local (200 or more working pairs affected, causing loss of dial tone) Toll/EAS (Isolation of an entire exchange) > 2 minutes. Fiber (Any working fiber providing customer service that fails without protection) lasting > 2 Minutes. A transport equipment failure (E.G. DACS) > 2 minutes. <u>BROADBAND</u> Frame Relay (A failure of one or more channelized T1 carrier systems or two or more non-channelized T1 carrier systems. ATM (A failure of one OC3 or two DS3s) SMDS (A failure of one DS3 or four T1s) Packet Switching (Any failure of an access module (AM) or resource module (RM)	None

NARROWBAND	
5 T1 carrier systems (within a switch) Fiber (Any working fiber providing customer service that falls without protection) Media Interest: Any interruption or outage that may cause public or news media attention. *SS7:* Loss of mated pair of STP or SCP > 2 minutes Media Interest: Any interruption or outage that may cause public or news media attention ***Trunking:*** Loss of intra/interoffice calling lasting > 2 minutes. (E.G. Toll and/or EAS) Media Interest: Any interruption or outage that may cause public or news media attention *911:* A central office isolation from the E911 network for = > 2 minutes or longer. Loss of 25% or more of the trunking capabilities from an E911 tandem to the PSAPs it serves for = > 2 minutes or longer (e.g. translations, trunking frame failure, etc.) A PSAP isolation from the E911 network for = > 2 minutes or longer (e.g. translations, trunking problems, etc.) A transport cable failure that isolates a central office from the E911 network; (Local switch to the E911 tandem) transport cable failure that isolates a PSAP from the E911 tandem;- A transport cable failure that results in the loss of 25% or more of the trunks/circuits (aggregate from an E911 tandem to the PSAPs served by that Tandem; A transport equipment failure that isolates a central office from the E911 network; A transport equipment failure that isolates a Public Safety Answering Point (PSAP) tandem.; or A transport equipment failure that results in the loss of 25% or more of the trunks/circuits (aggregate) from an E911 tandem to the PSAPs served by that tandem. **Federal Government, equipment or facility affecting 5 or more military special communication, isolations of FAA location**	

or air ground facilities.- State and local agencies interruptions seriously affecting service to police, fire departments, hospitals, press, military, PBS's	
Trouble Types Inside (Central Office) Dispatch - Out of Service Outside Dispatch - Out of Service Inside Dispatch – Degraded Service Outside Dispatch – Degraded Service No Access or No Trouble Found NXXs not loaded properly by ILEC NXXs not loaded properly by party other than CLEC/ILEC All Other Troubles *"Out of Service" means that the customer has no dial tone.* **"Dispatch" means that ILEC repair personnel must be dispatched to a location outside an ILEC building (to customer premises or other off-site facilities) to resolve the trouble.**	Dispatch and Non-Dispatch
Geographic Minimally down to MSA, lower (to CO level) if ILEC reports data internally to that level	MSA for certain measures only in Louisiana only, all other by state and region, or region only.
Volume Interval affecting volumes should be reported separately. See BellSouth interval guide.	Less than 10 lines and greater than 10 lines for certain measures only, e.g. not for FOCs.

C. Inappropriate formulas and calculations

In many cases, BellSouth has agreed to measure an area of performance, but has constructed its formula in such a way to mask discrimination. Examples include:

% appointments missed – which only measures the day of the appointment, not the time, rendering this a meaningless measurement for cut-overs of UNEs.

% flow through of orders- which excludes a myriad of orders that BellSouth has failed to design to flow through, again rendering this measurement of flow through meaningless.

Status notice interval measurements such as FOC, rejection, jeopardy, completion notice, etc. for which the end time of the calculation formula is not when the CLEC receives the notice (the relevant timeframe), but when BellSouth creates the notice and/or launches its distribution from its originating database.

D. Lack of Pro-competitive Performance Standards
(Analogs and benchmarks)

Among the key issues remaining in this area, BellSouth has not yet provided analogous retail data for many key measures such as rejections, FOCs, completion notices, and jeopardies, and has ceased to provide retail data for its flow-through measure.

Additionally, BellSouth and the CLECs have not reached agreement on appropriate analogs or benchmarks for UNEs, as well as other areas of measurement.

E. Insufficient Documentation

The CLECs and Louisiana PSC staff have been working in the Louisiana workshops to have BellSouth clarify and document its performance measurements methodology in its SQM. This has resulted in improvements and new versions of its SQM, the most recent being a new version of the 09/15/99. The CLECs are still asking for additional clarification and detail via the workshops and business to business negotiations, as well as seeking additional clarification and details through an independent audit.

LOCAL COMPETITION USERS GROUP (LCUG)

SERVICE QUALITY MEASUREMENTS (SQMs)

August 28, 1998
Membership: AT&T, Sprint, MCI, LCI,
WorldCom

Version 7.0

Service Quality Measurements
--Table of Contents--

Background:

On August 8, 1996, the Federal Communications Commission released its First Report and Order (the Order) in CC Docket No. 96-98 (Implementation of the Local Competition Provisions of the Telecommunications Act of 1996). The Order establishes regulations to implement the requirements of the Telecommunications Act of 1996. Those regulations are intended to enable potential competitive local exchange carriers (CLECs) to enter and compete in the local telecommunications markets. One requirement found to be "absolutely necessary" and "essential" to successful entry is that the incumbent local exchange carriers (ILECs) provide nondiscriminatory access to their operations support systems (OSSs). Many variations of interim OSS GUIs (graphic user interfaces) and electronic gateways have been or are being offered by the ILECs. These interim systems have not provided the capability for the CLECs to provide the same customer experience for their customers as compared to what the ILECs do for their customers. The availability, timeliness and accuracy of information processed by the ILEC for pre-ordering, ordering, provisioning, maintenance and repair, unbundled elements, and billing have not, to date, been satisfactory. Service delivery problems exist regardless of whether total service resale (TSR), unbundled elements, or interconnection are utilized. Final solutions for application-to-application real time system interfaces are elusive because of the complexity, the diversity of committed implementation schedules, and lack of or inconsistent use of industry guidelines.

On February 12, 1997, the Local Competition Users Group (LCUG) issued its "Foundation For Local Competition: Operations Support Systems Requirements For Network Platform and Total Services Resale." The core principles contained in the document are: Service Parity, Performance Measurement, Electronic Interfaces, Systems Integrity, Notification of Change, and Standards Adherence. Each of these is significant to ensure CLEC customers can receive at least equal levels of service compared to those the ILEC provides to its own customers.

The LCUG group indicated in its Foundation document that is was essential that a plan be developed to measure the ILECs performance for all the OSS categories (e.g. pre-ordering, ordering and provisioning, maintenance and repair, network performance, unbundled elements, operator services and directory assistance, system performance, service center availability and billing). To that end, an LCUG sub-committee was formed with a charter to address measurements and metrics. The subcommittee jointly developed a comprehensive list of potential measurements, which was shared among the team members for review. Each committee member researched an assigned measurement group for the purpose of proposing consolidation and other modifications. The subcommittee discussed each measurement and considered existing regulatory requirements (minimum service standards) as well as good business practices in arriving at the recommended measurement and extent of detail to be reported. Service Quality Measurement (SQM) benchmark levels of performance were established to provide a nondiscrimination standard in the absence of directly comparative ILEC results. Establishing precise benchmark levels was difficult since ILECs have been reluctant to share actual performance results. The benchmarks, therefore, were based upon best of class performance and an assessment of the necessary performance to support a meaningful opportunity for CLECs to compete. SQM benchmarks may change if the ILECs share historical and/or self-report current results.

Measurement Plans:

A measurement plan, capable of monitoring for discriminatory behavior, must incorporate at least the following characteristics: 1) it permits direct comparisons of the CLEC and CLEC industry experience to that of the ILEC through recognized statistical procedures; 2) it accounts for potential performance variations due to differences in service and activity mix; 3) it measures not only retail services but experiences with UNEs and OSS interfaces; and 4) it produces results which demonstrate that nondiscriminatory access to OSS functionality is being delivered across all interfaces and a broad range of

resold services, unbundled elements and interconnection capabilities. The measures employed must address availability, timeliness of execution, and accuracy of execution.

It is essential that the CLECs be able to determine that they are receiving at least equal treatment to that ILECs provide to their own retail operations or their local service affiliates. Benchmarks (performance standards) that are either negotiated by the CLECs and ILECs, or ordered by Commissions, need to clearly demonstrate that new service providers are receiving service on reasonable terms that affords an efficient CLEC a meaningful opportunity to compete.

This document discusses measurements at both a summary level (Executive Overview) and at a level suitable for starting the implementation process (Measurement Detail).

Service Quality Measurements
Business Rules

Business Rules

Test for Parity and Compliance with the Act:

Across all reporting dimensions, performance results (mean, proportion, or rate) should be collected for the ILEC's retail versus wholesale performance. Using a statistical model acceptable to CLECs, these results should be compared to confirm or reject an assumption of parity (in performance results and variance) for each dimension.[1] These individual parity comparisons should result in a monthly determination of the ILEC's compliance with its section 251 nondiscrimination obligations. The ILEC's record of compliance over some period of time will be used as one element in making a determination of compliance with section 271.[2]

ILEC Results Are Not Reported Or Results Are Incomplete:

The mean, proportion or rate result for CLEC must be compared and a determination made that the CLEC result is no worse than the benchmark performance level. The benchmark performance level to be used in the comparison is the result produced via special study by an ILEC (as described below) or, in the absence of such a study result, either the LCUG default performance benchmarks or other applicable state standards as may be determined by the appropriate regulatory agency.

Benchmarking Study Requirements:

The ILEC should produce a study supporting a benchmark performance level whenever a reasonable ILEC retail analog does not exist. When the ILEC performs a benchmarking study, it must be based upon equivalent experiences of that ILEC and conform to the following minimum requirements: (1) a benchmark result is provided for each reporting dimension described for the measurement; (2) the mean, standard error, and number of sample points are disclosed for each benchmark result; (3) the study process and benchmark are fully disclosed and independently audited; (4) update to the benchmark result will occur whenever changes may reasonably be expected to affect the study results and reviewed every six months for changes in the business climate that could significantly affect the benchmark. Unless directly ordered by the appropriate regulatory commission, no ILEC benchmark should be utilized without the mutual agreement of the CLECs impacted by the use of the benchmark.

Reporting Expectations and Report Format:

CLEC results for the report month are to be shown in comparison to the ILEC retail result for the same period with an indication, for each measurement, where the CLEC result is lesser in quality compared to the ILEC (based upon the test for parity described in the preceding). Such detailed results should be reported only to the CLEC unless written permission is provided to do otherwise. Furthermore, reporting to the individual CLECs should include, for each measure, a representation of the dispersion around the average (mean) of the measured results for the reporting period (e.g. percent of 1-4 lines installed in the 1st day, 2nd day, 3rd day, and > 10 days, etc.) In summary, the ILEC should also report separately on its performance for each reporting dimension as provided to: (1) its own retail customers, (2) any of its affiliates that provide local service, (3) competing carriers (CLECs) in the aggregate, and (4) the individual CLEC receiving the report. The "affiliate" category above includes any ILEC affiliate that purchases local service for resale or purchases unbundled network elements from the ILEC. Performance results of the ILEC and ILEC affiliates would be provided to CLECs as proprietary information that could be used for legitimate business purposes other than marketing-type activities.

Delivery of Reports and Data:

Reports should be made available to CLECs preferably by the 5th day following the close of the calendar report month or on an alternative schedule, which may be mutually agreed to between

---

[1] The details of this statistical model used to accept or reject an assumption of parity are found in LCUG's "Statistical Tests For Local Service Parity v1.0" white paper.

[2] The details of the methodology utilized to make a monthly 251 compliance determination as well as the requirements for 271 compliance are found in LCUG's "Local Service Non-Discrimination Compliance and Compliance Enforcement v1.0" white paper.

CLECs and the ILEC. If requested by the CLEC, data files of raw data supporting the performance reports are to be transmitted by the ILEC to the CLEC on the 5th scheduled business day pursuant to mutually acceptable format, protocol and transmission media. Likewise, individual CLEC reports should be considered proprietary and competitively sensitive. As such, no CLEC should receive information about another CLEC (other than a CLEC affiliate of an ILEC).

Disaggregation:

Performance measurements reporting should be disaggregated to ensure parity comparisons are meaningful. The reporting dimensions in Appendix A provide LCUG's recommended disaggregation level for each Performance Measurement. The appropriate disaggregation across all ILECs should be comparable to the requirements in Appendix A. However, LCUG recognizes that the ILECs current method of operation may be unique and thus require modifying the disaggregation to be ILEC specific. The mutually agreed disaggregation must be consistent with the overall requirement of ensuring meaningful parity comparisons that do not obscure actual performance result differences.

Measurement data should be reported in a manner consistent with natural geographic and operational areas that allow prudent operational management decisions to be made and that do not obscure actual performance levels. Currently, ILECs report at levels as discrete as individual exchanges (Central Offices) and as aggregated as the ILEC Region.

Reporting at too high a level of geographic aggregation, for example, statewide (except for a LEC that may serve only a limited portion of a state) or LATA-wide (in states where LATAs encompass large geographic areas) can mask underlying differences in performance so as to make meaningful parity determinations unlikely. For example, if local competition exists only in one metropolitan area of a state, statewide measurement and reporting could obscure that an ILEC is providing significantly superior performance to its own metropolitan retail customers because of its below-average performance in non-competitive parts of the state.

Although an ILEC may claim that it cannot disaggregate below statewide/LATA reporting levels, it knows its performance in various regions within a state so that it can evaluate its operation and performance personnel, and allocation of resources within these smaller geographic units.

ILECs that currently report (whether externally or internally) performance in geographic units smaller than a state or LATA should continue to use those units. For ILECs that have not established such subdivisions, MSAs (metropolitan statistical areas) may be an appropriate level of geographic disaggregation.

Further, performance interval results are often affected by the volume of service requested by the CLEC. For instance, a request for 30 or more telephone numbers or an order for 100 lines will likely lead to a longer performance interval than a request for a single phone number or a single line installation. Hence, it is critical that interval-affecting volumes be reported separately to accurately depict ILEC performance in handling both the smaller and larger volume requests. The volume thresholds should be mutually agreed to by ILECs and CLECs and disaggregated sufficiently to allow a meaningful comparison of an ILEC's retail versus wholesale performance (e.g. Mean Completion Interval for 1-10 lines, 10-30 lines and greater than 30 lines).

Verification and Auditing:

By request of one or more CLECs, an audit of data collecting, computing and reporting processes–as well as related business processes–must be permitted by the ILEC. The ILEC also must permit an individual CLEC to audit or examine its own results pursuant to terms no more restrictive than those established between the CLEC and the ILEC in their interconnection agreement for the relevant operating area.

Service Quality Measurements
Business Rules

During implementation of the measurement reporting, the validation of data collection, measurement result computation and report production will be necessary. The ILEC must permit such validation activities. It may not subsequently contend that such activities constitute an audit under the terms of the measurement plan or the CLEC's interconnection agreement.

Adaptation:

Technology, market conditions and industry guidelines/standards continue to evolve. LCUG reserves the right to modify the content of this document as necessary to reflect such changes.

Service Quality Measurements
Executive Overview

Executive Overview:

- Summarizes the business implications of each measurement function
- Quickly lists each measurement and its reporting dimensions

Ordering and Provisioning (OP)

Function:	
Order Completion Intervals	
Business Implications:	

- When the CLEC commits to a due date for service delivery, the customer plans for service availability at that time and will be dissatisfied if the requested service or feature is not delivered when promised.
- The "average completion interval" metric monitors the time required by the ILEC to deliver integrated and operable service components requested by a CLEC, regardless of whether total service resale or unbundled network elements are employed.
- When the service delivery interval of the ILEC is measured for comparable services, then conclusion can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers.
- The "average completion interval" and "percent completed on time" also may prove useful in detecting developing network capacity problems.
- The "average offered interval" shows whether the ILEC offers less favorable timeframes for completions to CLECs than to itself or affiliates. This measure also can be compared to the "mean completion interval" to note disparities in timeframes CLECs are offered but are later changed by the ILEC.

Measurements:	Results Detail:
• Average Completion Interval • % Orders Completed on Time • Average Offered Interval	• Company • Service Type • Order Activity Type • Geographic Scope • Volume Category

Function:	
Order Processing Quality	
Business Implications:	

- Customers expect that their service provider will deliver precisely the service ordered and all the features specified.
- The "order accuracy" measurement monitors the accuracy of the provisioning work performed by the ILEC in response to CLEC orders.
- Measuring the percent of mechanized order flow through is critical to reducing errors and inefficiency caused by ILEC rekeying CLEC orders on behalf of customers.
- Measurements of order rejections and resubmissions can highlight problems with ILEC systems or training processes unduly affecting the CLEC.

Measurements:	Results Detail:
• % Order Accuracy • % Mechanized Order Flow Through • % Order Rejections • Average Submissions Per Order	• Company • Interface Type • Service Type • Order Activity Type • Volume Category

Service Quality Measurements
Executive Overview

Function:
Order Status

Business Implications:
• When customers call their service provider, they expect to be able to promptly get information regarding the progress on their orders. • When changes must be made, such as to the expected delivery date, customers expect that they will be immediately notified so that they may modify their own plans. • The order status measurements, when compared to the ILEC result, will indicate whether the CLEC has timely access to all the information needed to notify its customers promptly when changes and rescheduling are required.

Measurements:	**Results Detail:**
• Reject Interval • FOC Interval • Jeopardy Interval • Completion Notice Interval • % Completions/Attempts Without Notice or With Notice Less Than 24 Hours • % Jeopardies	• Company • Interface Type • Service Type • Order Activity • Geographic Scope

Function:
Coordinated Cutovers

Business Implications:
• Customers must not be subjected to unscheduled service disruptions because of lengthy or uncoordinated cutovers of loops with interim or permanent number portability. • Customers have suffered loss of dialtone due to the early cutover of trunks with interim number portability. Late ILNP facilities conversions and PNP conversions of translations by ILECs also can cause unscheduled disruptions in service. • The "coordinated cutover" measurements capture the extent to which CLEC customers face more losses in dialtone or call blocking due to mishandling of such cutovers.

Measurements:	**Results Detail:**
• Average Coordinated Conversion Interval • % Service Loss from Early Cuts • % Service Loss from Late Cuts	• Company • Service Types • Order Activity • Geographic Scope • Volume Category

Function:
Held Orders

Business Implications:
• Customers expect that work will be completed when promised. • There must be assurances that the average period that CLEC orders are held, due to a delayed completion, is no longer for CLEC than ILEC orders.

Measurements:	**Results Detail:**
• Held Order Interval • % Orders Held ≥ 90 Days • % Orders Held ≥ 15 Days	• Company • Service Type • Reason for Hold (no facilities, no equipment, workload, other) • Geographic Scope

Maintenance and Repair (MR)

Function:	
Time To Restore	
Business Implications:	
• Customers expect prompt restoral of service to the normal operating parameters whenever troubles are detected. • The longer the time required to correct a service problem, the greater the customer dissatisfaction • Failure to provide parity in jeopardy notices regarding maintenance appointments can cause customers great inconvenience, particularly for delivery of service through collocations and UNEs when massive coordination of vendors, technicians, translations specialists and other technicians are involved. Customers will not tolerate a provider that cannot at least notify them when a maintenance or trouble handling appointment cannot be met.	
Measurements:	**Results Detail:**
• Time to Restore • Average Jeopardy Notice Interval for Maintenance Appointments/Trouble Handling	• Company • Service Type • Trouble Type • Geographic Scope

Function:	
Frequency of Repeat Troubles	
Business Implications:	
• This measurement, when gathered for both the ILEC and CLEC, can establish whether or not CLECs are competitively disadvantaged (vis-à-vis the ILEC) as a result of experiencing more frequent occurrences of customer troubles not being resolved on the first repair attempt. Differences in this measure may indicate that the CLEC is receiving inferior maintenance support in the initial resolution of troubles or, in the alternative, it may indicate that the network components supplied are of inferior quality.	
Measurements:	**Results Detail:**
• Repeat Trouble Rate	• Company • Service Type • Trouble Type • Geographic Scope

Service Quality Measurements
Executive Overview

Function:

Frequency of Troubles

Business Implications:

- Customers demand high quality service from their supplier, and differentials in supplier performance are quickly recognized throughout the market place.
- When measured for both the ILEC and CLEC and compared, this metric shows whether CLECs are competitively disadvantaged, compared to ILECs, as a result of experiencing more frequent incidents of trouble reports.
- Disparity in this measure may indicate differences in the underlying quality of the network components supplied.

Measurements:	Results Detail:
• Trouble Rate • % Troubles in 30 Days of New Installations and Other Order Activity	• Company • Geographic Scope • Service Type • Trouble Type

Function:

Estimated Time To Restore Met

Business Implications:

- When customers experience trouble on working services, they naturally expect the services to be restored within the time frame promised.
- When this measure is collected for the ILEC and CLEC and then compared, it can be used to establish that CLECs are receiving equally reliable (as compared to the ILEC operations) estimates of the time required to complete repairs.

Measurements:	Results Detail:
• % Customer Troubles Resolved Within Estimate	• Company • Service Type • Trouble Type • Geographic Scope

Service Quality Measurements
Executive Overview

General (GE)

Function:	
Systems Availability	
Business Implications:	

- Dependable access to essential business functionality, supported by OSS of the ILEC, is absolutely essential to CLEC operations.
- This measure monitors whether such OSS functionality is at least as accessible by the CLEC as by the ILEC.

Measurements:	Results Detail:
• % System Availability	• By Function Interface • Company • Business Period

Function:	
Center Responsiveness	
Business Implications:	

- When CLECs experience operational problems dealing with ILEC processes or interfaces, prompt support by the ILEC is required in order to ensure that CLEC customers are not adversely impacted
- Any delay in responding to CLEC center requests for support (e.g., request for a vanity telephone number) will, in turn, adversely impact the CLEC retail customer who may be holding on-line with the CLEC customer service agent.
- This measure monitors whether the ILEC's handling of support calls from CLECs is at least as responsive as the ILEC's handling of calls from its retail customers seeking assistance (e.g., calling the business office of the ILEC or calling the ILEC to report service repair issues).

Measurements:	Results Detail:
• Mean Time to Answer Calls • Call Abandonment Rate	• By Support Center Provided

Function:	
Average Response Interval for Real-Time OSS Queries	
Business Implications:	

- The CLEC customer service agent must determine the availability of desired features, likely service delivery intervals, telephone number(s) to be assigned and the validity of the street address information while the customer (or potential customer) is on the line.
- It is critical that the CLEC employees be perceived as equally competent, knowledgeable and fast as ILEC customer service agents.
- This measure is designed to monitor the time required for CLECs to obtain the pre-ordering information necessary to establish and modify service and maintenance information necessary to handle trouble resolution activities.
- Comparison to the ILEC results allow conclusions regarding whether CLECs have an equal opportunity to deliver a comparable customer service experience when a retail customer calls with a service inquiry.

Measurements:	Results Detail:
• Average Response Interval for OSS Query Information	• Query Type (Pre-Ordering and Maintenance) • Interface Type for Each Functional Area

Billing (BI)

Function:	
Timeliness Of Billing Record Delivery	
Business Implications:	
• Regardless whether the billing is for retail customer or exchange access service, the timing of ILEC delivery of billing records must provide CLECs with the opportunity to deliver timely bills in as timely a manner as the ILEC; otherwise artificial competitive advantage would be realized by the ILEC.	
Measurements:	**Results Detail:**
• Mean Time to Provide Recorded Usage Records • Mean Time to Deliver Invoices	• Company • Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)

Function:	
Accuracy of Billing Records	
Business Implications:	
• The accuracy of billing records affects the accuracy of the billing ultimately delivered to local service customers, whether retail local service or exchange access service customers. • Billing for the elements from which CLEC services are constructed must be validated to assure that only correct charges are paid.	
Measurements:	**Results Detail:**
• % Invoice Accuracy • % Usage Accuracy	• Company • Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)

Operator Services/Directory Assistance & Listings (OS, DA & DL)

Function:
Speed To Answer

Business Implications:
• The speed of answer delivered to CLEC retail customers, when the ILEC provides Operator Services or Directory Services on behalf of the CLEC, must be no slower than the speed of answer that the ILEC delivers to its own retail customers of equivalent local services. • CLECs need adequate time to review the accuracy of directory listings before publication. The opportunity to check for errors should be available at parity with that afforded the ILEC or its affiliates regardless of whether manual or electronic interfaces are available.

Measurements:	Results Detail:
• Mean Time to Answer • Average Time Provided To Proof Updated Listings Prior to Publication	• Company • Operator Services by Center • Directory Service by Center • Directory Listings by Directory Note: OS/DA Speed to Answer is to be CLEC-specific if technically feasible.

Service Quality Measurements
Executive Overview

Network Performance (NP)

Function:	
Network Performance	
Business Implications:	
• The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNE combinations are employed, will be heavily influenced by the underlying quality of the ILEC network performance. • Customers experience the quality of the service provider each time services are used.	
Measurements:	**Results Detail:**
• % Call Completion (Inbound and Outbound) • Mean time to notify CLEC of a Network Incident/Outage • Transmission Quality	• Trunk Type • Switch • Company • Geographic Scope • Reportable Incident

Collocation Provisioning (CP)

Function:	
Timeliness of Collocation Provisioning	
Business Implications:	

- Timely responses about the availability and price of collocation space or alternatives where space is not available or high priced is critical for CLEC financial planning on expansions beyond the calling areas of its switches.
- Timely provisioning of collocation arrangements enables CLECs to keep to business plans for entering new service areas.

Measurements:	Results Detail:
- Mean Time To Respond to Collocation Request - Mean Time To Provide Collocation Arrangement % Due Dates Missed	- Company - Collocation Type - Geographic Scope

Database Updates (DU)

Function:	
Database Update Timelines and Accuracy	
Business Implications	
• Timely and accurate database updates are critical to customers receiving prompt emergency assistance at correct locations when they dial 911; customers and friends obtaining correct dialing information from operators or telephone directories; and callers seeking correct information about acceptance of collect or third-party-billed calls. • Timely and accurate loading of CLECs' NXXs enable proper completion and billing of all calls, on-time launch of new facilities-based service, and proper emergency routing of calls for emergency assistance.	
Measurements:	**Results Detail:**
• Average Update Interval • % Update Accuracy	• Company • Database Type

Service Quality Measurements
Executive Overview

Interconnect / Unbundled Elements and Combos (IUE)

Function:	
Availability of Network Elements	
Business Implications	
• Because CLECs use individual elements as well as element combinations to deliver unique services, it is essential that the UNE functionality operate properly due to the crucial role played by such elements in providing quality retail services.	
• This measure monitors individual network element or element combinations, that do not have an apparent retail analog, to assure that CLECs have a meaningful opportunity to compete through access to and use of an element (or combinations) functionality.	
Measurements:	**Results Detail:**
• Function Availability	• By Unique UNE or UNE Combination Requested by CLEC

Function:	
Performance of Network Elements	
Business Implications:	
• As CLECs use individual elements (as well as element combinations) to deliver unique services, it is essential that the UNE functionality operates in a timely manner because of the crucial role played by such elements in providing quality retail services	
Measurements:	**Results Detail:**
• Timeliness of Element Performance	• By Unique UNE or UNE Combination employed (e.g. LIDB Query time out)

Service Quality Measurements
Formula Quick Reference

Formula Quick Reference Guide

Measurement Designation:	Measurement Name:	Measurement Formula:
Ordering and Provisioning (OP)		
OP-1	Average Completion Interval	Average Completion Interval = Σ [(Completion Date & Time) - (Order Submission Date & Time)] /(Count of Orders Completed in Reporting Period)
OP-2	% Orders Completed on Time	% Orders Completed on Time = (Count of Orders Completed within ILEC Committed Due Date) / (Count of Orders Completed in Reporting Period) x 100
OP-3	Average Offered Interval	Average Offered Interval = Σ [(Committed Due Date & Time) – (Date & Time of Receipt of valid Service Request)]/(Number of Committed Due Dates)
OP-4	% Order Accuracy	% Order Accuracy = (Σ Orders Completed w/o Error)/ (Σ Orders Completed) x 100
OP-5	% Mechanized Order Flow Through	% Mechanized Order Flow Through = [(Total Number of Orders Processed Without Manual Intervention)/(Total Number of Orders Completed)] x 100
OP-6	% Orders Rejected	% Orders Rejected = [Number of Orders Rejected Due to Error or Omission/Number of Orders Received by ILEC During Reporting Period] x 100
OP-7	Average Submissions Per Order	Average Submissions Per Order = Σ[(Number of Firm Order Confirmations) + (Number of Rejections Issued)/(Number of Firm Order Confirmations
OP-8	Reject Interval	Reject Interval = Σ [(Date and Time of Order Rejection) - (Date and Time of Order Receipt or Acknowledgment)]/(Number of Orders Rejected in Reporting Period)
OP-9	FOC Interval	FOC Interval = Σ [(Date and Time of Firm Order Confirmation) - (Date and Time of Order Acknowledgment)]/(Number of Orders Confirmed in Reporting Period)
OP-10	Jeopardy Interval	Jeopardy Interval = Σ [(Date and Time of Committed Due Date for the Order) - (Date and Time of Jeopardy Notice)]/(Number of Orders Jeopardized in Reporting Period). For all orders jeopardized on or before the scheduled due date.
OP-11	Completion Notice Interval	Completion Notice Interval = Σ [(Date and Time of Notice of Completion Issued to the CLEC) - (Date and Time of Work Completion by ILEC)]/(Number of Orders Completed in Reporting Period)
OP-12	% Completions/Attempts without Notice or with Less Than 24 Hours Notice.	% Completions/Attempts without Notice or with Less Than 24 Hours Notice = [Completion Dispatches (Successful and Unsuccessful) With No FOC or FOC Received Within 24 Hours of Due Date/All Completions] x 100

Service Quality Measurements
Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
OP-13	% Jeopardies	% Jeopardies = (Number of Orders Jeopardized in Reporting Period)/(Number of Orders Confirmed in Reporting Period)
OP-14	Average Coordinated Conversion Interval	Average Coordinated Conversion Interval = Σ [(Date & Time Re-termination is Completed by ILEC) – Date and Time of Initial Service Interruption (disconnect of facilities and translations for customer transferring service)/All Customer Conversions Completed During Reporting Period)] x 100
OP-15	% Service Loss from Early Cuts	% Service Loss from Early Cuts = (Customer Conversion Where Cutover Time is Earlier Than Due Date and Time)/(All Customer Conversions Completed During Reporting Period) x 100
OP-16	% Service Loss from Late Cuts	% Service Loss from Late Cuts = (Customer Conversion Where Cutover Time Is More Than 30 Minutes Past Due Date and Time)/All Customer Conversion Completed During Reporting Period) x 100
OP-17	Held Order Interval	Held Order Interval = Σ(Reporting Period Close Date - Committed Order Due Date) / (Number of Orders Pending and Past The Committed Due Date) for all orders pending and past the committed due date
OP-18	% Orders Held $\geq$ 90 Days	% Orders Held $\geq$ 90 Days = (# of Orders Held for $\geq$ 90 days) / (Total # of Orders Pending But Not Completed) x 100
OP-19	% Orders Held $\geq$ 15 Days	% Orders Held $\geq$ 15 Days = (# of Orders Held for $\geq$ 15 days) / (Total # of Orders Pending But Not Completed) x 100
Maintenance and Repair (MR)		
MR-1	Mean Time to Restore	Mean Time To Restore = Σ [(Date and Time of Trouble Ticket Resolution Returned to CLEC)-(Date and Time Trouble Ticket Referred to ILEC)] / (Count of Trouble Tickets Resolved in Reporting Period)
MR-2	Mean Jeopardy Interval for Maintenance and Trouble Handling	Mean Jeopardy Interval for Maintenance and Trouble Handling = Σ [(Date and Time of Committed Due Date for Maintenance or Trouble Handling) - (Date and Time of Jeopardy Notice)]/(Number of Maintenance or Trouble Handling Appointments Jeopardized in Reporting Period)
MR-3	Repeat Trouble Rate	Repeat Trouble Rate = (Count of Trouble Reports Where More Than One Trouble Report Was Logged for the Same Service Access Line Within a Continuous 30 Day Period) / (Number of Reports in the Report Period) x 100
MR-4	Trouble Rate	Trouble Rate = (Count of Initial & Repeated Trouble Reports in the Current Period) / (Number of Service Access Line in Service at End of the Report Period) x 100

Service Quality Measurements
Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
MR-5	% Troubles Within 30 Days of Install and Other Order Activity	% Troubles Within 30 Days of Install and Other Order Activity = (Total Number of Trouble Tickets Associated With Lines That Had Service Order Activity Within 30 Days of the Trouble Report)/(Total Number of Orders Completed in the Report Period
MR-6	% Customer Troubles Resolved Within Estimate	% Customer Troubles Resolved Within Estimate = (Count of Customer Troubles Resolved By The Quoted Resolution Time and Date) / (Count of Customer Troubles Tickets Closed) x 100
General (GE)		
GE-1	% System Availability	% System Availability = [(Hours Functionality is Available to CLECs During Report Period) / (Number of Hours Functionality was Scheduled to be Available During the Period)] x 100
GE-2	Mean Time to Answer Calls	Mean Time to Answer Calls = Σ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered by Center)
GE-3	Call Abandonment Rate	Call Abandonment Rate = (Count of Calls Terminated Before Answer During the Reporting Period)/(Count of All Calls Placed in Queue During the Reporting Period)
GE-4	Average Response Interval	Average Response Interval = Σ [(Query Response Date & Time) - (Query Submission Date & Time)] /(Number of Queries Submitted in Reporting Period
Billing (BI)		
BI-1	Mean Time to Provide Recorded Usage Records	Mean Time to Provide Recorded Usage Records = {Σ[(Data Set Transmission Date)-(Date of Message Recording)]}/(Count of All Messages Transmitted in Reporting Period)
BI-2	Mean Time to Deliver Invoices	Mean Time to Deliver Invoices = Σ[(Invoice Transmission Date)-(Date of Scheduled Bill Cycle Close)]/(Count of Invoices Transmitted in Reporting Period)
BI-3	% Invoice Accuracy	% Invoice Accuracy = [(Number of Invoices Delivered in the Reporting Period that Have Complete Information, Reflect Accurate Calculations and are Properly Formatted) / Total Number of Invoices Issued in the Reporting Period)] x 100
BI-4	% Usage Accuracy	% Usage Accuracy = [(Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)] x 100
Operator Services/Directory Assistance & Listings (OS, DA and DL)		
OS/DA-1	Mean Time To Answer	Mean Time To Answer = Σ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered on Behalf of CLECs in Reporting Period)

Service Quality Measurements
Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
DL-1	Average Time Allotted To Proof Listing Updates Before Publication	Average Time Allotted To Proof Listing Updates Before Publication = Σ[(Date & Time of Directory Publication Deadline) – (Date and Time Updates Available for Proofing)]/ Number of Updates Sent for Proofing
Network Performance (NP)		
NP-1	% Call Completion	% Call Completion = [(Total number of blocked call attempts during busy hour)/(Total number of call attempts during busy hour)] x 100. (inbound and outbound call attempts would be measured separately)
NP-2	Meantime To Notify CLEC	Meantime To Notify CLEC = Σ[(Date and Time ILEC Notified CLEC) – (Date and Time ILEC detected network incident)]/Count of Network Incidents
NP-3	Network Performance Parameters	Network Performance Parameters = Σ(Network Performance Parameter Result)/(Number of Tests Conducted)
Collocation Provisioning (CP)		
CP-1	Meantime To Respond To Collocation Request	Meantime To Respond To Collocation = Σ [(Request Response Date) – Request Submission Date)]/Count of Request Responses Issued
CP-2	Meantime To Provide Collocation Arrangement	Meantime To Provide Collocation Arrangement Request = Σ [(Date & Time Collocation Arrangement is Compete) – (Date & Time Collocation application submitted)]/Number of Collocation Arrangements Complete
CP-3	% Due Dates Missed	% Due Dates Missed = (Number of Orders Not Completed By ILEC Committed Due Date)/Total Number of Orders Completed During the Reporting Period
Database Updates (DU)		
DU-1	Average Update Interval	Average Update Interval = Σ [(Completion Date & Time of Database Update) – (Submission Date and Time of Database Change)]/Total Number of Updates Completed During Reporting Period
DU-2	% Update Accuracy	% Update Accuracy = [Number of Updates Completed Without Error)/(Number Updates Completed)] x 100]
Interconnect / Unbundled Elements and Combos (IUE)		
IUE-1	Function Availability	Function Availability[1] = (Amount of Time[2] a Functionality is Useable[1] by a CLEC in a Specified Period)/(Total Time[2] Functionality Was Intended to Be Useable) Notes: 1. These measures may also be expressed in the negative, that is, in term of unavailability. 2. In some instances, rather than time, the availability will be expressed in terms of transactions executed successfully compared to transactions attempted.

Service Quality Measurements
Formula Quick Reference

Measurement Designation:	Measurement Name:	Measurement Formula:
IUE-2	Timeliness of Element Performance	Timeliness of Element Performance = (Number of Times Functionality Executes Successfully Within the Established Timeliness Standard)/(Number of Times Execution of Functionality was Attempted)

Measurement Detail:

- Highlights the business implications of each measurement function
- Details the measurement methodology, analogous retail functions, reporting dimensions, and objective performance standard in the absence of ILEC retail performance results

Service Quality Measurements
Measurement Detail

Pre-Ordering (PO)

The content of this section has been moved to the "General" section.

Ordering and Provisioning (OP)

Function:	Order Completion Intervals
Business Implications:	In order to be successful in the marketplace, CLECs must be capable of delivering service in time frames equal to or better than the ILEC delivers for comparable service configurations and activities. Likewise, CLECs' customers will be dissatisfied if requested services or features are not delivered when promised. The "average completion interval" measure monitors the time required by the ILEC to deliver integrated and operable service components requested by the CLEC, regardless of whether service resale, unbundled network elements or interconnection service delivery methods are employed. When the service delivery interval of the ILEC is measured for comparable services, a conclusion can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers. Timely provisioning of interconnect trunks and inbound augments by the ILEC can prevent customer harm from call blocking before the problem occurs. The "orders completed on time" measure monitors the reliability of ILEC commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customers. In addition, when monitored over time, the "average completion interval" and "percent completed on time" may prove useful in detecting developing capacity issues. The "average offered interval" indicates whether both ILEC and CLEC have the same scheduling opportunities for service delivery. The measure also shows non-parity if the ILEC's offered intervals match more closely the completion intervals for its customers than do the ILEC's offered and completion intervals for CLEC customers. CLECs need to honor their offered intervals to retain customers. Timely delivery of interconnect trunks and augments based on CLEC traffic projections rather than current utilization is a significant capacity parity issue. Because of the ILEC's more extensive network and greater use of DEOTs (direct end office trunks), ILECs typically do not need to augment their own trunks until utilization reaches 85%. A CLEC, however, is very likely to see its 50% utilization rate jump to 100% with the addition of one or two large customers. An ILEC should not deny the CLEC's request for inbound interconnect trunk augments when the CLEC's current utilization level does not match the percentage level at which the ILEC augments its own trunks. The ILEC's network should meet the CLEC's forecasted or otherwise formally communicated business needs for augment trunks and DS3 trunks (which must be in place before local tandem trunks and DEOT orders are placed.
Measurement Methodology:	**Average Completion Interval = Σ [(Completion Date & Time) - (Order Submission Date & Time)]/(Count of Orders Completed in Reporting Period)** **% Orders Completed on Time = (Count of Orders Completed within ILEC Committed Due Date) / (Count of Orders Completed in Reporting Period) x 100**

Service Quality Measurements
Measurement Detail

Average Offered Interval = [(Date & Time Due Date) – (Date &Time of Receipt of Service Request)]/(Number of Committed Due Dates)

For CLEC Results: The actual completion interval is determined for each order processed during the reporting period. The completion interval is the elapsed time from the ILEC receipt of a syntactically correct order from the CLEC to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each order is accumulated for each reporting dimension (see below). The accumulated time for each reporting dimension then is divided by the associated total number of orders completed within the reporting period.

The percentage of orders completed on time is determined by first counting, for each specified reporting dimension, both the total numbers of orders completed within the reporting interval and the number of orders completed by the committed due date (as specified on the initial FOC returned to the CLEC). For each reporting dimension, the resulting count of orders completed no later than the committed due date is divided by the total number of orders completed with the resulting fraction expressed as a percentage.

Although CLEC forecasts are not technically "orders", the CLEC forecast provides the ILEC with the information it needs to be able to augment its inbound trunks (and other ILEC trunks needed for efficient interconnection) in a timely manner to handle the forecasted CLEC calling volume. To calculate ILEC trunk augments as a percentage of "orders" completed on time, the due date is the date on which the additional trunk is needed by the CLEC, as stated in the forecast. The total number of ILEC augments completed no later than the due date is divided by the total number of ILEC augments completed in the reporting period. The resulting fraction is expressed as a percentage.

The offered interval is the due date that an ILEC provides the CLEC on a firm order confirmation (i.e. the earliest date on which the CLEC's customer can obtain service without paying for an escalation).

For ILEC Results: Same as for CLEC with the clarifications noted below.

Other Clarifications and Qualification:

- The elapsed time for an ILEC order is measured from the point in time when the ILEC customer service agent enters the order into the ILEC order processing system until the date and time that the ILEC personnel log actual completion of all work necessary to permit service initiation, whether or not the ILEC initiates customer billing at that point in time.
- Results for the CLECs are captured and retained at the order level (e.g., unique PON).
- The Completion Date and Time is the date upon which the ILEC issues the Order Completion Notice to the CLEC.
- If the CLEC initiates a supplement to the originally submitted order and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the order submission date and time will be the date and time of the ILEC receipt of a syntactically correct order supplement.
- No other supplemental order activities will result in an update to the order submission date and time used for the purposes of computing the order completion interval.

Service Quality Measurements
Measurement Detail

- See "Order Status" measurement detail for a discussion of ILEC analogs, receipt of a syntactically correct order and return of a valid completion notice.
- Elapsed time is measured in hours and hundredths of hours rounded to the nearest hundredth of an hour.
- The accumulation of elapsed time continues through off-schedule, weekends and holidays.

Reporting Dimensions:	Excluded Situations:
• Company • Service (See Appendix A) • Activity (See Appendix A) • Geographic Scope • Volume Category	• Canceled orders • ILEC Orders associated with internal or administrative use of local services • Orders where CLEC has selected a longer due date than requested.

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • CLEC Order Number • Order Submission Date • Order Submission Time • Order Completion Date • Order Completion Time • Service Type • Activity Type • Geographic Scope	• Report Month • Average Order Completion Interval • Standard Error for the Order Completion Interval • Count of Orders Completed • Count of Orders Completed by the Due Date • Average Offered Interval • Service Type • Activity Type • Geographic Scope • Volume Category

| Performance Standard in Absence of ILEC Results: | If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:

• Unless otherwise noted, the order completion interval for installations that do not require a premise visit and do not require anything beyond software updates is 1 business day.
• Unless otherwise noted, the order completion intervals for installations that involve a premise visit or physical work is three business days.
• Installation Interval Exceptions:
    • UNE Platform (at least DS0 loop + local switching + common transport elements) installation interval is 1 business day whether or not premise work is required.
    • The installation interval for unbundled loops is always 1 business day.
    • UNE Channelized DS1 (DS1 unbundled loop + multiplexing) installation interval is within 2 business days.
    • Unbundled Switching Element installation interval is within 2 business days
    • DS0/DS1 Dedicated Transport installation interval is within 3 business days (See Network Performance measurement detail for related standards on interconnect trunks and augment inbound trunk provisioning thresholds)
    • The installation interval for All Other Dedicated Transport is within 5 business days.
    • Access DS3s used for local interconnects within 10 days. |

- The installation interval for all orders involving only feature modification is 5 hours.
- Order completion interval for all disconnection orders is 1 business day.

Interconnect Augment Trunks: ILECs must meet relevant tariff, service level agreement or contract intervals for T-1s/DS0s and DS1 provisioning 98% of the time

Although CLECs do not order them per se, ILECs must also provide inbound trunk augments in line with CLEC capacity projections. CLECs require these augments at utilization thresholds that are lower than the ILEC's own thresholds to reflect the differences in network size and the impact of growth in CLEC customer numbers on inbound as well as outbound capacity needs. The threshold below for augment trunk provisioning will afford CLECs a reasonable opportunity to compete. Individual CLECs may agree to different thresholds in negotiation with ILECs on inbound trunk augments:

- DEOTS REPRESENT LESS THAN 50% OF COMBINED INBOUND/ OUTBOUND CAPACITY – augment trunk orders must be provided when utilization reaches 60% on the Erlang-B.01 scale.

- DEOTS REPRESENT MORE THAN 50% OF TOTAL CAPACITY – augment trunk orders may be placed when utilization is at 75% on the Erlang-B.01 scale.

Function:	Order Processing Quality
Business Implications	Customers expect that their service provider will deliver precisely the service ordered and all the features specified. A service provider that is unreliable in fulfilling orders, will not only generate ill-will with customers when errors are made, but will also incur higher costs to rework orders and to process customer complaints. This measurement monitors the accuracy of the provisioning work performed by the ILEC, in response to CLEC orders. When the ILEC provides the comparable measure for its own operation, it is possible to know if provisioning work performed for CLECs is at least as accurate as that performed by the ILEC for its own retail local service operations. Many of the order transactions between ILEC and CLEC are designed to be entirely automated. For these transactions, any "fall out" from the mechanized process will result in a higher likelihood of delay or inaccurate processing. The availability of flow through order entry without manual intervention on the ILEC's part decreases the occurrence of rekeying errors and makes the CLEC more accountable for its order quality. Measurements are needed (1) to monitor the extent to which human intervention is required for CLEC automated order transactions and (2) to compare the results to ILEC order processing flow through. CLECs must be assured that their orders have the same opportunity as the ILEC's orders for timely and accurate processing. Sometimes CLECs receive order rejections and must resubmit orders for failures on the part of the ILECs' systems or lack of notice or training on changed formats and processes for order entry. Sometimes orders are rejected with no explanation or delayed for invalid queries by the ILECs. Often ILEC electronic editing systems reject an order one error at a time, rather than capture all the issues with the order on one submission. These rejections and resubmissions not only are burdensome to CLECs but delay service delivery to the customer.

Service Quality Measurements
Measurement Detail

Measurement Methodology:	**% Order Accuracy = (Σ Orders Completed w/o Error) / (ΣOrders Completed) x 100**

% Mechanized Order Flow Through = [(Total Number of Orders Processed Without Manual Intervention)/(Total Number of Orders Completed)] x 100

% Orders Rejected =[Number of Orders Rejected Due to Error or Omission/Number of Orders Received by ILEC During Reporting Period] x 100

Average Submissions Per Order = Σ[(Number of Firm Order Confirmations) + (Number of Rejections Issued)/(Number of Firm Order Confirmations

For CLEC Results:

Order Accuracy:

For each order completed during the reporting period, the original account profile and the order that the CLEC sent to the ILEC are compared to the services and features reflected upon the account profile as it existed following completion of the order by the ILEC. An order is "completed without error" if all service attribute and account detail changes (as determined by comparing the original and the post order completion account profile) completely and accurately reflect the activity specified on the original and any supplemental CLEC orders. "Total number of orders completed" refers to the total number of order completion notices sent to the CLEC by the ILEC for each reporting dimension identified below.

% Mechanized Order Flow Through:

"Percentage Mechanized Order Flow Through" identifies the total orders processed from acceptance of the ILEC gateway to the ILEC service order processor and other legacy systems without manual intervention. For each type of order, the count includes orders that arrive at the destination work group(s) without human intervention from initial order creation by the customer contact agent until the time the order is delivered to the appropriate work group responsible for physical work. The resulting count is divided by the total number of orders (of the same type) that were processed during the reporting period with the result expressed as a percentage.

% Orders Rejected:

The percentage of orders rejected is the count of (1) order submissions where the ILEC returns a notice of a syntax rejection to the CLEC and (2) order submissions where the ILEC returns a notice that the CLEC order was rejected by legacy system edits. The resulting combined count of rejections is divided by the count of orders submitted (For EDI interfaces, the orders submitted would be the combined count of positive and negative 997 messages issued upon receipt of the CLEC order.)

Average Number of Submissions Per Order:

The "average number of submissions per order" is derived by adding the number of Firm Order Confirmations sent to the CLEC during the reporting period and the number of rejects issued to the CLEC during the reporting period. This sum is then divided by the number of Firm Order Confirmations to determine the average number of submissions per order for the CLEC.

For ILEC Results: Same computation as for the CLEC with the clarifications noted below.

Other Clarifications and Qualification:
ioning (OP)

30

ality Measurements v7.0

Order Supplements - If the CLEC initiates any supplements to the originally submitted order, for the purposes of reflecting changes in customer requirements, then the cumulative effect of the initial order and all the

Service Quality Measurements
Measurement Detail

Reporting Dimensions:	Excluded Situations:
- Company - Interface Type - Service Type (See Appendix A) - Order Activity (See Appendix A) - Volume Category	- Orders canceled by the CLEC - Order Activities of the ILEC associated with internal or administrative use of local services. - For resubmissions impact on due date measure, ILEC would not have to comply if tying final accepted order to original order is technically infeasible (But feasibility issue will be revised as systems are upgraded.)

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
- Report Month - Count of Orders Completed Without Manual Intervention - Count of Firm Order Confirmations - Count of Syntax Rejects - Count of Legacy System Rejects - Count of Orders Submitted - Interface Type - Order Activity Type - Original order date for rejected orders - Rejection Notice Date and Time - Service Type - Volume Category - Manual Fallout (for Mechanized Orders Only)	- Report Month - Count Orders Completed Without Manual Intervention - Count of Order Confirmations - Count of Syntax Rejects - Count of Legacy System Reject - Count of Orders Submitted - Interface Type - Order Activity - Service Type - Volume Category

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete. - Completed CLEC orders, by reporting dimension, are accurate no less than 99% of the time. - Mechanized flow through of orders occurs at least 98% of the time.

Function:	Order Status
Business Implications:	When customers call their service providers, they expect prompt answers regarding the progress on their orders. Likewise, when changes must be made, such as to the expected delivery date, customers expect that they will be immediately notified so that they may modify their own plans. A service provider that cannot fulfill such expectations will generate customer dissatisfaction. Lengthy delays in exchange of status information will result in the delay of other customer affecting activities. For example, inside wiring activity often is initiated after the firm order confirmation is returned, and customer billing must await CLEC receipt of the order completion notice. The order status measurements monitor, when compared to the ILEC result, whether the CLEC has timely access to order progress information so that the customer may be updated or notified promptly when changes and rescheduling are necessary.

Service Quality Measurements
Measurement Detail

The "% jeopardies returned" measure for the CLEC, when reported in comparison to the ILEC result, will gauge whether initial commitments to the CLEC for order processing are at least as reliable as the commitments the ILEC makes for its own operations.

CLECs also need adequate notice of order completion activities. They can be made to look disorganized by ILECs providing service without such advance notice: Customers and CLECs may even be unable to schedule necessary vendors on the scene to complete the installation, resulting in ILEC technicians being turned away and customer frustration with the CLEC. An ILEC could cause a great deal of harm to the CLEC competitively, yet look like it is providing parity or above parity service by the results other provisioning measures. A measurement capturing any non-parity in the occurrence of surprise or short-notice service deliveries also is critical to affording CLECs a reasonable opportunity to compete.

Measurement Methodology	Order status intervals measure the elapsed time necessary to provide a notice to the CLEC that specific events have occurred or particular conditions have been encountered when processing an order. Order status includes notification of order <u>rejection</u> due to violation of order content or syntax requirements, <u>confirmation</u> of order acceptance, <u>jeopardy</u> of an order due to the inability to complete work as originally committed and work <u>completion</u> notification. The interval associated with each of these four preceding major categories of status must be separately monitored and reported.

Reject Interval = Σ[(Date and Time of Order Rejection) - (Date and Time of Order Receipt or Acknowledgment)]/(Number of Orders Rejected in Reporting Period)

<u>Reject Interval</u> **(syntax)** is the elapsed time between the ILEC receipt of an order from the CLEC to the ILEC return of a notice of a syntax rejection to the CLEC. The time measurement starts when the ILEC receives the order from the CLEC. The time measurement stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of rejected orders associated with the particular order type.

<u>Reject Interval </u>**(legacy system)** is the elapsed time between the ILEC's acknowledgement /acceptance of an order from the CLEC to the ILEC's return of a rejection notice to the CLEC. The time measurement starts when the ILEC accepts or acknowledges the order from the CLEC as syntactically correct. The time measurement stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of rejected orders associated with the particular service and order type.

FOC Interval = Σ[(Date and Time of Firm Order Confirmation) - (Date and Time of Order Acknowledgment)]/(Number of Orders Confirmed in Reporting Period)

<u>Interval for Return of a Firm Order Confirmation (FOC Interval)</u> is the elapsed time between the ILEC acceptance of a syntactically correct order and the return of a confirmation to the CLEC that the order will be worked as submitted or worked with the modifications specified on the confirmation. The time measurement starts when the ILEC accepts (acknowledges) the order from the CLEC. The time measurement stops when the ILEC returns a valid firm order confirmation to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of orders associated with the particular order type. |

Service Quality Measurements
Measurement Detail

Jeopardy Interval = Σ[(Date and Time of Committed Due Date for the Order) - (Date and Time of Jeopardy Notice)]/(Number of Orders Jeopardized in Reporting Period). For all orders jeopardized on or before the scheduled due date.

Jeopardy Interval is the remaining time between the pre-existing committed order completion date and time (communicated via the FOC) and the date and time the ILEC issues a notice to the CLEC indicating an order is in jeopardy of missing the due date. The scheduled order completion time will be assumed to be 5:00 p.m. local time unless other information is communicated in the FOC. The date and time of the jeopardy notice delivered by the ILEC is subtracted from the scheduled completion date to establish the jeopardy interval for any order placed in jeopardy before its scheduled due date. The jeopardy interval is accumulated by standard order activity with the resulting accumulated time then divided by the count of orders placed in jeopardy before the due date for each order activity.

Completion Interval = Σ[(Date and Time of Notice of Completion Issued to the CLEC) - (Date and Time of Work Completion by ILEC)]/(Number of Orders Completed in Reporting Period)

Completion Notice Interval is the elapsed time between the ILEC technician's reported completion of physical work and the issuance of a valid completion notice to the CLEC. Where physical work is not required, such as in the case of software-only changes, the elapsed time will be measured beginning at 5:00 p.m. local time of the date for the committed completion and will end when the ILEC returns a valid completion notice to the CLEC. If a valid completion notice is returned before 5:00 p.m. on the committed completion date and no physical work is involved, then the elapsed time will be recorded as 1/10 hour. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of completion notices returned for each service and order type.

% Completions or Attempts without Notice or with Less Than 24 Hours Notice. = [Completion Dispatches (Successful and Unsuccessful) With No FOC or FOC Received Within 24 Hours of Due Date/All Completions] x 100

Completion and Completion Attempts include any delivery of service (successful or not successful) for which the CLEC did not receive sufficient prior notification.

For ILEC Results: The ILEC reports completions for which ILEC technicians delivered service to customers without giving sufficient advance notice to customers, sales or to internal account team to arrange for appropriate vendors to be on hand. Calculation of insufficient notice is similar to CLEC calculation (none or less than 24 hours). Similar surprise service deliveries are calculated for ILEC affiliate's account representatives.

For CLEC Results: Calculation would exclude any successful or unsuccessful service delivery that CLEC was informed of at least 24 hours in advance. ILEC may also exclude from calculation deliveries on less than 24 hours' notice that CLEC requested.

% Jeopardies = (Number of Orders Jeopardized in Reporting Period)/(Number of Orders Confirmed in Reporting Period)

% Jeopardies is the percentage of total orders processed for which the ILEC notifies the CLEC that the work will not be completed as committed on the original FOC.

Service Quality Measurements
Measurement Detail

The measurement result is derived by dividing the count of jeopardy notices the ILEC issues to the CLEC by the count of FOCs returned by the ILEC during the identical period. Both the "Number of Orders Jeopardized in Reporting Period" and "Number of Orders Confirmed in Reporting Period" are utilized in other status measurement computations and have identical meaning and derivation for this measurement.

For ILEC Results: Same computation as the CLEC with the clarifications outlined below.

Other Clarifications and Qualification:

- When the ILEC processes orders for a CLEC via different interfaces (e.g., ASR and EDI) then the preceding measurement must be computed for each interface arrangement.
- All intervals are measured in hours and hundredths of hours rounded to the nearest hundredth.
- Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays.
- "Syntactically correct" means all fields required to process an order are populated and reflect the correct format as agreed and documented in the current interface specifications.
- The ILEC service agent's attempt to submit an order for processing by the ILEC OSS is considered equivalent to the ILEC acknowledgment of the CLEC's order.
- The ILEC OSS return of any indication to the service agent that an order cannot be processed as submitted is considered equivalent to the ILEC return of a rejection notice to the CLEC.
- Return of any information (e.g., order recapitulation) to the ILEC customer service agent that indicates no errors are evident or that an order can be processed, is the equivalent of the ILEC return of a FOC to the CLEC.
- Logging of information in the ILEC OSS, whether manual or automatic, that indicates an order may not be completed by the existing due date, is equivalent of the return of a jeopardy notice to the CLEC regardless of whether or not the ILEC takes action based upon such information.
- Automatic logging of work completion and manual logging of work completion, whether input directly to the ILEC OSS or into an intermediate storage devise, is considered the equivalent of the return of a completion notice to the CLEC.

Reporting Dimensions:	Excluded Situations:
• Standard Order Activities (See Appendix A) • Company • Interface Type • Service Type (See Appendix A) • Geographic Scope	• Rejection Interval - None • Jeopardy Interval - None • Firm Order Confirmation Interval - None • Completion Notification Interval - None • % Jeopardies – None • Completions or Attempts Without Notice or With less than 24-hours' notice delivery that the CLEC specifically requested.

Service Quality Measurements
Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Interface Type • Service Type • CLEC Order Number • Order Submission Date • Order Submission Time • Status Type (Rejection, FOC, Jeopardy Type, Completion Notice) • Status Notice Date • Status Notice Time • Standard Order Activity • Order Due Date	• Report Month • Interface Type • Service Type • Status Type (Rejection, FOC, Jeopardy Type, Completion Notice) • Average Status interval • Standard error of status interval • Number of Orders Reflected In Result • Standard Order Activity • Number of Statuses Provided

| Performance Standard in Absence of ILEC Results | If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
• no less than 97% of Rejects in any category for a reporting period are returned within 15 seconds
• all Firm Order Confirmations are returned within 4 hours
• no less than 97% of order completions in any category are returned within 30 minutes of work completion
• 99.9% of completion and completion attempts should receive more than 24 hours notice.
• no less than 97% of Jeopardies for any category are returned to the CLEC a minimum of 2 business days in advance of the due date indicated on the most recent FOC
• no more than 5% of the total number of orders should result in a Jeopardy in any given report period. |

Function:	Coordinated Cutovers
Business Implications:	Customers must not be subjected to unscheduled service disruptions because of lengthy or uncoordinated cutovers of loops with interim or permanent number portability or the provision of any other UNEs that require disconnection and reconnection of a customer. Customers may suffer loss of dialtone due to early cutovers (ILEC takes down loop before scheduled date for CLEC loop to be ready) in cases where interim number portability is involved. With Permanent Number Portability (PNP), customers may not receive inbound calls if the ILEC (1) does not provide timely disconnection of the ILEC's old translations for routing the number or (2) does not employ or prematurely takes down the 10-digit trigger designed to ensure proper routing during the transition. Service may also be disrupted in conversions from ILNP-to-PNP or through premature disconnects in coordinated cutovers of UNE combinations. The percentage of early and late cutovers must be monitored to ensure that CLECs' customers are not disproportionately losing dialtone or having inbound calling blocked.

| Measurement Methodology: | Average Coordinated Conversion Interval = Σ[(Date & Time Re-termination is Completed by ILEC) – Date & Time of Initial Service Interruption (disconnect for Customer Transferring Service)]/(Count of Completed Coordinated Conversions in Reporting Period)

% Service Loss from Early Cuts = (Customer Conversion Where Cutover Time is Earlier Than Due Date and Time)/(All Customer Conversions Completed During Reporting Period)] x 100

% Service Loss from Late Cuts =(Customer Conversions Where Cutover Time is More than 30 Minutes Past Due Date and Time)/(All Customer Conversions Completed During Reporting Period) x 100

For CLEC Results:

Average Coordinated Conversion Interval: The elapsed time between the disconnection of an access line (for a retail customer of the ILEC) from the switch port of the ILEC to the time that the ILEC finishes both the physical work necessary to re-terminate the loop (at the point of re-termination specified by the CLEC) and receives CLEC confirmation that electrical continuity exists. The elapsed time is accumulated for the reporting period and divided by the number of loops that were re-terminated on a coordinated basis.

% Service Loss (Early/Late Cuts): For hot loop cuts, the same loop is moved from an existing port to what is effectively a different port (The CLEC collocation point). Translation disconnections also are reported if they occur too early or late in a conversion involving local number portability. For each conversion, the ILEC will track whether the cutover time (for facilities and translations) was earlier or later than the committed due date and time that appeared on the FOC. The total number of early cutovers will be divided by the total number of customer conversions that were completed during the reporting period. Likewise, the total number of cutovers that were completed more than 30 minutes past the committed due date and time will be divided by the total number of customer conversions that were completed during the reporting period. For both formulas, the resulting ratio will be expressed as a percentage.

For ILEC Results: ILECs would use retail residential or business POTS outside move activity as an analog. An outside move occurs when a customer, with existing service, moves from one premises to another within the same central office area without disconnecting and reconnecting service. With inside moves the customer keeps their own phone number. Although an outside move involves disconnecting an existing loop from an operating port and reconnecting a different loop (within the same office) to that same port, the work involved is very similar (i.e. coordinated re-termination). |
|---|---|

Reporting Dimensions:	Excluded Situations:
• Company • Type of Loop or UNE Combination Cutover and Type of NP involved (i.e. ILNP, PNP or ILNP-to-PNP conversion). See also Service Type (Appendix A) • Order Activity • Geography • Volume Category	None

Service Quality Measurements
Measurement Detail

Data Retained Relating To CLEC Experience:	Date Retailed Relating To ILEC Experience:
• Report Month • Service Type • Order Activity • Committed Due Date and Time (from Firm Order Confirmation) • Completion Date and Time • Geographic Scope • Volume Category	• Report Month • Number of Early Conversions • Number of Conversions >30 Minutes Late • Total Number of Conversions • Average Conversion Interval • Standard Error of Conversion Interval • Geographic Scope • Volume Category

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • 98% of coordinated cutovers have ILEC and CLEC work completed within 5 minutes of one another and 100% within 15 minutes. • 98% of unscheduled disruptions causing loss of dialtone or inbound call blocking should be corrected in 1 hour and 100% within 2 hours.

Function:	Held Orders
Business Implications:	Customers expect that work will be completed when promised. Therefore, when delays occur in completing CLEC orders, such delays must be no longer than the average period of time the ILEC's own customer orders are held.
Measurement Methodology:	**Held Order Interval = Σ(Reporting Period Close Date - Committed Order Due Date) / (Number of Orders Pending and Past The Committed Due Date) for all orders pending and past the committed due date** **For CLEC Results:** This metric is computed at the close of each report period. The held order interval is established by first identifying all pending orders at that time that (1) have not been reported "completed" via a valid completion notice and (2) have passed the currently "committed completion date." For each such order, the number of calendar days between the committed completion date 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 service type and reason for the hold, if identified) and then divided by the number of held orders within the same category to produce the mean held order interval. **Orders Held for ≥ 90 days = (# of Orders Held for ≥ 90 days) / (Total # of Orders Pending But Not Completed) x 100** **Orders Held for ≥ 15 days = (# of Orders Held for ≥ 15 days) / (Total # of Orders Pending But Not Completed) x 100** This "percentage orders held" measure is complementary to the held order interval but is designed to detect orders continuing in a "non-completed" state for an extended period of time. Computation of this metric uses a subset of the data accumulated for the "held order interval" measure. All orders, for which the "held order interval" equals or exceeds 90 (or 15) days, are counted by service type and reason for the hold.

The total number of pending and past due orders for the same category are counted (as was done for the held order interval) and divided into the count of orders held past 90 (or 15) days.

For ILEC Results: Same computation as for the CLEC with the clarifications provided below..

Other Clarifications and Qualification:
- The "held order" measure established by some state commissions as part of minimum service standards is analogous to this proposed measure but, because it is typically limited to monitoring only those orders held because of facility shortages, needs to be expanded to include all reasons that an order is pending and past due.
- **Order Supplements** - If the CLEC initiates a supplement to the originally submitted order for the purpose of reflecting changes in customer requirements, then the due date returned on the FOC will be the basis for the preceding calculations. No other supplemental order activities will result in an update to the committed due date.
- See "Order Status" measurement definitions for discussion of the ILEC analog for a completion notice.
- The held order interval is measured in calendar rather than business days.

Reporting Dimensions:	Excluded Situations
- Company - Service Type (See Appendix A) - Reason for Hold (no facilities, no equipment, workload, other) Geographic Scope	- Any orders canceled by the CLEC will be excluded from this measurement. - Order Activities of the ILEC associated with internal or administrative use of local services

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
- Report Month - CLEC Order Number - Committed Due Date - Report Period Close - Service Type - Hold Reason - Geographic Scope	- Report Month - Average Held Order Interval - Standard Error for Average Held Order. Interval - Number of Orders Rejected - Service Type - Hold Reason - Geographic Scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: - Less than 0.1% of orders held for more than 15 calendar days. - No orders held for more than 90 calendar days.

Service Quality Measurements
Measurement Detail

Maintenance and Repair (MR)

Function:	Time To Restore
Business Implications:	Customers expect service to be restored promptly to the normal operating parameters whenever troubles are detected. The longer the time required to correct a service problem, the greater the customer dissatisfaction. Customers also need to know that the CLEC is monitoring the status of their repair closely. The CLEC, therefore, needs jeopardy notification if repair commitments are not going to be met. Both measures, when collected and compared for the CLEC and ILEC, monitor whether the CLEC receives the same intervals and jeopardy notices regarding repairs as the ILEC provides for its own or an affiliate's retail customers.
Measurement Methodology:	**Mean Time To Restore = Σ[(Date and Time of Trouble Ticket Resolution Returned to CLEC)-(Date and Time of Trouble Ticket Referred to the ILEC)] / (Count of Trouble Tickets Resolved in Reporting Period)**

For CLEC Results: The restoral interval for resolution of customer requested maintenance and repair is the elapsed time, measured in hours and tenths of hours, measured from the CLEC submission of a customer trouble to the ILEC, regardless of the ultimate resolution of the trouble, to the time the ILEC returns a valid trouble resolution notification to the CLEC. The elapsed time is accumulated by service type and trouble disposition for the reporting period. The accumulated time is divided by the count of maintenance tickets reported as resolved by the ILEC (by service type and trouble type) during the report period.

For ILEC Results: Same computation as for the CLEC.

Other Clarifications and Qualification:

- Elapsed time is measured on a 24-hour-a-day, seven-days-a-week basis. The time is measured in hours and hundredths of hours rounded to the nearest hundredth hour.
- Multiple reports for the same customer service are treated as the same incident only when a subsequent report is received for a customer service arrangement that already has an open ticket.
- "Restore" means to return to the normally expected operating parameters for the service regardless of whether or not the service, at the time of trouble ticket creation, was operating in a degraded mode or was completely unusable.
- A trouble is "resolved" when the ILEC issues notice to the CLEC that the customer's service is restored to normal operating parameters.
- A trouble ticket or trouble report is any record (whether paper or electronic) used by the ILEC for the purpose of monitoring action and disposition of a service repair or maintenance situation.
- ILEC acceptance of a trouble by the call receipt agent is considered equivalent to the CLEC logging or submitting a trouble to the ILEC.
- The ILEC closure of a trouble ticket (whether automatic or manual) is considered equivalent to returning a trouble resolution notice to the CLEC.

Mean Jeopardy Interval = Σ [(Date and Time of Committed Due Date for the Order) - (Date and Time of Jeopardy Notice)]/(Number of Orders Jeopardized in Reporting Period)

CLEC Results: Jeopardy Interval is the remaining time between the pre-existing committed maintenance or trouble handing appointment date and time and the date and time the ILEC issues a notice to the CLEC indicating an appointment is in jeopardy of being missed. The scheduled appointment time will be assumed to be 5:00 p.m. local time unless other information is communicated. The date and time of the jeopardy notice delivered by the ILEC is subtracted from the scheduled completion date to establish the jeopardy interval for any appointment placed in jeopardy. The jeopardy interval is accumulated by service group with the resulting accumulated time then divided by the count of scheduled appointments associated with the particular service.

For ILEC Results: Computations are the same as for the CLEC with the clarifications outlined below.

Other Clarifications and Qualification:

All intervals are measured in hours and hundredths of an hour rounded to the nearest hundredth. The lack of electronic bonding for maintenance does not excuse the ILEC from jeopardy reporting requirements.

Reporting Dimensions:	Excluded Situations:
• Service Type (See Appendix A) • Trouble Type • Geographic Scope	• Trouble tickets that are canceled at the CLEC's request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests that a ticket be "held open" for monitoring • Subsequent Reports (additional reports on an already open ticket) • Any trouble type tracking that parties agree are technically unfeasible or operationally prohibitive • A trouble ticket created for tracking and/or monitoring requests for clarifying information (e.g. confirmation of customer ownership from CLEC support centers. • Tickets used to track referrals of misdirected calls

Service Quality Measurements
Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
- Report Month - CLEC Ticket # - Ticket Submission Time - Ticket Submission Date - Ticket Completion Time - Trouble Resolution Time - Trouble Resolution Date - Service Type - WTN or CKTID (a unique identifier for elements combined in a service configuration) - Trouble Type - Geographic Scope	- Report Month - Average Restoral Interval - Standard Error for the Average Restoral Interval - Service Type - Trouble Type - Geographic Scope - Number of Tickets

Performance Standard in Absence of ILEC Results	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: 1. Out of Service conditions where dispatch is required: $\geq$90% resolved within 4 hours $\geq$95% resolved within 8 hours $\geq$99% resolved within 16 hours 2. Out of Service conditions where no dispatch is required: $\geq$85% resolved within 2 hours $\geq$95% resolved within 3 hours $\geq$99% resolved within 4 hours 3. $\geq$ all other troubles resolved within 24 hours

Function:	Frequency of Repeat Troubles
Business Implications:	Customers are keenly aware of the effectiveness of repair activities. First time troubles are sufficiently annoying and disruptive. When the trouble recurs within a short time frame, customers are even more dissatisfied. This measurement, when gathered for both the ILEC and CLEC, can establish whether or not CLECs are competitively disadvantaged (vis-à-vis the ILEC) as a result of experiencing more lingering customer troubles after the first repair attempt. Differences in this measure may indicate that the CLEC is receiving inferior maintenance support in the initial resolution of troubles or that ILEC-supplied network components are inferior.
Measurement Methodology:	**Repeat Trouble Rate = (Count of Trouble Reports Where More Than One Trouble Report Was Logged for the Same Service Access Line Within a Continuous 30 Day Period) / (Number of Reports in the Report Period) x 100** **For CLEC Results:** The repeat trouble rate measure is computed by accumulating the number of instances where a trouble ticket is submitted by a CLEC to the ILEC for a service arrangement that had at least one prior trouble ticket any time in the 30 calendar days preceding the creation of the current trouble ticket. The number of repeat troubles are accumulated for the reporting period by service type and trouble type. The count of repeat troubles, by service type, is divided by the count of initial trouble reports (by service type) received during the report period.

	For ILEC Results: Same computation as for CLECs. **Other Clarifications and Qualification:** • Unbundled loops or UNE combinations involving and unbundled loops are considered a "service access line". • A trouble is "resolved" when the ILEC issues notice to the CLEC that the Customer's service is restored to normal operating parameters. • The "same service arrangement" means a trouble report being reported for the same telephone number or the same circuit identifier. • The trouble resolution need not be identical between the repeated reports for the incident to be counted as a repeated trouble.

Reporting Dimensions:	**Excluded Situations:**
• Service Type (See Appendix A) • Company • Trouble Type • Geographic Scope	• Trouble tickets that are canceled at the CLEC request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests that a ticket be "held open" for monitoring. • Subsequent trouble report(s) on a maintenance ticket that has (have) not been reported as resolved (or closed) • Trouble tickets created for tracking and/or monitoring requests for clarifying information (e.g., confirmation of customer ownership from CLEC support centers) • Tickets used to track referrals of misdirected calls.

Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • CLEC Ticket # • Ticket Submission Time • Ticket Submission Date • Trouble Resolution Time • Trouble Resolution Date • Service Type • WTN or CKTID (a unique identifier for elements combined in a service configuration) • Trouble Type • Geographic Scope	• Report Month • % repeat trouble • Service Type • Trouble Type • Geographic Scope • Count of Troubles • Count of Repeat Troubles

| **Performance Standard in Absence of ILEC Results** | If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:

• Less than 1% of trouble reports, by service type, experience a repeat report, regardless of the trouble disposition, within a 30-day period. |

Service Quality Measurements
Measurement Detail

Function:	Frequency of Troubles
Business Implications:	Customers demand high quality service from their supplier, and differentials in supplier performance are quickly recognized throughout the market place. Poor performance is difficult to overcome and may require lengthy periods of sustained superb performance in order to re-establish a product image that has been tarnished. When measured for both the ILEC and CLEC and compared, this measure can be used to establish that CLECs are not competitively disadvantaged, compared to the ILEC, as a result of experiencing more frequent trouble reports. Disparity in this measure may indicate differences in the underlying quality of the network components supplied.
Measurement Methodology	**Trouble Rate = (Count of Initial & Repeated Trouble Reports in the Current Period) / (Number of Service Access Line in Service at End of the Report Period) x 100** **For CLEC Results:** The frequency of trouble metric is computed by accumulating, by standard service grouping and disposition and cause, the total number of maintenance tickets logged by a CLEC (with the ILEC) during the reporting period. The resulting number of tickets for each trouble type is accumulated within each standard service grouping, and trouble type is divided by the total number of "service access lines" existing for the CLEC at the end of the report period **For ILEC Results:** Same calculation as for the CLEC with the clarifications provided below. **Other Clarifications and Qualification:** • This measure is frequently a minimum service standard required by state commissions for monitoring ILEC performance.. • Unbundled loops or UNE combinations involving unbundled loops would be counted as a "service access line." • A trouble is "resolved" when the ILEC issues notice to the CLEC that the customer's service is restored to normal operating parameters. • See the "Time to Restore" measurement for a discussion of the ILEC equivalent of "trouble tickets" and "trouble logging". **% Troubles Within 30 Days of Installations and Other Order Activity = (Total Number of Trouble Tickets Associated With Lines That Had Service Order Activity Within 30 Days of the Trouble Report)/(Total Number of Orders Completed in the Report Period.** **For CLEC Results:** The results are computed by accumulating the number of trouble tickets submitted by a CLEC to the ILEC for a service arrangement that had at least one install or service order activity within the 30 calendar days preceding the creation of the current trouble ticket. The count of troubles is divided by the count of service-affecting orders completed by the ILEC for the CLEC during the report period. Non-parity results for % Trouble Rate within 30 Days of Install and Other Order Activity may require further reporting to determine root cause issues. For instance, reports on whether facilities provided on new installations tested to industry standard per interconnection contract, tariff or regulatory requirements may be required if results indicate a poorer performance of facilities and supporting network equipment provided to CLECs. ILECs also may need to cooperate with CLECs on comparative mechanized line testing (through respective ILEC and CLEC switches) of the transmission quality of ILEC loops versus CLEC unbundled loops obtained from the

ILEC. Reporting dimensions of copper versus fiber deployment may show that CLEC install troubles result from a disparity in use of underlying transmission media for install of ILEC vs. CLEC facilities. The broadening of the measure to include more than just new installs will detect new service activations (hunt group changes, other feature additions) that cause troubles versus the quality of the transmission medium.

For ILEC Results: Calculations are similar to those for CLECs.

Reporting Dimensions:	Excluded Situations:
• Standard Service Groupings (See Appendix A) • Company • Trouble Type • Geographic Scope	• Trouble tickets that are canceled at the CLEC request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests a ticket be "held open" for monitoring • Trouble tickets created for tracking and/or monitoring requests for clarifying information (e.g., confirmation of customer ownership from CLEC support centers) • Tickets used to track referrals of misdirected calls.

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • CLEC Ticket # • Ticket Submission Time • Ticket Submission Date • Trouble Resolution Time • Trouble Resolution Date • Service Type • WTN or CKTID (a unique identifier for elements combined in a service configuration) • Trouble Type • Geographic Scope	• Report Month • Service Type • Trouble Type • Geographic Scope • Number of Tickets • Number of Service Access Lines

Performance Standard in Absence of ILEC Results	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Less than 0.5% of lines, by service type, regardless of disposition and cause, experience a trouble in a report period for both the "trouble rate" and "percent troubles on new installations and order activity measures."

Function:	Estimated Time To Restore Met
Business Implications:	When customers experience trouble on working services, they naturally expect the services to be restored within the time frame promised. When such commitments are not fulfilled, an already unsatisfactory condition, in the customer's eyes, becomes even worse. When this measure is collected for the ILEC and CLEC and then compared, it can be used to establish that CLECs are receiving equally reliable (as

	compared to the ILEC operations) estimates of the time required to complete service repairs.

Measurement Methodology:	**% Customer Troubles Resolved Within Estimate = (Count of Customer Troubles Resolved By The Quoted Resolution Time and Date) / (Count of Customer Troubles Tickets Closed) x 100**
	
	For CLEC Results: The computation of the measure is as follows: The quoted repair completion date and time is compared to the actual repair date and time (ticket closure as defined in Time to Restore metric). In each instance where the actual repair date and time is on or before the initially provided estimated or quoted date and time to restore, the count of "troubles resolved within estimate" is incremented by one for the relevant "service type" and "trouble type." The resulting count is divided by the total number of troubles resolved (for the consistent service and trouble type), for the report period, in all instances where an estimated interval was provided or a standard interval existed.
	
	For ILEC Results: Same calculation as for CLEC.
	
	Other Clarifications and Qualification:
	
	The ILEC analog for this measure is derived by comparing the actual date and time of ILEC trouble ticket closure compared to the projected trouble clearance date and time established through the ILEC agent's on-line interaction with the ILEC's work management system, regardless of whether or not the ILEC currently quotes this information to its retail customer.
	  • See the "Time To Restore" measurement for discussion of analogous ILEC maintenance activities (e.g., trouble resolution).
	  • The "quoted" or "estimated" time to restore is the actual scheduled time projection returned by the ILEC work management system or the standardized repair interval that the ILEC uses for its own operations when equivalent service arrangements are involved.
	  • A trouble is "resolved" when the ILEC issues notice to the CLEC that the customer's service is restored to normal operating parameters.
	  • If the ILEC supplies only the estimated repair interval, then the estimated date and time of repair is determined by adding the repair interval to the date and time that the CLEC logged the repair request with the ILEC.

Reporting Dimensions:	**Excluded Situations:**
• Company • Service Type (See Appendix A) • Trouble Type • Geographic Scope	• Trouble tickets that are canceled at the CLEC request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests a ticket be "held open" for monitoring • Trouble tickets created for tracking and/or monitoring requests for clarifying information (e.g., confirmation of customer ownership from CLEC support centers). • Tickets used to track referrals of misdirected calls.

Service Quality Measurements
Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
- Report Month - CLEC Ticket # - Ticket Submission Time - Ticket Submission Date - Trouble Resolution Time - Trouble Resolution Date - Service Type - WTN or CKTID (a unique identifier for elements combined in a service configuration) - Trouble Type - Geographic Scope	- Report Month - Service Type - Trouble Type - Number of Troubles Resolved Within Estimate - Number of Troubles Resolved - Geographic Scope

Performance Standard in Absence of ILEC Results	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: Greater than 99% of a maintenance problems, by service type and regardless of trouble type, are resolved by the quoted or estimated date and time of repair.

Service Quality Measurements
Measurement Detail

General (GE)

Function:	Systems Availability
Business Implications:	Access to essential business functionality, supported by the ILEC's OSS, is absolutely critical to CLEC operations. This measure monitors whether OSS functionality is at least as accessible to the CLEC as it is to the ILEC.
Measurement Methodology:	**% System Availability = [(Hours Functionality is Available to CLECs During Report Period) / (Number of Hours Functionality was Scheduled to be Available During the Period)] x 100** **For CLEC Results:** The total "number of hours functionality was scheduled to be available" is the cumulative number of hours (by date and time on a 24-hour clock) over which the ILEC planned to offer and support CLEC access to ILEC OSS functionality during the reporting period. The ILEC must provide a minimum advance notice of one reporting period regarding availability plans and such plans must be interface-specific. If scheduled availability is not provided with at least one report period's advance notice, then the default availability for the subsequent reporting period will be seven days per week, 24 hours per day. "Hours Functionality is Available" is the actual number of hours, during scheduled available time, that the ILEC gateway or interface is capable of accepting CLEC transactions or data files for processing in the gateway / interface and supporting OSS. The actual time available is divided by the scheduled time available and then multiplied by 100 to produce the "% system availability" measure. The "% system availability" measure is required for each unique interface type offered by the ILEC . **For ILEC Results:** Each OSS of the ILEC that is employed in the support of CLEC operations must first be identified by supported functional area (e.g., pre-ordering, ordering and provisioning, repair and maintenance and billing) with such mapping disclosed to the CLECs. The "available time" and "scheduled available time" is gathered for each of the identified ILEC OSS during the report period. The OSS function availability is computed based upon the weighted average availability of the subtending support OSS. That is, the available time for each OSS supporting a functional area is accumulated over the report period and then divided by the summation of the scheduled available time for those same supporting OSS. **Other Clarifications and Qualification:** • The ILEC analogs for this performance measure are the internal measures of system downtime (or up time) typically established between the ILEC Systems Management Organization and the client organizations. • OSS scheduled and available time may be utilized in the computation of more than one functional area. • Parity exists if the CLEC "% system availability" $\geq$ ILEC function availability for the functionality accessed by the CLEC. • "Capable of accepting" must have a meaning consistent with the ILEC definition down time, whether planned or unplanned, for internal ILEC systems having a comparable potential for customer impact. • Time is measured in hours and tenths of hours rounded to the nearest tenth of an hour.

Service Quality Measurements
Measurement Detail

Reporting Dimensions:	Excluded Situations:
• Company • Interface type offered for each functional area (See Appendix A) • Business Period (8:00AM to 8:00PM local time versus 8:00PM to 8:00AM , weekends and holidays)	• None

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Interface Type (Identifies each unique interface available to CLECs) • Business Period • Scheduled Hour Available • Actual Hours Available	• Report Month • Functionality Identification • Business Period • % Availability of Functionality

Performance Standard in Absence of ILEC Results	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Less than 0.1% of unplanned down time, by interface type, during either business period.

Function:	Center Responsiveness
Business Implications:	When CLECs experience operational problems dealing with ILEC processes or interfaces, prompt responses by ILEC support centers are required to ensure that the CLEC customers are not adversely affected. Any delay in responding to CLEC center requests for support (e.g., request for a vanity telephone number) will, in turn, adversely impact the CLEC retail customer who may be holding on-line with the CLEC customer service agent. This measure monitors the ILEC's handling of support calls from CLECs to determine if responsiveness is at parity with the service the ILEC provides its retail customers seeking assistance (e.g., calls to the business office of the ILEC or call the ILEC to report service repair issues)..
Measurement Methodology	**Mean Time to Answer Calls = Σ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered by Center)** **Call Abandonment Rate = (Count of Calls Terminated Before Answer During the Reporting Period)/(Count of All Calls Placed in Queue During the Reporting Period)** **For CLEC Results:** Speed of answer (mean time to answer calls) and call abandonment rates are monitored through the call management technology utilized to distribute calls to ILEC agents supporting CLEC activities (i.e., call receipt personnel staffing ILEC support centers intended for CLEC use). Results for each measure are to be provided separately for each center handing CLEC inquiries. If centers deployed by the ILEC support multiple functions (e.g., both maintenance and provisioning) then the results for each function supported should be separately reported. Speed of Answer is determined by measuring and accumulating the elapsed time from the entry of a CLEC call into the ILEC call management system until the CLEC call

is transferred to the ILEC personnel assigned to handling CLEC calls for assistance. The elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second. The accumulated elapsed time is divided by the count of calls transferred to ILEC agents for accuracy.

The Call Abandonment Rate is based on the number of calls received by the call distribution system of the ILEC center for the reporting period, regardless whether the call actually is transferred to ILEC personnel for processing. In addition, a count is accumulated of all calls that are subsequently terminated by the calling party or dropped due to equipment failure before transfer to the service agent for processing. The accumulated count of calls abandoned (terminated) is divided by the total count of calls received at the monitored center.

For ILEC Results:

Speed of Answer, as it relates to the ILEC, will be measured in an identical manner as described for the CLEC. The results for the ILEC business office operations and its repair bureau operations should be separately accumulated, computed and retained. If further distinctions are made or more discrete tracking is performed within the ILEC call receipt centers (e.g., by business and residence), then results should be reported at the lowest possible level of detail. Where call receipt for such operations are commingled and inseparable, then only a single result for each measure will be generated and serve as the comparative result for both the CLEC repair support and the CLEC provisioning support results.

Other Clarifications and Qualification:

- Speed of Answer minimum service standards, established in many states for business office, maintenance center, and/or operator services represent a similar ILEC measure and are derived from identical data (although the result displayed may be in comparison to a pre-established standard performance minimum).
- For ILEC and CLEC calls, an ILEC Agent answering and placing the caller on hold does not stop timing for purposes of the speed of answer interval.
- An interactive voice response (IVR) unit does not stop the timing for purposes of the speed of answer interval. For a call to be considered answered, the live ILEC Agent must handle the CLEC request.
- Results may be reported for the CLEC industry in aggregate to the extent that separate carrier-specific support centers are not provided. If separate centers are provided (either for an individual CLEC or a group of CLECs) then results should be gathered and supplied for each center and reported to the CLEC(s) based upon the center providing the specific CLEC's support.
- If the ILEC call management technology cannot measure speed of answer on a call-specific basis, then an alternate methodology that simulates speed of answer based upon the average time for component parts of the call (e.g., queue to IVR + IVR to queue + queue to agent answer) can be utilized by mutual consent of the ILEC and CLECs.

Reporting Dimensions:	Excluded Situations:
• Support Center Type (i.e., Center supporting CLEC maintenance, Center supporting CLEC provisioning, ILEC Center supporting retail customer maintenance calls, ILEC Center supporting business office inquiries)	• None

Service Quality Measurements
Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Month	• Month
• Center Identifier	• Center Identifier
• Center Type	• Center Type
• Mean Speed of Answer	• Mean Speed of Answer
• Standard Error for Mean Speed of Answer	• Standard Error for Mean Speed of Answer
• Count of Calls Answered	• Count of Calls Answered
• Count of Calls Abandoned	• Count of Calls Abandoned

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC's operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Greater than 95% of calls, by center, are answered within 20 seconds. • All calls are answered within 30 seconds.

Function:	Average Response Interval for Real-time OSS Queries
Business Implications:	As an initial step of establishing service, the customer service agent must determine such basic facts as availability of desired features, service delivery intervals, telephone numbers to be assigned, the customer's current products and features, qualification of the customer's loop for advanced digital services, and/or the validity of the street address. Likewise, maintenance customer service agents also must obtain real-time information in order to log customer troubles. In preordering and maintenance operations, this type of information is gathered from supporting OSS while the customer (or potential customer) is on the telephone with the customer service agent. Because pre-ordering activities are the first tangible contact a customer may have with a CLEC and because customers already may be dissatisfied when they report a trouble, it is critical that the CLEC be perceived as equally competent, knowledgeable and fast as and ILEC customer service agent. This measure is designed to monitor the time required for CLECs to obtain the pre-ordering and maintenance information necessary to establish and modify service and to log trouble reports. Comparisons to ILEC results indicate whether a CLEC has an equal opportunity to deliver a comparable customer experience when a retail customer calls the CLEC with a service inquiry.
Measurement Methodology:	Average Response Interval = Σ[(Query Response Date & Time) - (Query Submission Date & Time)]/(Number of Queries Submitted in Reporting Period) For CLEC Results: The response interval for each query is determined by computing the elapsed time from the ILEC receipt of a query from the CLEC, whether or not syntactically correct, to the time the ILEC returns the requested data (or reject notification) to the CLEC. Elapsed time is accumulated for each major query or transaction type, consistent with the specified reporting dimension, and then divided by the associated total number of queries received by the ILEC during the reporting period. For ILEC Results: The ILEC computation is identical to that for the CLEC with the clarifications noted below.

Service Quality Measurements
Measurement Detail

Other Clarifications and Qualification:

- The elapsed time for an ILEC query is measured from the point in time when the ILEC customer service agent submits the request for identical or similar information into the ILEC OSS until the time when the ILEC OSS returns the requested information to the ILEC customer service agent.
- As additional pre-ordering functionality is established by the industry, for example with respect to unbundled network elements, the reporting dimensions may be expanded.
- Elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second.
- Elapsed time is to be measured through automated rather than manual monitoring and logging.
- The ILEC service agent entry of a request for pre-ordering or repair information (to the ILEC OSS) is considered to be the equivalent of the ILEC receipt of a query from the CLEC.
- The ILEC OSS return of information to the ILEC customer service agent, whether in hard copy or by display on a terminal, is considered equivalent to the return of requested information to the CLEC.

Reporting Dimensions:	Excluded Situations:
• Company • Interface Type • Pre-Ordering Query Types (See Appendix A) • Maintenance Query Types (See Appendix A)	• None

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Interface Type (specific to pre-ordering or maintenance and repair) • Query Identifier (e.g., unique tracking number) • Query Receipt Date by ILEC • Query Receipt Time by ILEC • Query Type (per reporting dimension) • Response Return Date • Response Return Time	• Report Month • Interface Type • Query Type (per reporting dimension) • Mean response interval • Query Count • Standard error of the mean response interval

Performance Standard in Absence of ILEC Results	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation, then result(s) related to the CLEC operation should meet or exceed the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Other than a query requesting 30 or more telephone numbers, the response interval will be less than or equal 2 seconds for 98% of the CLEC's queries received by the ILEC during the reporting period and no query will take longer than 5 seconds. • For queries requesting 30 or more telephone numbers, the response interval is never to exceed two hours.

Service Quality Measurements
Measurement Detail

Billing (BI)

Function:	Timeliness Of Billing Record Delivery
Business Implications:	Regardless of whether the billing is to retail customers or to exchange access service customers, ILEC delivery of billing records must provide CLECs with the opportunity to deliver bills in as timely a manner as the ILEC; otherwise artificial competitive advantage will be realized by the ILEC. The "mean time to provide recorded usage" and the "mean time to deliver invoices" metrics monitor this situation.
Measurement Methodology	**Mean Time to Provide Recorded Usage Records ={ Σ[(Data Set Transmission Date)-(Date of Message Recording)]}/(Count of All Messages Transmitted in Reporting Period)** **Mean Time to Deliver Invoices = Σ[(Invoice Transmission Date)-(Date of Scheduled Bill Cycle Close)]/(Count of Invoices Transmitted in Reporting Period)** **For CLEC Results:** Usage Records: This measure captures the elapsed time between the recording of usage data generated either by CLEC retail customers or by CLEC access customers (by the AMA recording equipment associated with the ILEC switch) and the time when the data set, in a compliant format, is successfully transmitted to the CLEC. For each usage record, the calendar date and time of usage recording is compared to the calendar date and time of successful completion of data set transmission to the CLEC. The number of hours and tenths of hours elapsed between message recording and data set transmission will constitute the elapsed delivery time. The elapsed delivery time is accumulated for each usage record with the resulting total number of hours accumulated being divided by the number of complete usage records in all the data sets transmitted. Invoices: This measure captures the elapsed number of days between the scheduled close of a Bill Cycle and the ILEC's successful transmission of the associated invoice to the CLEC. For each invoice, the calendar date of the scheduled close of Bill Cycle is compared to the calendar date that successful invoice transmission to the CLEC completes. The number of calendar days elapsed between scheduled Bill Cycle close and completion of invoice transmission will constitute the elapsed delivery time. The elapsed delivery time is accumulated for each invoice with the resulting total number of days accumulated being divided by the number of complete invoices sent in the reporting period. **For ILEC Results:** Identical computations are made for the ILEC with the clarifications provided below. **Other Clarifications and Qualification:** • The elapsed time for delivery of ILEC usage records is measured from the time of message recording, as captured on the ILEC's AMA tape, to the time the AMA tape is converted to billing format (EMR format or equivalent). • The elapsed time for ILEC invoice delivery is measured from the scheduled close date of the retail customer bill cycle to the production of the customer bill in a format appropriate for delivery to retail customers regardless whether such a distribution occurs immediately.

Service Quality Measurements
Measurement Detail

<table>
<tr>
<td colspan="2">• Mean time to deliver usage records is to be reported separately for end user usage and access related usage.</td>
</tr>
<tr>
<td>Reporting Dimensions:</td>
<td>Excluded Situations:</td>
</tr>
<tr>
<td>• Company
Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)</td>
<td>• Any usage records or invoices rejected due to formatting or content errors.</td>
</tr>
<tr>
<td>Data Retained Relating To CLEC Experience:</td>
<td>Data Retained Relating To ILEC Performance:</td>
</tr>
<tr>
<td>• Report Monthly
• Record Type or Invoice Type
• Mean Delivery Interval
• Standard Error of Delivery Interval
• Number of Messages or Invoices Delivered</td>
<td>• Report Month
• Record Type or Invoice Type
• Mean Delivery Interval
• Standard Error of Delivery Interval
• Number of Messages or Invoices Delivered</td>
</tr>
<tr>
<td>Performance Standard in Absence of ILEC Results</td>
<td>If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
• For usage records, separately for access usage and end user usage:
  1. Greater than 99.9% records received within 24 hours or usage recording.
  2. All usage is received within 48 hours of usage recording.
• Greater than 99.95% of total service resale invoices received within 10 calendar days of bill cycle close.
• Greater than 99.95% of wholesale (UNE) invoices received within 10 calendar days of bill cycle close.</td>
</tr>
</table>

<table>
<tr>
<td>Function:</td>
<td>Accuracy of Billing Records</td>
</tr>
<tr>
<td>Business Implications:</td>
<td>The accuracy of billing records affects the accuracy of the billing ultimately delivered to local service customers, whether retail local service or exchange access service customers. Billing for the elements from which CLEC services are constructed must be validated to assure that only correct charges are paid. This validation is necessary to assure that the cost structure for services is not inflated. Furthermore, charges such as "time and material" related charges may be on the invoice and need to be promptly passed on to customers (by CLECs) to avoid dissatisfaction regarding the timeliness of CLEC billing. Prompt billing of such charges also minimizes customer inquiries on late billing. Fair competition requires that the accuracy of billing records (both usage and invoices) delivered by the ILEC to the CLEC must provide CLECs with the opportunity to deliver bills at least as accurate as those delivered by the ILEC. Producing and comparing this measurement result for both the ILEC and CLEC allows a determination as to whether or not parity exists.</td>
</tr>
<tr>
<td>Measurement Methodology</td>
<td>Invoice Accuracy = [(Number of Invoices Delivered in the Reporting Period that Have Complete Information, Reflect Accurate Calculations and are Properly Formatted) / Total Number of Invoices Issued in the Reporting Period)] x 100

Usage Accuracy = [(Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)] x 100

For CLEC Results: The completeness of content, accuracy of information and conformance of formatting will be determined based upon the terms of the individual CLEC interconnection agreements with the ILECs. The ILEC will establish a quality</td>
</tr>
</table>

control process that is disclosed to CLECs and that is no less rigorous than the most rigorous quality monitoring established in the ILEC billing service contracts for long distance service providers. The quality monitoring process must be disclosed in advance and process auditing must be permitted. The records and invoices delivered by the ILEC must simultaneously meet the standards relating to content, accuracy and formatting in order to be counted as accurate. Each of the above measurements, is expressed as a ratio (expressed as a percentage) of accurate records (or invoices) to the total records (or invoices) delivered.

For ILEC Results: The computation for the ILEC is identical to that described for the CLEC. The usage accuracy determination is based upon comparison of the usage records, following format conversion to the EMR (or equivalent) format as compared to the internally established content and formatting requirements. Likewise, the accuracy measure for invoice delivery will be based upon a statistically reliable comparison of ILEC invoices to the content, calculation methodology and formatting standards of the ILEC. Separate comparisons are to be made for retail service invoices and access invoices with the results compared to wholesale (total service resale) and UNE invoices, respectively.

Other Clarifications and Qualification:

- The usage accuracy measure identified here is similar to the type of measures that ILECs commonly institute in service contracts with long distance service suppliers who use ILEC billing services.
- The wholesale invoice accuracy identified here is analogous to the measures contained within the Billing Quality Assurance Programs that the ILECs have with interchange carriers for monitoring access billing quality. If a sampling process is used to monitor accuracy, then the study results must be reconfirmed no less than quarterly.

Reporting Dimensions:	Excluded Situations:
• Company • Type of Record (end user or access) or Invoice (resale, UNE or interconnection services)	• None

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Record Type or Invoice Type • Number of Records With Errors • Number of Records Delivered	• Report Month • Record Type or Invoice Type • Number of Records With Errors • Number of Records Created

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Greater than 98% of usage records transmitted, by usage type, reflect the agreed upon format and contain complete information. • Greater than 98% of wholesale bills, by invoice type, are accurate.

Service Quality Measurements
Measurement Detail

Operator Services,/Directory Assistance & Listings (OS, DA & DL)

Function:	Speed To Answer/Review Period for Directory Listings
Business Implications:	The speed of answer delivered to CLEC retail customers, when the ILEC provides Operator Services or Directory Services on behalf of the CLEC, must be no slower than the speed of answer that the ILEC delivers to its own retail customers of equivalent local services. The average amount of hold time that CLEC customers experience also must not be longer than it is for ILEC customers. In addition, CLECs must be provided the same opportunity to review directory listing updates to catch any errors before publication in white pages directories.
Measurement Methodology:	**Mean Time To Answer =[Σ(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered on Behalf of theCLECs in Reporting Period)**

Mean Time Allotted to Proof Listing Updates Before Publication = [Date &Time of Directory Publication Deadline) – (Date and Time Updates Available for Proofing]/(Total Number of Updates Provided for Proofing During Reporting Period)

For CLEC Results: Speed of answer is monitored through the call management technology used to distribute calls to ILEC agents supporting CLEC activities (i.e., call receipt personnel staffing Directory Assistance or Operator Service Positions).

Speed of Answer is determined by measuring and accumulating the elapsed time from the entry of a CLEC retail customer call into the ILEC call management system queue until the CLEC retail customer call is transferred to the ILEC personnel assigned to handling CLEC calls for assistance (whether DA or OS). The elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second.

Time Allotted To Proof Listing Updates encompasses the amount of review time afforded to CLECs for the purposes of validating directory listings prior to directory publication. If electronic access permits a CLEC to view, on demand, its customers' listings as they will be published, then this measure is not necessary. An interface availability measurement, however, should be included within the reporting dimensions for the "General" OSS systems measurements. The directory proofing interval information should be captured and retained for each directory published. The interval is measured from the date and time the CLEC receives a final listing of customer-related information that will be contained within the ILEC's next directory publication to the final date and time for submission of changes to the listings provided.

For ILEC Results: Identical to process described for the CLEC with the clarification provided below.

Other Clarifications and Qualifications:

- The "speed to answer" measure is directly analogous to speed of answer minimum service standards established within many states.
- Results must be reported separately for CLECs that use facilities-based interconnection, as customer calls to OS and DA will arrive at the operator center on unique facilities. For CLECs that use common facilities to deliver customer calls to the operator center, results may be reported for the CLEC industry in aggregate until the capability to measure specific CLEC results exists.

Service Quality Measurements
Measurement Detail

	• See the "Center Responsiveness" measurement for the treatment of situations where ILEC call management technology cannot measure speed of answer on a call basis from receipt to answer.

Reporting Dimensions:	**Excluded Situations:**
• Company • Operator Services By Center • Directory Assistance By Center • Directory Listings By Directory Note: OS/DA Speed to Answer is to be CLEC-specific if technically feasible.	• Call abandoned by customers prior to answer by the ILEC OS or DA operator

Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Month • Type of Measurement (OS Calls, DA Calls or Directory Listing • Center Identifier (or Directory ID for DL) • Mean Speed of Answer (OS & DA only) • Standard Error for Mean Speed of Answer (OS & DA only) • Number of Calls Answered (OS & DA only) • Directory Close Date (DL only) • List Availability Date (DL only)	• Month • Type of Measurement (OS Calls, DA calls or Directory Listings) • Center Identifier (or Directory ID for DL) • Mean Speed of Answer (OS & DA only) • Standard Error for Mean Speed of Answer (OS & DA only) • Standard Error for Mean Speed of Answer (OS & DA only) • Directory Close Date (DL only) • Listing Availability Date (DL only)

| **Performance Standard in Absence of ILEC Results:** | If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
• More than 90% of calls answered by a "live" agent, separately for OS and DA services, within 10 seconds.
• All calls answered by a Voice Response Unit, separately for OS and DA services, within 2 seconds.
• Directory Listing review time may be no more than 4 hours less than the ILEC's. |

Service Quality Measurements
Measurement Detail

Network Performance (NP)

Function:	Interconnect Traffic Engineering/Trunking Capacity
Business Implications:	When customers place calls, they expect that their calls will go through. Likewise customers also expect that other callers will be able to reach them without having their calls blocked. In order to ensure that CLEC customers do not experience greater blocking to and from their lines than ILEC customers do, it is necessary to measure and compare blocking rates for ILEC and CLEC trunk usage. Overall trunk blocking experienced by ILEC and CLEC customers must be measured because blockage on common trunks affects a greater percentage of CLEC total traffic than ILEC total traffic. The ILEC's greater build out of Direct End Office Trunking (DEOT), using common trunking mostly for overflow traffic from DEOTS, creates the disparity. Common trunks carry a greater percentage of CLEC traffic because of the CLECs' reliance on tandem interconnection as their networks are built out. The reliance not only is an economic choice based on 'start-up' traffic volumes, but also results from ILEC restrictions on direct end office connections. Blocking measurements, as recommended below, or any call completion comparisons for dedicated final interconnection trunks do not tell the whole story of network capacity. Timely delivery of interconnect trunks and augments based on CLEC traffic projections rather than current utilization is also significant to the capacity parity issue and is discussed further in the order completion interval section. To protect their customers and their reputations, CLECs keep blocking levels under control on dedicated trunks by holding up new off-net and on-net customer orders. Installing new customers before ILECs have provided adequate trunking capacity, in line with CLEC forecasts and actual business requirements, can degrade service to existing and new CLEC customers.
Measurement Methodology:	**% Call Completion: [(Total number of blocked call attempts (separate measures for inbound and outbound) during the busy hour)/Total number of call attempts during busy hour)] x 100** **For CLEC Results:** For determining outbound call blocking, the number of CLEC customer call attempts, where the customer dials a valid telephone number, is accumulated for the reporting period. The number of blocked call attempts experienced by CLEC customers, where a call to a valid telephone number was not completed by the network because of ILEC-controlled capacity limitations or other ILEC network trouble, also is accumulated during the reporting period. At the end of the reporting period, the total number of blocked attempts is divided by the total number of attempts, and the ratio is expressed as a percentage. For inbound calling, the results will measure calls originating on the ILEC's network and blocked from terminating on the CLEC's network. **For ILEC Results:** The approach is identical to that described for the CLEC, except that the network performance is measured only for representative ILEC service configurations. **Other Clarifications and Qualifications:** CLECs may agree to call completion reports in lieu of or in addition to blocking reports.

Service Quality Measurements
Measurement Detail

Reporting Dimensions:	Excluded Situations:
• Trunk Capacity Type (DSO, DS1, DS3, etc.) • Dedicated Trunk Groups • Common Trunk Groups Where CLEC/LD Traffic Share Common ILEC Trunks. • Common Trunk Groups where CLEC traffic traverses a separate common network from ILEC traffic. • Availability of 7-digit call back-up to PSAP location • E911/911 Trunk Groups • OS/DA Trunk Groups • By Switch (Serving CLEC) for CLEC • By Switch (Serving CLEC) for ILEC • Company • Geographic Scope	• None.

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • By Switch (Serving CLEC) for CLEC • Trunk Capacity Type • Trunk Group Identifier • Geographic Identifier • Busy Hour and Day • Calls Attempted • Calls Blocked	• Report Month • By Switch (Serving CLEC) for ILEC • Trunk Capacity Type • Trunk Group Identifier • Geographic Identifier • Busy Hour and Day • Calls Attempted • Calls Blocked

| Performance Standard in Absence of ILEC Results: | If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:

Engineering Parameters:

• Dedicated Trunk Groups: Not to exceed blocking standard of B.01

• Common Trunk Groups:

(1) Where CLEC/LD traffic share common ILEC trunks: No more than 1% of end offices may have more than 2% blockage a month based on the Erlang-B.01 scale.
(2) Where CLEC traffic traverses a separate common network from LEC traffic: No more than 2% of end offices may have more than 2% blocking. |

Service Quality Measurements
Measurement Detail

Function:	Reporting Network Outages
Business Implications:	Both CLECs and ILECs must be made aware of major network events in order to notify customers and regulatory agencies (e.g. E-911 agencies, FAA, and other key customer accounts). To that end, the ILECs must provide the CLECs with timely and detailed information (pertaining to a network incident) to afford CLECs the opportunity to make prudent business decisions regarding management of their own customer base and networks. For example, the ILEC would inform the CLEC that the network incident was caused by a cable cut at a specified location.
Measurement Methodology:	**Mean Time to Notify CLEC = Σ[(Date and Time ILEC Notified CLEC network incident) - (Date and Time ILEC detected network incident)] / Count of Network Incidents.** **For CLEC Results:** The results will be based on the time it takes for the ILEC's Centralized Control Center to notify the CLEC and ILEC of a customer impacting network incident in equipment utilized by the CLEC. When the ILEC's Centralized Control Center becomes aware of the network incident, they must electronically notify both the ILEC and the CLEC. The notification time for each outage will be measured in minutes and divided by the number of outages for the reporting period. **For ILEC Results:** Same computation as for the CLEC.

Reporting Dimensions:	Excluded Situations:
• Company • Type of Event - By each Reportable Incident Grouping (See Attachment A) • By Switch and Tandem	• None

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Type of Event • Meantime to notify CLEC • Number of Events • Geographic Scope Indicator	• Report Month • Type of Event • Mean Time to Detect Event • Number of Events • Geographic Scope Indicator

| **Performance Standard in Absence of ILEC Results:** | If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
• Electronic Notification Procedures are required for real-time network incident reporting from ILEC to CLEC.
• Manual reporting processes may be required until OSS Interfaces become operational. |

Service Quality Measurements
Measurement Detail

Function:	Network Performance Parity
Business Implications:	The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNE combinations are employed, will be heavily influenced by the underlying quality of the ILEC network performance. Customers experience the network quality of the service provider each time services are used. This metric, when collected for both the CLEC and ILEC and then compared, will help show whether CLEC network performance is at least at parity with ILEC network performance.
Measurement Methodology	**Network Performance Parity = Σ(Network Performance Parameter Result)/(Number of Tests Conducted)** **For CLEC Results:** Based upon a random and statistically reliable (at a preset level) sample of network configurations employed by the CLEC, the network performance parameter (as indicated in the reporting dimension) is monitored based upon generally accepted testing procedures and the resulting parameter value(s) recorded. The measured values are accumulated across the sample base and the mean and associated variance computed. **For ILEC Results:** The approach is identical to that described for the CLEC, except that the network performance is measured only for representative ILEC service configurations.

Reporting Dimensions:	Excluded Situations:
• Transmission Quality (See Appendix A)	• None

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Reporting Dimension • Mean Performance Result • Standard Error of Mean Performance • Number of Data Points • Geographic scope	• Report Month • Reporting Dimension • Mean Performance Result • Standard Error of Mean Performance • Number of Data Points • Geographic scope

| Performance Standard in Absence of ILEC Results | If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
• Performance Standards in this area are yet to be published. |

Service Quality Measurements
Measurement Detail

Collocation Provisioning (CP)

Function:	Collocation Provisioning
Business Implications:	CLECs need to receive timely responses describing the price and availability of collocation space and ontime provisioning of collocation arrangements. CLECs also need the timely offering of alternatives to physical collocation and virtual collocation. Where ILECs run out of physical collocation space, they may develop suitable space. CLECs also may prefer more cost-efficient alternatives that afford control over their own equipment and may seek alternative arrangements from ILECs. The speed at which these alternative arrangements (i.e. leasing GR-303 compliant access concentration equipment as an unbundled network element or backhauling to a neighboring central office) are offered and provided also is critical to CLECs obtaining a meaningful opportunity to compete in local markets.
Measurement Methodology:	**Mean Time To Respond To Collocation Request = Σ [(Request Response Date) – Request Submission Date)]/Count of Request Responses Issued** **Mean Time To Provide Collocation Arrangement = Σ [(Date & Time Collocation Arrangement is Complete) – (Date & Time Collation Application Submitted)]/Number of Collocation Arrangements Completed** **% Due Dates Missed = (Number of Orders Not Completed By ILEC Committed Due Date)/Total Number of Orders Completed During the Reporting Period** **For CLEC Results:** Mean Time to Respond to Collocation Request: The response interval for each space request is determined by computing the elapsed time from the ILEC receipt of a collocation request (or inquiry) from the CLEC, to the time the ILEC returns the requested information or commitment to the CLEC. Elapsed time is accumulated for each type of collocation space request, and then divided by the associated total number of collocation requests received by the ILEC during the report period. Mean Time To Provide Collocation Arrangements: The interval is the elapsed time from the ILEC's receipt of an order for collocation (from the CLEC) to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each order is then divided by the associated total number of collocation orders completed within the reporting period for each type of collocation. The measurement is similar to the Average Completion Interval for resold services and unbundled network element orders and could be reflected as a separate category of that measurement. % Due Dates Missed: For each type of collocation, both the total numbers of orders completed within the reporting interval and the number of orders completed but missing the committed due date (as specified on the initial confirmation returned to the CLEC) are counted. The resulting count of orders completed later than the committed due date is divided by the total number of orders completed. The measurement is similar to the % Completed on Time for resold services and unbundled network element orders and could be reflected as a separate category within the % Completed on Time measurement. **For ILEC Results:** The ILEC computation is identical to that for the CLEC for provision of collocations to ILEC affiliates. Largely, however, tariff and contract standards will be the benchmarks that ILECs must meet for a parity determination.

LCUG's Service Quality Measurements v7.0
61

Service Quality Measurements
Measurement Detail

Their vast number of end offices compared to CLECs' switch deployment make it difficult to develop the appropriate analog.

Other Clarifications and Qualifications:

- Elapsed time is measured in days and hours.
- A response to the collocation request will only be considered to be "received" if it is a thorough and actionable plan (i.e., a simple "yes" or "no" is not sufficient).
- Questions about the CLEC's collocation request also do not count as a "received response."

Reporting Dimensions:	Excluded Situations:
• Company • Type of Collocation • Geographic Scope	• CLEC cancellations or requested delays.

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Request Identifier (e.g., unique tracking number) • Date and Time of Request receipt by ILEC. • Request type (per reporting dimension) • Response Date and Time • Committed Delivery Date and Time • Actual Delivery Date and Time • Response Date and Time • Geographic Scope	• Report Month • Request Identifier • Date and Time of Request Receipt by ILEC • Response Date and Time • Committed Delivery Date and Time • Actual Delivery Date and Time • Geographic scope

Performance Standard in Absence of ILEC Results	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • All responses must be provided in 5 business days unless contract/tariff interval is shorter. • All collocations must be provided within the applicable contract or tariff intervals. • No less than 98% of commitments must be met for Physical, Virtual and other alternative collocation offerings.

Service Quality Measurements
Measurement Detail
Database Updates (DU

Function:	Database Updates
Business Implications:	CLECs must rely on ILEC databases in order to provide accurate E911/911 services, directory listings, directory assistance, and operator services. ILECs currently control the updating of many essential databases, such as the Line Information Database (LIDB); directory listings, E911 Automatic Location Identifier (ALI), Master Street Address Guide (MSAG) and selective routing databases. In addition, accurate and timely loading of NXXs before the LERG (Local Exchange Routing Guide) effectiveness date is vital to CLEC customer's receiving calls from ILEC customers, and it is essential to ensure that customers are charged correctly for local and toll calls. Routing of CLEC's NXXs at the tandem and central office to the proper Public Safety Answering Point (PSAP) for emergency calls also is critical to E911/911 service. Disparity in timely and accurate updates of the above databases can lead to annoying, costly and possibly "life and death" situations for CLEC customers.
Measurement Methodology:	**Average Update Interval = Σ [(Completion Date & Time of Database Update) – (Submission Date and Time of Database Change)]/Total Number of Updates Completed During Reporting Period** **% Update Accuracy = [Number of Updates Completed Without Error)/(Number Updates Completed)] x 100]** **For CLEC Results:** <u>Average Update Interval</u>: The actual update interval is determined for each update processed during the reporting period. It is the elapsed time from the ILEC receipt of a syntactically correct transaction from the CLEC to the ILEC's accurate completion of updating all databases affected by the CLEC activity. Elapsed time for each update is accumulated for each affected database (e.g., E911/911, LIDB, Directory and Directory Listings). The time required to update each database is accumulated and then divided by the associated total number of updates completed within the reporting period. <u>% Update Accuracy</u>: For each update completed during the reporting period, the original update that the CLEC sent to the ILEC is compared to the Database following completion of the update by the ILEC. An update is "completed without error" if the database completely and accurately reflects the activity specified on the original and supplemental update (e.g., orders) submitted by the CLEC. Each Database (e.g., E911/911, LIDB, Directory and Directory Listings) should be separately tracked and reported. **For ILEC Results:** The ILEC computation is identical to that for the CLEC with the clarifications noted below. **Other Clarifications and Qualification:** • For LIDB, the elapsed time for an ILEC update is measured from the point in time when the ILEC's file maintenance process makes the LIDB update information available until the date and time reported by the ILEC that database updates are completed. • Results for the CLECs are captured and reported at the update level by Reporting Dimension (see below).

- The Completion Date is the date upon which the ILEC issues the Update Completion Notice to the CLEC.
- If the CLEC initiates a supplement to the originally submitted update and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the update submission date and time will be the date and time of ILEC receipt of a syntactically correct update supplement. Update activities responding to ILEC initiated changes will not result in changes to the update submission date and time used for the purposes of computing the update completion interval.
- Elapsed time is measured in hours and hundredths of hours rounded to the nearest tenth of an hour.
- Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays; however, scheduled maintenance windows are excluded.

Reporting Dimensions:	Excluded Situations:
• Company • Database Type	• Updates Canceled by the CLEC • Initial update when supplemented by CLEC • ILEC updates associated with internal or administrative use of local services

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • Database Type • Update Submission Date • Update Submission Time • Update Completion Date • Update Completion Time • Reporting Dimension • Geographic Scope	• Report Month • Database Type • Mean Interval for Update • Standard Error of Mean • Number of Updates • Number of Updates With Errors • Geographic Scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • 99.99% completed in 24 hours or 100% completed by LERG effective date. • 99.99% accurate

Interconnection/Unbundled Elements and Combinations (IUE)

Function:	Availability of Network Elements
Business Implications:	As CLECs use individual elements and element combinations to deliver unique services, UNE functionality must operate properly to ensure that those elements support quality retail services. This measure monitors individual network elements or element combinations to ensure that CLECs have a meaningful opportunity to compete through access to and use of element (or combination) functionality.
Measurement Methodology	Function Availability[1] = (Amount of Time[2] a Functionality is Useable[1] by a CLEC in a Specified Period)/(Total Time[2] Functionality Was Scheduled To Be Useable)

Notes:
1. These measurements may also be expressed in the negative, that is, in term of unavailability.
2. In some instances, rather than time, the availability will be expressed in terms of transactions executed successfully compared to transactions attempted.

For CLEC Results: Availability will be measured for each unique UNE functionality (or combination of UNEs). The number of times that the functionality executes properly will be shown in comparison to the number of times that the execution of the functionality was requested or initiated. Availability can apply to both physical and logical (e.g., database) elements. Physical element availability (e.g., links to databases, dedicated transport, etc.) will typically be expressed as the percent of time that the functionality is useable compared to the total time in the period being observed. "Useable" means that, when monitored, the element indicates readiness to operate (e.g., an electrical (or equivalent) continuity is detected, expected signaling is returned, etc.). Logical element availability will typically be expressed in terms of the number of transactions successfully executed (e.g., successful database updates, success query responses) compared to the number of transactions attempted.

Illustrative examples of availability measures are shown below
- A-link: minutes unavailable per year
- D-link: seconds unavailable per year
- Databases: percentage of queries receiving a response
- Databases: percentage of queries experiencing a return of unexpected values

For ILEC Results: Identical measurements are performed where the ILEC employs the same or reasonably comparable functionality. Where such analogs do not exist, the ILEC is expected to establish benchmark performance levels jointly with the CLEC requesting the functionality.

Other Clarifications and Qualification:
- The preceding list of elements is illustrative and is not to be considered exhaustive
- ILEC failure to provide comparably timely performance when using comparable functionality constitutes discriminatory access. Where comparable functionality is not employed, failure to meet or exceed parameters negotiated with the CLEC also is discrimination.
- For each element or element combination requested, where a retail analog is not identified, the ILEC is expected to establish both an availability measure and an availability standard (ILEC functional analog or benchmark) unless the CLEC waives its right for such a measure. |

	• Typical databases for which standards are currently expected are AIN, LIDB and 800 Number.
Reporting Dimensions:	**Excluded Situations:**
• By unique UNE or UNE combinations requested by the CLECs	• None
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Month • Element or Element Combination Identification • Result for Agreed Upon Availability Parameter	• To Be Determined
Performance Standard in Absence of ILEC Results	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Performance Standards in this area are yet to be published.

Function:	**Performance of Network Elements**
Business Implications:	As CLECs use individual elements (as well as element combinations) to deliver unique services, it is essential that the UNE functionality operates in a timely manner because of the crucial role played by such elements in providing quality retail services. This measure monitors individual network element (or element combinations) that do not have an apparent retail analog. CLECs must be afforded a meaningful opportunity to compete when element (or combination) functionality is utilized.
Measurement Methodology:	**Timeliness of Element Performance = (Number of Times Functionality Executes Successfully Within the Established Timeliness Standard)/(Number of Times Execution of Functionality was Attempted)** **For CLEC Results:** Timeliness will be measured for each unique UNE (or combination of UNEs) that delivers unique functionality. The number of times that the functionality executes properly within the established standard time frame will be accumulated and shown in comparison to the number of times that the execution of the functionality was requested or initiated. Illustrative examples of timeliness measures are shown below: • Database: % transactions experiencing time-outs • Post Dial Delay: % calls routed to CLEC OS platform within 2 seconds **For ILEC Results:** Identical measurements are performed where the ILEC employs the same or reasonably comparable functionality. Where such analogs do not exist, the ILEC is expected to establish benchmark performance levels jointly with the CLEC requesting the functionality. **Other Clarifications and Qualification:** • The preceding list of elements is illustrative and is not to be considered exhaustive • ILEC failure to provide comparably timely performance when using comparable functionality constitutes discriminatory access. Where comparable functionality is not employed, failure to meet or exceed parameters negotiated with the CLEC also is discrimination.

- For each element (or element combination) requested where a retail analog is not identified, the ILEC is expected to establish both a timeliness measure and a timeliness standard (ILEC functional analog or benchmark) jointly with the requesting CLEC unless that CLEC waives its right for such a measure.
- Typical databases for which standards are currently expected are AIN, LIDB and 800 Number.
- Comparisons of performance should be based upon the criteria for which the element was engineered. For example, if the element was engineered based upon average busy hour criteria, the comparison should be based upon the CLEC busy hour period (likewise for criteria such as busy day, busy season, or ten high days).

Reporting Dimensions:	Excluded Situations:
• By unique UNE or UNE combinations requested by the CLECs	• None

Data Retained Relating To CLEC Experience:	Data Retained Relating to ILEC Performance:
• Month • Element or Element Combination Identification • Result for Agreed Upon Availability Parameter	• To Be Determined

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Performance Standards in this area are yet to be published.

Appendix A: Reporting Dimensions

Service Types:	- Resold Residence POTS - Resold Business POTS - Resold BRI ISDN - Resold PRI ISDN - Resold Centrex/Centrex-like - Resold Analog PBX trunks - Resold DID Trunks - Resold Voice-Grade Private Line - Resold DS1 Services - Resold DS3 Services - Resold >DS3 Services - Other Resold Services - UNE Platform (at least DS0 loop + local switch + transport elements) - UNE Channelized DS1 (DS1 loop + multiplexing) - Unbundled or UNE-derived 8 dB Analog Loops - Unbundled or UNE-derived 2-wire Digital Loops - Unbundled or UNE-derived 4-wire Digital Loops - Unbundled or UNE-derived ADSL Loops - Unbundled or UNE-derived HDSL Loops - Unbundled or UNE-derived xDSL Loops - Other Unbuondled or UNE-derived Loops - UNE Analog Switch Port (line side) - UNE BRI Capable Switch Port (line side) - UNE DS1 Switch Port (line side) - UNE PRI Switch Port (trunk side) - UNE DID-capable Switch Port (trunk side) - UNE Message Trunk Port - UNE Dedicated DS0 Transport - UNE Dedicated DS1 Transport - UNE Dedicated DS3 Transport - Interconnect Trunks (DS0s, DS1s and DS3s, - Two-Way Trunking, Inbound Augments, separately) - Common Transport - ILNP - PNP - ILNP-to-LNP conversions
Standard Order Activities:	- New Service Installations - Service Migrations Without Changes - Service Migrations With Changes - Local Number Porting - Inside Move - Outside Move - Records Change - Feature Changes - Service Disconnects - Translation Disconnects - Standalone Directory Listing (DL) - Standalone Directory Assistance (DA) Listing - Standalone DL & DA Activity

Service Quality Measurements
Appendix A: Reporting Dimensions

Pre-Ordering Query Types:	• Due Date Reservation (if separate transaction from Appointment Scheduling) • Feature Function Availability • Facility Availability (if separate transaction from Feature/Function Availability) • Qualification of Loops for Advanced Digital Services • Street Address Validation • Service Availability Information (if separate transaction from Feature/Function Availability) • Appointment Scheduling • Customer Service Records • Telephone Number • Rejected or Failed Queries (regardless of type)
Maintenance Query Types	• Create (or confirm logging of) a Maintenance Request • Obtain Status • Obtain Test Results • Cancel Request • Rejected of Failed Queries (regardless of type) • Clearance Notification • Closure Notification
Order Rejection Reason Codes	• Invalid Address • Address Errors • End User Name Doesn't Match ILEC Records • Incorrect Directory Assistance Listing/Due Date • Duplicate PON • Winback (Customer Returned to ILEC) • ILEC System Problem • TN Already Disconnected
Transmission Quality Parameter:	• Subscriber Loop Loss • Signal to Noise Ratio • Idle Channel Circuit Noise • Loop-Circuit Balance • Circuit Notched Noise • Attenuation Distortion
Collocation Provisioning Types:	• Physical within CO (space available at time of request) • Physical within CO (space created in response to request) • Physical outside of CO (space available at time of request) • Physical outside of CO (space created in response to request) • Virtual • Backhauling to neighboring CO • Access to GR-303 compatible concentration equipment (leased UNE alternative) • Other alternatives to physical
Databases and Switch Tables:	• E911/911 ALI, Selective Router • MSAG • LIDB • OS/DA • DL • NXX tables at CO for call completion and NXX routing • NXX tables at tandem for call completion and NXX routing

Reportable Network Incidents:

Switching (Local/Tandem):
- Complete loss of call processing capability from a switch (host/remotes) lasting = > 2 minutes or longer.
- Network Incident (Loss of Dial Tone) affecting one thousand access lines.
- Media Interest: Any interruption or outage that may cause public or news media attention.

Transport:
- EQUIPMENT AND/OR FACILITY FAILURES

- Local (200 or more working pairs affected, causing loss of dial tone)
- Toll/EAS (Isolation of an entire exchange) > 2 minutes.
- Fiber (Any working fiber providing customer service that fails without protection) lasting > 2 Minutes.
- A transport equipment failure (E.G. DACS) > 2 minutes.

- BROADBAND

- Frame Relay (A failure of one or more channelized T1 carrier systems or two or more non-channelized T1 carrier systems.
- ATM (A failure of one OC3 or two DS3s)
- SMDS (A failure of one DS3 or four T1s)
- Packet Switching (Any failure of an access module (AM) or resource module (RM)

- NARROWBAND

- 5 T1 carrier systems (within a switch)
- Fiber (Any working fiber providing customer service that falls without protection)
- Media Interest: Any interruption or outage that may cause public or news media attention.

SS7:
- Loss of mated pair of STP or SCP > 2 minutes
- Media Interest: Any interruption or outage that may cause public or news media attention

Trunking:
- Loss of intra/interoffice calling lasting > 2 minutes. (E.G. Toll and/or EAS)
- Media Interest: Any interruption or outage that may cause public or news media attention

911:
- A central office isolation from the E911 network for = > 2 minutes or longer.
- Loss of 25% or more of the trunking capabilities from an E911 tandem to the PSAPs it serves for = > 2 minutes or longer (e.g. translations, trunking frame failure, etc.)
- A PSAP isolation from the E911 network for = > 2 minutes or longer (e.g. translations, trunking problems, etc.)
- A transport cable failure that isolates a central office from the E911 network; (Local switch to the E911 tandem) transport cable failure that isolates a PSAP from the E911 tandem;- A transport cable failure that results in the loss of 25% or more of the trunks/circuits (aggregate from an E911 tandem to the PSAPs served by that Tandem; A transport equipment failure that isolates a

	central office from the E911 network; A transport equipment failure that isolates a Public Safety Answering Point (PSAP) tandem.; or A transport equipment failure that results in the loss of 25% or more of the trunks/circuits (aggregate) from an E911 tandem to the PSAPs served by that tandem. • Federal Government, equipment or facility affecting 5 or more military special communication, isolations of FAA location or air ground facilities.- State and local agencies interruptions seriously affecting service to police, fire departments, hospitals, press, military, PBS's
Trouble Types	• Inside (Central Office) Dispatch - Out of Service • Outside Dispatch - Out of Service • Inside Dispatch – Degraded Service • Outside Dispatch – Degraded Service • No Access or No Trouble Found • NXXs not loaded properly by ILEC • NXXs not loaded properly by party other than CLEC/ILEC • All Other Troubles *"Out of Service" means that the customer has no dial tone.* *"Dispatch" means that ILEC repair personnel must be dispatched to a location outside an ILEC building (to customer premises or other off-site facilities) to resolve the trouble.*

Appendix B: Glossary

Term:	Definition:
Abandoned Call:	An abandoned call occurs when the caller hangs up after the call has been delivered, but before the receiving party has answered the call.
Automatic Location Identification:	A proprietary database developed for E911 systems that provides for a visual display of the caller's telephone number, address and the names of the emergency response agencies that are responsible for that address. The ALI also shows an interim number portability telephone number if applicable.
Attenuation Distortion:	Attenuation Distortion measures the variation in loss at different frequencies across the voice frequency spectrum (200Hz – 3400 Hz).
Call Completion Rate:	The call completion rate for CLEC customers is determined by calculating the total number of calls placed by CLEC customers that were completed to the calling destination. The number of completed calls is then divided by the total # of call attempts made by CLEC customers during the reporting period.
Call Delivery Rate:	The call delivery rate for CLEC customers is determined by calculating the total # of calls received by CLEC customers. This number of delivered calls is then divided by the total # of call attempts received by the ILEC for termination to CLEC customers.
Common Trunks	Trunks carrying the traffic from more than one carrier, such as the trunking between a tandem switch and end office switches.
Completion:	A completion is the transaction that the ILEC sends to the CLEC to inform the CLEC that a requested order has been completed.
Dial Tone Delay:	The dial tone delay is determined for each trial completed during the reporting period by computing the time that transpires from a customer's going off-hook and the receipt of dial tone from the servicing central office. It should be measured in seconds and tenths of seconds. Post dial delay for each trial is determined for each trial completed during the reporting period by computing the time that transpires from when the last digit is dialed until a valid response is received by the customer. It should be measured in seconds and tenths of seconds
Direct End Office Trunks	Trunking from the serving central office to the central office switch (Class 5) used to connect subscriber loops.
Directory Assistance Database:	The database containing subscriber records used to provide live or automated operator-assisted directory assistance, including 411, 555-1212, NPA-555-1212.
Directory Listings:	Subscriber information, including name, address and phone numbers, that is published in any media, including traditional white/yellow page directories, CD ROM and other electronic formats.

Term:	Definition:
FOC:	A FOC is a Firm Order Confirmation notification, which is the transaction that the ILEC will send to the CLEC to confirm that an order can be completed.
GR303-Compliant Loop Access Concentration	An alternative to physical and virtual collocation that enables CLECs to serve a greater number of unbundled loops with less transport and collocation costs through leasing GR303-compliant remote digital terminals (RDTs) (as an unbundled network element priced on forward-looking costs)—from the ILECs. Loops are then ordered to the RDTs and carried over leased transport to the CLEC's collocation area. Bellcore General Requirements-303 describes a family of generic criteria for integrated access systems that includes open interfaces for mix-and-match of (1) local digital switches with RDTs as well as (2) remote digital terminals and element management systems.
Held Orders:	Held orders are orders that the ILEC has confirmed (an FOC was returned to the CLEC) and that are overdue.
Idle Channel Circuit Noise:	The idle channel circuit noise for each trial is determined for each trial completed during the reporting month by computing the difference between the noise that exists in the channel when no signals are present and the reference noise. The resulting accumulated idle channel circuit noise for all trials is divided by the total # of trials completed during the reporting period.
Interface:	The interface is the ILEC interface that allows the CLEC to access the ILEC system
Interim Local Number Portability:	An interim service arrangement, such as by use of remote call forwarding, whereby subscribers who change local service providers may retain existing telephone numbers without impairment of quality, reliability or convenience when changing local service providers and remaining in their current location or changing their location or changing their location within the geographic area service by the initial carrier.
Internal or Administrative Use:	The carrier's use for intra-company communications or for operation of its business.
Jeopardy:	A jeopardy is a transaction that the ILEC sends to the CLEC to inform the CLEC that a previous order cannot be processed as specified in the original FOC.
Line Information Database	A signal control point database (linked by common channel signaling to other points in the network) that provides for such functions as calling card validation for telephone number cards issued by ILECs and other entities and validation for collect and billed-to-third-party services.

Service Quality Measurements
Appendix B: Glossary

Term:	Definition:
Loop-circuit Balance:	Loops-circuit balance should be measured in decibels and tenths of decibels above the reference noise. "Attenuation Distortion" should measure the variation in loss at different frequencies across the voice frequency spectrum (200Hz – 3400 Hz). It should be measured from the NID to the switch, and from the switch to the NID. It is measured by subtracting the loss at 1004 Hz from the loss at the frequency of interest, and should be reflected in tenths of decibels.
Master Street Address Guide:	A database defining the geographic area of an E911 service. It includes an alphabetical list of the street names, high-low house number ranges, community names and emergency service numbers provided by the counties or their agents.
Network Incident:	A network incident is an unplanned network occurrence that results in blocked calls
NXX:	The three-digit code that indicates the central office switch serving the called party. The NXX is the fourth, fifth and sixth digits of a telephone number as established within the North American Numbering Plan.
Physical Collocation:	A form of carrier network interconnection where the ILEC designates space on the floor of its central office for the CLEC to build a cage for its transmission equipment. With physical collocation, the CLEC services and maintains its own equipment.
Permanent Number Portability or Number Portability:	A long-term service arrangement whereby users of telecommunications services retain, at the same location, existing telephone numbers without impairment of quality, reliability or convenience when switching from one telecommunications carrier to another.
Post Dial Delay:	Post dial delay is the time that transpires from when the last digit is dialed until a valid response is received by the customer
Public Safety Answering Point	A public safety communications center that receives 911 calls placed by the public in a specific geographic area.
Return of Valid Completion:	Receipt of notification that service has been installed or is being provided to the customer and such service has been installed or provided.
Selective Router	A database service that automatically routes an E911 call to the PSAP that has jurisdictional responsibility for the service address of the telephone that dialed 911, irrespective of the telephone company exchange or wire center boundaries.
Signal to Noise Ratio:	Signal to Noise ratio is the ratio of usable signal being transmitted to the noise or undesired signal.

Term:	Definition:
Subscriber Loop Loss:	Subscriber loop loss is determined by computing the difference between the strength of the signal as it enters the loop and the strength of the transmitted signal. Signal strength is measured in decibels rounded to the nearest tenth of a decibel. The total number of trials completed during the reporting period divides the resulting accumulated decimal strength.
Subsequent Reports:	Customer trouble reports where the customer calls to check on the status of a previous trouble report (initial or repeat) that has not been cleared (closed or resolved) at the time of the call.
Syntax Reject:	A syntax reject is the transaction that an ILEC will return to a CLEC when a the CLEC has submitted an order transaction that the ILEC's gateway cannot process due to violation of published rules for formatting or content.
System:	The system is the combination of ILEC gateways, communications links, hardware and software that, in combination, is used to perform or support business functions or executes supporting transactions.
Tandem	A switch between a serving wire center and the end office switches that enables multiple carriers to trunk to one point rather than provide direct end office terminations to all switches.
Trouble Appointment:	A trouble appointment is a commitment made by the ILEC (to CLEC or to customer) to resolve a trouble.
Troubles:	Troubles include all reported difficulties with performance of resold services or UNEs, whether the report is the initial or a repeated report, that the CLEC refers to the ILEC repair process/interface for resolution. Subsequent reports are categorized separately.
Virtual Collocation:	A form of carrier network interconnection where the CLEC provides its transmission equipment to the ILEC to install in the ILEC's network. The ILEC then services and maintains the equipment for the CLEC.

Tab 5: Suggested Revisions to Appendix A of Draft MTP

<u>Please note: Revisions are indicated by word processing revision marking.</u>

Appendix A: Test Scenarios

Resale

Activity	Res. POTS	Bus. POTS	Res. ISDN	Bus. ISDN	Centrex	Private Line	PBX
Migration from BST-FL "as is"	X	X	X	X	X		X
CLEC to CLEC migration	X	X					
Feature changes to existing customer	X	X			X		
Migration from BST-FL "as specified"	X	X	X	X			
New customer	X	X			X	X	
Telephone number change	X	X					
Directory change	X	X			X		
Add lines/trunks/ circuits	X	X	X	X	X	X	X
Suspend/restore service	X	X					
Disconnect (full and partial)	X	X	X	X	X	X	X
Moves (inside and outside)	X	X					
Convert line to ISDN			X	X			
Migrate from CLEC to BST-FL	X	X					
Cancel pending order	X	X	X	X	X	X	X

UNE

Activity	Res. Analog Loop	Bus. Analog Loop	Res. xDSL Capable Loop	Bus. xDSL Capable Loop	Bus. DS1 Loop	Inter-office Facilility	EEL Combo
Migrate ~~lines~~ loops from BST-FL w/o number port.	X	X	X	X	X		
Using redesigned loops	X	X	X	X	X		X
Migrate ~~lines~~ loops from BST-FL with INP (as appropriate)	X	X	X	X	X		X
Using redesigned loops	X	X	X	X	X		X
Migrate ~~lines~~ loops from BST-FL with LNP	X	X	X	X	X		X
Using redesigned loops	X	X	X	X	X		X
Migrate from CLEC to CLEC	X	X					
Add new ~~lines~~ loops to existing customer	X	X	X	X	X		X
Add new interoffice DS1/DS3 facilities						X	
Purchase ~~lines~~ loops for a new customer	X	X	X	X	X		X
Disconnect (full and partial)	X	X	X	X	X	X	X
Moves (inside and outside)	X	X	X	X	X		X
Convert from UNE combinations to UNE loop	X	X	X	X	X		X
Convert from Resale to UNE loop	X	X		X	X		X
Convert from access to UNE					X	X	
Directory change only	X	X	X	X	X		X
Migrate INP only (no loop) full account	X	X			X		
Migrate LNP only (no loop) full account	X	X			X		
Migrate INP only (no loop) partial account incl MBTN	X	X			X		
Migrate LNP only (no loop) partial account incl MBTN	X	X			X		
Migrte INP only (no loop) partial account not incl MBTN	X	X			X		
Migrate LNP only (no loop) partial account not incl MBTN	X	X			X		
Migrte INP only (no loop) subesquent partial	X	X			X		
Migrate LNP only (no loop) subsequent partial	X	X			X		
Cancel pending order	X	X	X	X	X	X	X

Stand-alone Preorder

Activity	Residence	Business
Obtain CSRs	X	X
Validate customer address	X	X
Reserve telephone numbers	X	X
Inquire about product/service availability	X	X
Determine availability of desired due date	X	X
xDSL loop qualification	X	X
Loop make-up information	X	X

Post Order Completion		
Activity	Residence	Business
Obtain CSR on CLEC's account	X	X
Validate Directory Listing	X	X

UNE Combinations Involving Switch Ports

Activity	Res. POTS	Bus. POTS	Res. ISDN	Bus. ISDN	Bus. PRI	EEL + Port
Migration from BST-FL "as is"	X	X	X	X	X	X
Migrate from CLEC to CLEC	X	X				
Feature changes to existing customer	X	X				X
Migration from BST-FL "as specified"	X	X	X	X	X	X
New customer	X	X	X	X	X	X
Telephone number change	X	X				
Directory change	X	X	X	X	X	X
Add lines/trunks/ circuits	X	X	X	X	X	X
Suspend/restore service	X	X				
Disconnect (full and partial)	X	X	X	X	X	X
Moves (inside and outside)	X	X				
Convert line to ISDN			X	X	X	
Migrate from CLEC to BST-FL	X	X				
Convert from Resale to UNE-Combinations	X	X	X	X	X	X
Cancel pending orders	X	X	X	X	X	X

Stand Alone Maintenance & Repair

Activity	Res. POTS	Bus. POTS	Res. ISDN	Bus. ISDN	Centrex	Private Line	PBX	UNE Loop	UNE Port
Short on outside plant facility	X	X					X	X	X
Open on outside plant facility	X	X		X				X	X
Short on the line within the central office	X	X			X	X		X	X
Open on the line within the central office	X	X	X	X	X	X	X	X	X
Noise on line	X	X		X				X	X
Echo on line	X	X						X	X
Customer w/INP not receiving incoming calls	X	X							
Customer w/ LNP not receiving incoming calls	X	X							
Customer receiving incoming calls intended for another customer's number.	X								X
Call waiting not working	X	X							X
Repeat dialing not working	X								X
Customer cannot call 900 numbers	X								X
Calls do not roll-over for customer w/ multiline hunt group		X			X				X
Call forwarding not working		X							X
Caller id not working	X	X							X
Pick-up group order for large centrex customer not functioning properly					X				
DS1 loop MUXed to DS3 IOF not functioning.							X		