BELLSOUTH

BellSouth Telecommunications, Inc.
333 Commerce Street, Suite 2101
Nashville, TN 37201-3300

guy.hicks@bellsouth.com

Guy M. Hicks
General Counsel

615 214 6301
Fax 615 214 7406

November 20, 2001

VIA HAND DELIVERY

Mr. David Waddell, Executive Secretary
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243

Re: *Docket to Determine the Compliance of BellSouth Telecommunications, Inc.'s Operations Support Systems with State and Federal Regulations*
Docket No. 01-00362

Dear Mr. Waddell:

Enclosed please find the original and thirteen copies of the redacted direct testimony of Milton McElroy, Jr. Because the attachments to Mr. McElroy's direct testimony are somewhat voluminous, we are not refiling them. BellSouth recognizes that Exhibits 4, 7, 8, and 12 have been stricken by Order of the Hearing Officer. Copies have been provided to counsel of record.

Very truly yours,

Guy M. Hicks

GMH/jej

Enclosure

421654

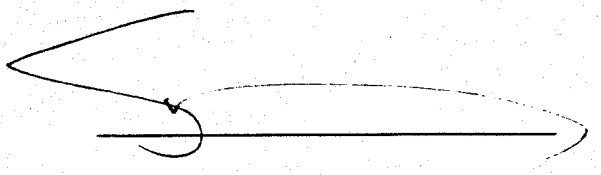
CERTIFICATE OF SERVICE

I hereby certify that on November 20, 2001, a copy of the foregoing document was served on counsel for known parties, via the method indicated, addressed as follows:

[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	James P. Lamoureux AT&T 1200 Peachtree St., NE, #4068 Atlanta, GA 30367
[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	James Wright, Esq. United Telephone - Southeast 14111 Capitol Blvd. Wake Forest, NC 27587
[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	H. LaDon Baltimore, Esquire Farrar & Bates 211 Seventh Ave. N, # 320 Nashville, TN 37219-1823
[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	Henry Walker, Esquire Boult, Cummings, et al. P. O. Box 198062 Nashville, TN 37219-8062
[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	Jon E. Hastings, Esquire Boult, Cummings, et al. P. O. Box 198062 Nashville, TN 37219-8062
[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	Timothy Phillips, Esquire Office of Tennessee Attorney General P. O. Box 20207 Nashville, Tennessee 37202
[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	Charles B. Welch, Esquire Farris, Mathews, et al. 618 Church St., #300 Nashville, TN 37219
[ ] Hand [ ] Mail [X] Facsimile [ ] Overnight	Terry Monroe Competitive Telecom Assoc. 1900 M St., NW, #800 Washington, DC 20036

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

Jack Robinson, Esquire
Gullett, Sanford, Robinson & Martin
230 Fourth Ave., N., 3d Fl.
Nashville, TN 37219-8888



BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF MILTON MCELROY, JR

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 01-00362

OCTOBER 22, 2001

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

A. My name is Milton McElroy, Jr. I am employed by BellSouth Telecommunications, Inc. ("BellSouth") as a Director, Interconnection Services. In this position, I am responsible for Operations Support Systems ("OSS") Testing across the BellSouth region. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375. I have over 13 years of experience in Engineering and Operations. I earned a Bachelor of Science degree from Clemson University in Civil Engineering in 1988 and a Master's degree in Business Administration from Emory University in 2001. Additionally, I am a registered Professional Engineer in North Carolina, South Carolina and Alabama.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to provide this Authority with information about the Georgia and Florida OSS testing conducted by KPMG, along with that of regionality testing conducted by PricewaterhouseCoopers ("PwC").

BELLSOUTH'S OSS TESTING

Q. PLEASE DESCRIBE THIRD-PARTY TESTS.

A. The FCC's ("Commission's") New York Order (¶89)[1] emphasizes that commercial or operational readiness can be evidenced in several ways: actual commercial usage, carrier-to-carrier testing, independent third-party testing, and internal testing. The Commission has repeatedly stated that actual commercial usage is the most probative evidence that OSS functions are operationally ready (e.g., New York Order, ¶89). BellSouth's interfaces have been used commercially for several years. As will be shown more fully in the discussion of each interface, the levels of commercial usage alone clearly demonstrate the operational readiness of these interfaces. These interfaces, however, have also been subjected to extensive third-party testing and/or to carrier-to-carrier testing, as will be described below.

In ¶100 of its New York Order, the Commission stated that "the persuasiveness of a third-party review is dependent on the conditions and

[1] *Application by Bell Atlantic New York for Authorization Under Section 271 of the Communications Act to Provide In-Region, InterLATA Service in the State of New York,* Memorandum Opinion and Order, 15 FCC Rcd 3953 (1999) ("New York Order").

scope of the review." In addition to scope, depth, and surrounding conditions, the following qualities led the Commission "...to treat the conclusions in the KPMG Final Report as persuasive evidence of Bell Atlantic's OSS readiness." These qualities are: independence, military-style testing philosophy, efforts to place themselves in the position of an actual market entrant, and efforts to maintain blindness when possible. The independent third-party test ordered by the Georgia Commission has all of those qualities. I will discuss the independent third-party test in Georgia throughout this testimony.

Q. PLEASE DESCRIBE THE INDEPENDENT THIRD-PARTY TEST ORDERED BY THE GEORGIA COMMISSION.

A. On May 20, 1999, the Georgia Commission issued its Order of Petition for Third-Party testing in Docket No. 8354-U. Based on substantial involvement in the development and operation of BellSouth's electronic interfaces and OSS, the Georgia Commission concluded that a focused third-party audit would be suitable for Georgia. The Georgia Commission determined that the Georgia third-party audit should focus on the specific areas of OSS that had not yet experienced significant commercial usage, and about which competing local exchange carriers ("CLECs") had expressed concerns regarding operational readiness.

As originally conceived, the Georgia third-party test specifically addressed the following elements of BellSouth's OSS infrastructure: electronic

interfaces to the OSS (TAG, EDI, TAFI, ECTA, ODUF, ADUF, CRIS, and CABS[2]); Unbundled Network Elements ("UNE") analog loops (with and without number portability); UNE switched ports; UNE business and residence port-loop combinations; Local Number Portability ("LNP"); all five core OSS processes (pre-ordering, ordering, provisioning, maintenance and repair, and billing); and normal and peak volume testing of the electronic interfaces for pre-ordering, ordering, and maintenance and repair using a representative service mix of resale services and UNE transactions. The Georgia Commission also required an audit of BellSouth's Flow-through Service Request Report for the latest three months of data.

On June 15, 1999, two audit firms, KPMG and Hewlett-Packard, were approved by the Georgia Commission. On June 28, 1999, the Georgia Commission issued an order approving the initial third-party Master Test Plan ("MTP"). I have provided a copy of the MTP as Exhibit MM-1.

On January 12, 2000, the Georgia Commission issued an order requiring BellSouth to initiate additional testing of its OSS. The Supplemental Test Plan ("STP"), provided as Exhibit MM-2, includes: an assessment of the change management process as it applied to the implementation of Release 6.0 (also known as "OSS99"); an evaluation of the current pre-ordering, ordering, and provisioning of xDSL compatible loops; a

[2] TAG (Telecommunications Access Gateway); EDI (Electronic Data Interchange); TAFI (Trouble Analysis Facilitation Interface); ECTA (Electronic Communications Trouble Administration); ODUF (Optional Daily Usage File); ADUF (Access Daily Usage File); CRIS (Customer Record Information System); CABS (Carrier Access Billing System).

functional test of resale pre-ordering, ordering, provisioning, maintenance and repair, and billing transactions for the top 50 electronically orderable retail services available for resale that have not experienced significant commercial usage; and an evaluation of the processes and procedures for the collection and calculation of performance data. Together, the MTP and STP provide a complete description of the processes, systems and procedures used by BellSouth to provide wholesale elements and services to CLECs in Tennessee.

The CLECs have been active throughout the third-party testing process in Georgia. The Georgia Commission considered the input of the CLECs, such as that obtained from the OSS workshop in 1997, as well as CLEC filings encouraging the Georgia Commission to adopt a third-party testing plan. The CLECs have filed comments on the Master and Supplemental Test Plans, and on KPMG's status reports. On January 20, 2000, with the support of BellSouth and the Georgia Commission, KPMG invited the CLECs to participate in weekly conference calls to discuss the status of the third-party test, including exception resolution, and to entertain any questions the CLECs might have about the progress of the test. The first meeting, face-to-face rather than by teleconference, was held on February 1, 2000. A second face-to-face meeting was held on April 26, 2000. The weekly teleconferences continued until the testing was completed. In addition, CLECs have had the option to file written responses to each interim status report filed by KPMG. KPMG also conducted numerous CLEC interviews, and posted all exceptions and meeting minutes to a

website accessible to all CLECs. In cases where it was not practical for KPMG to conduct transactions as a pseudo-CLEC, such as in the provisioning of xDSL loops and the ordering of LNP, CLECs supplied test scenarios for the test plan, and KPMG had the CLECs submit selected orders on its behalf (e.g. LNP and xDSL). Finally, CLECs also were given the opportunity by the Georgia Commission to discover the basis for KPMG's conclusions, which included serving voluminous discovery requests and deposing four KPMG witnesses over the course of two days, as well as to cross-examine KPMG's principal witnesses at the May 8, 2001 hearing. At the conclusion of the hearing, all interested parties submitted written comments addressing the test and KPMG's conclusions. In short, CLECs were actively involved in the test process.

Details of KPMG's evaluation and methods of analysis, and the results of the MTP, the STP, and the Flow-Through Evaluation Plan, are contained in the *Master Test Plan Final Report* ("MTP Final Report"), the *Supplemental Test Plan Final Report* ("STP Final Report"), and the *Flow-Through Evaluation*, which were filed at the Georgia Commission on March 20, 2001. The MTP Final Report, the STP Final Report, and the Flow-Through Evaluation are attached as Exhibits MM-3 through MM-5.

Q. PLEASE PROVIDE THE OUTCOME OF THE THIRD-PARTY TEST IN GEORGIA.

A. KPMG's Final Report was filed with the Georgia Commission on March 20, 2001. In the report, KPMG defines its evaluation criteria as "the norms, benchmarks, standards, guidelines used to evaluate items identified for testing. Evaluation criteria also provided a framework for identification of the scope of tests, and the types of measures that must be made during testing, and the approach necessary to analyze results." Throughout the test, KPMG analyzed over 1,170 criteria in eight functional areas. KPMG analyzed each criterion, and the results fell into five categories: satisfied, not satisfied, not complete, no result (also known as, "no report"), and not applicable. KPMG determined that 95.5 percent of the criteria were 'satisfied'. 1.8 percent are "not satisfied," 1.5% are "no report," and 0.3% are "not applicable. Eleven criteria (0.9 percent; all metrics) remain categorized as "not complete" at this time. In its opinion letter of March 20, 2001, KPMG stated, "no deficiencies creating potentially material adverse impacts on competition currently exist in the test categories of Pre-Ordering, Billing, Maintenance & Repair, Capacity Management, Change Management, and Flow-Through." (See Exhibit MM-6)

KPMG tested 420 evaluation criteria related to performance measurements. Of those, 409 criteria are closed and satisfied. As I stated earlier, there are 11 evaluation criteria for metrics that KPMG has not yet reconciled ("not complete criteria"). Work continues on these criteria, and they should fall into either the "satisfied" or "not satisfied" classifications.

Q. PLEASE DESCRIBE THE 'NOT COMPLETE' EVALUATION CRITERIA FROM THE MARCH 20, 2001 FINAL REPORT.

A. As I explained earlier, there currently are 11 evaluation criteria that are "non complete." Since KPMG issued the 'BellSouth – Georgia Evaluation Master Test Plan Final Report' on March 20, 2001, BellSouth has satisfied the following test criteria, and KPMG has issued closure reports to the Georgia PSC:

- O&P 7-6-3
- PMR 2-2-3, 2-2-4, 2-21-3, 2-21-4
- PMR 4-3-1, 4-3-2, 4-4-1, 4-4-2, 4-5-1, 4-5-2
- PMR 4-38-1, 4-39-1

Work continues on the remaining "not complete" evaluation criteria. KPMG is expected to issue a supplemental report on its findings.

Q. PLEASE DESCRIBE THE USE OF THE RSIMMS ENVIRONMENT IN THE THIRD-PARTY TEST.

A. As part of the third-party test, KPMG conducted normal volume and peak volume tests in the Reengineered Services, Installation and Maintenance Management System ("RSIMMS"). RSIMMS emulates the production environment in interoperability and end-to-end (flow-through) testing in support of the functionality that facilitates a CLEC's ability to process the following transaction types on BellSouth's OSS: submit Local Service Requests, receive Functional

Acknowledgements, receive Firm Order Confirmations, receive Completion Notices, and receive Rejects, Clarifications, and Service Jeopardies.[3] The purpose of the volume tests was to evaluate BellSouth's OSS associated with specified volumes of pre-ordering and ordering activities. By performing these volume tests, KPMG evaluated BellSouth's ability to accurately and quickly process pre-orders and orders using the EDI and TAG interfaces under "normal" and "peak," year-end 2001 projected transaction load conditions. These volume tests and KPMG's results are detailed in the MTP Final Report in the sections for TAG Normal Volume Pre-Order Performance Test (PRE-4), TAG Peak Volume Pre-Order Performance Test (PRE-5), EDI/TAG Normal Volume Performance Test (O&P-3), EDI/TAG Peak Volume Performance Test (O&P-4), EDI/TAG Production Volume Performance Test (O&P-10).

The decision to perform the volume tests in RSIMMS was made in mid-1999 during the development of the MTP. The language describing these tests and the evaluation of the RSIMMS environment against the production environment first appeared in version 2.0 of the MTP (filed with the Georgia Commission in August 1999). This decision was adopted and incorporated into the Introduction section of the MTP. On page II-3, the final version of the MTP states that:

> Normal and peak volume tests will be run against a volume test environment (RSIMMS) developed by BellSouth to support the transaction volumes specified by the test. KPMG will evaluate this environment to determine if the hardware and software configurations mirror those of BellSouth's production systems, except where additional hardware or software resources have been created to support the specified test volume. The entire volume

[3] BellSouth's production environment is called "ENCORE."

test bed except CRIS is a duplicate of the production system. RSIMMS does access production CRIS.[4]

As directed by the MTP, KPMG compared the RSIMMS environment with the production environment. KPMG described its objective on page 1 of the Appendix to the MTP Final Report of March 20, 2001:

> The objective of the RSIMMS and ENCORE Systems Review was to evaluate the Volume test environment developed by BellSouth – the Reengineered Services, Installation and Maintenance Management System (RSIMMS) – to determine if the hardware and software configurations mirrored those of BellSouth's production system (ENCORE), except where additional hardware or software had been created to support the specified test volume.
>
> This review was conducted in parallel to the planning and execution of the volume tests associated with the BellSouth – Georgia OSS Evaluation described in the *Master Test Plan* (PRE-4, PRE-5, OP-3, and OP-4).

Based on its evaluation of RSIMMS and the production environment, KPMG reported in the Appendix to the MTP Final Report, at 5, that

> ...except for specific, preauthorized changes that were made in RSIMMS to support the requirements of the volume test, the applications implemented in the RSIMMS environment mirrored those of BellSouth's ENCORE production system.
>
> Specific changes were made to the RSIMMS environment to support the business volumes required to accomplish KCI's volume test. KCI is not aware of any reasons, and is satisfied, that these same changes could be made to the production environment such that it could support the same volumes as were tested in KCI's volume evaluation.

[4]The Customer Records Information System ("CRIS") billing system principally produces bills for non-UNE services.

There are some differences between the hardware used by RSIMMS and that used by the production environment. These differences, as well as the hardware components that are the same, are detailed in the Appendix to the MTP Final report. The RSIMMS and production environments, however, are not defined by their hardware, but by the software applications, such as LENS, TAG, EDI, that run on the hardware. Both the RSIMMS and production environments contain copies of these applications. The sameness of the applications used in both environments was validated by KPMG in its report.

The MTP Final Report directed KPMG to perform five volume tests: two normal volume tests in RSIMMS (PRE-4, O&P-3); two peak volume tests in RSIMMS (PRE-5, O&P-4), and one volume test in the production environment (O&P-10).

The TAG/EDI "normal" volume test evaluated BellSouth's performance by sending approximately 35,000 orders with 118,000 associated pre-orders on two occasions over a ten-hour period through RSIMMS. The pre-ordering volume test (PRE-4) and ordering volume test (O&P-3) were executed concurrently.[5] The TAG/EDI "peak" volume test evaluated BellSouth's performance by sending approximately 43,000 orders with 118,000 associated pre-orders on two occasions over an eight-hour period

[5] See MTP Final Report at V-C-6.

through RSIMMS. The pre-ordering volume test (PRE-5) and ordering volume test (O&P-4) were also executed concurrently.[6]

Using the production environment, KPMG tested BellSouth's ability to accurately and quickly process orders and their associated pre-orders using EDI and TAG using the projected year-end 2001 transaction mix in the production environment at then-current system capacity.[7] KPMG sent approximately 7,400 orders with 24,600 associated pre-orders combined with actual live production activity to produce transaction levels of 21,600 orders and 73,400 pre-orders over an eight-hour period. After completing the test, KPMG found that BellSouth had satisfied each of the 21 evaluation criteria associated with this EDI and TAG production performance test. KPMG's production testing confirmed that BellSouth's EDI and TAG interfaces provide timely Functional Acknowledgements, timely and accurate Firm Order Confirmations, timely and accurate pre-order responses, and accurate order errors and clarifications.

KPMG used the exact same test scenarios for all five volume tests. The common set of scenarios produced a common set of performance results in both the RSIMMS and production environments, thus validating the sameness of functionality between the RSIMMS and production environments.

[6] See Version 1.0 Master Test Plan Final Report at V-C-6.
[7] See Version 1.0 Master Test Plan Final Report at V-J-1 (describing ordering volume test (O&P-10)).

There was a 38 percent difference in magnitude of volume levels between the production volume test and normal volume tests. The transaction levels of the production volume test were set at the stated capacity level for BellSouth's production environment at the time of the test. These volume levels prove that the production environment was able to handle this load and satisfy all evaluation criteria associated with the third-party test.

Since the third-party test in Georgia concluded, BellSouth has increased the capacity of its production environment. Because of current projections, BellSouth recently has increased the capacity of its production environment. BellSouth has performed routine, ongoing, internal normal, peak, and stress volume tests that have shown that BellSouth's production environment has sufficient capacity. BellSouth's production environment provides CLECs with sufficient capacity to process current and projected volumes. The following table shows RSIMMS at the time of the third-party test, the production environment (ENCORE) at the end of 2000, and the production environment on June 30, 2001.

Type	Application	RSIMMS2 Georgia 3PT	Production on 12/31/2000	Production on 06/30/2001
Midrange	TAG	3-HP K580	2-HP K570	3-HP K570 1-HP K580 4-HP N4000
	LESOG	2-HP K580	2-HP K370 2-HP N4000	2-HP K370 2-HP N4000 1-HP K580
	LEO/UNIX	1-HP K580	Retired. Functionality moved to Leo/Mainframe	N/A

	LNP	1-HP K360 2-HP K580	3-HP K460	3-HP K460
Mainframe	LEO/Main-frame	(U4SY-Test) Hitachi Skyline – 625 620 Mips - 24% Share	(B2SY) Hitachi CMOS P9-89S 1078 Mips – 35% Share	(B2SY) IBM Freeway 2064-109 1552 Mips – 33% Share
	SOCS, ATLAS, DSAP, RSAG	(U4SY-Test) Hitachi Skyline – 625 620 Mips - 24% Share	(O1SY) Hitachi Skyline – 727 878 Mips – 100% Share	(O1SY) IBM Freeway – 2064-1C8 1615 Mips - 83% Share
	BOCRIS, COFFI	(O1SY-Production) Hitachi Skyline – 727 878 Mips – 100% Share	(O1SY) Hitachi Skyline – 727 878 Mips – 100% Share	(O1SY) IBM Freeway – 2064-1C8 1615 Mips - 83% Share
	P/SIMS	(D2SY-Production) Hitachi (HDS) P8-98S 846 Mips – 60% Share	(D2SY) Hitachi CMOS P8-98S 846 Mips – 60% Share	(D2SY) IBM Freeway – 2064-108 1443 Mips - 35% Share

Q. PLEASE PROVIDE A COMPARISON OF THE GEORGIA THIRD-PARTY TEST WITH OSS TESTS FROM OTHER STATES.

A. To be sure, the test conducted in Georgia is different in scope from third-party OSS tests conducted in other states, as the CLECs have pointed out. Such differences, however, are expected, as is evident from the FCC's Section 271 decisions, wherein the FCC has rejected any "cookie cutter" approach to third-party OSS tests. (*See Texas Order* ¶103 rejecting argument that Southwestern Bell Telephone Company's 271 application is "inadequate" because "the third-party test in Texas was less comprehensive than the test executed by KPMG in New York, with respect to the Bell Atlantic Section 271 process".) The scope of the third-

party OSS test in New York was different from the scope of the Texas test, which was different from the scope of the third-party test in Massachusetts. In short, that the Georgia test was different by design from other third-party OSS tests does not detract from the usefulness of the Georgia test.

Nevertheless, the Georgia test is comparable in scope to the third-party tests conducted in New York and Texas, both of which received 271 approval. The similarities and differences between the Georgia test and those in New York and Texas can be seen in Exhibit MM-8. The Georgia test included the same functionality review of OSS Business processes as New York and Texas. In addition, all three tests assess OSS scalability. All three tests included normal volume and peak testing of the interfaces. Moreover, the Georgia test reviewed all documentation for maintenance, updates and communication, as did New York and Texas. Like New York and Texas, the Georgia test assessed change management (including the notice and completion intervals), release versioning policy, defect management process, and OSS interface development review. All three tests included functional testing of pre-ordering and ordering. All three tests provisioned orders, evaluated provisioning processes, and tested the performance of specific provisioning measures. Georgia and New York tested basic functionalities of Maintenance and Repair (M&R), and included an M&R process parity evaluation. In some cases, the Georgia test went beyond the tests in New York and Texas. For example, the Georgia test included manual ordering for xDSL loops while the New York test did not. Moreover, the Georgia

test included a more extensive performance metrics evaluation than tests from either New York or Texas.

The Georgia test meets all of the criteria established by the FCC in its decision on Bell Atlantic's New York application. Specifically, in the Georgia test, like the New York test, KPMG was an independent tester, conducted a military-style test, made efforts to place itself in the position of an actual market entrant, and made efforts to maintain blindness when possible. In compliance with FCC decisions, the Georgia test is a focused test that appropriately concentrates on the specific areas of BellSouth's OSS that had not experienced significant commercial usage.

Q. PLEASE PROVIDE A COMPARISON OF THE GEORGIA AND FLORIDA THIRD-PARTY TESTS.

A. In state 271 proceedings throughout the BellSouth Region, some of the CLECs have made a number of allegations concerning the results of KPMG's report on the independent third-party test in Georgia. I will discuss these allegations here. In addition, some parties have raised issues related to the exceptions and observations from the third-party test in Florida. Descriptions of the open Florida exceptions and BellSouth's responses are found in Exhibits MM-9. Exhibit MM-10 is a summary of the status of all observations and exceptions, open or closed, from the

third-party test in Florida. Below, I will also discuss certain Florida Exceptions that have been closed.

The CLECs, particularly AT&T, complained extensively about the scope of the third-party test in Georgia, often comparing it with tests that have or are taking place in other states. When reading these witnesses' statements, it is easy to forget that the test that was ordered by the Georgia Commission was the test that was executed by KPMG – and that the very CLECs that are now complaining had ample opportunity to participate in the design and execution of this Georgia test, as I discussed earlier.

A number of the witnesses, especially AT&T and MCI/WorldCom, spend considerable time comparing the observations and exceptions from the Florida test with the exceptions and finds of the Georgia test. In making these comparisons, these witnesses have made a number of generalizations in which they allege that many of the exceptions that were satisfied in the Georgia Test, were then re-opened in the Florida Test. These statements are wrong when applied to some of the observations and exceptions, and misleading applied to others.

These witnesses implied that the differences between Florida and Georgia, in and of themselves, make the Georgia test invalid. This is not the case. Instead, the differences merely reflect that the scope of the Georgia test differs from the scope of the Florida test. A comparison of the Georgia and Florida tests can be seen in Exhibit MM-11. As I discussed earlier, the Commission has specifically

rejected the suggestion by CLECs that third-party tests should follow a "cookie cutter" pattern. KPMG completed and concluded the test in Georgia based upon the scope of that test as ordered by the Georgia Commission. Exhibit MM-11 provides a review of the processes, systems and procedures used by BellSouth to support CLEC wholesale activities across Tennessee, Georgia and Florida. The only system difference is one between the Direct Order Entry ("DOE") and Service Order Negotiation ("SONGS") systems, and that difference will be discussed in depth in the Regionality section later in this testimony.

It is important to note that, between February 2000 and January 2001, BellSouth made many changes due to the Georgia third-party test. In many instances, KPMG opened observations and exceptions in the Florida test after auditing code and documentation that dated from February 2000 through January 2001, before BellSouth had implemented the changes to satisfy the Georgia Exception. After KPMG opened an observation or exception in Florida that was based on old information, BellSouth asked KPMG to review current information.

Q. PLEASE DESCRIBE PARITY OF PERFORMANCE.

A. In other state 271 proceedings, CLECs complain that the Georgia third-party test did not measure BellSouth's parity of performance. The Georgia Commission and the FCC have established that parity is evaluated by reviewing the RBOC wholesale performance results against its retail analogs. If the performance results show that an RBOC serves its CLECs with same level of service as it serves itself or its retail customers, then a

further process parity evaluation would be irrelevant. This is the same method of proof that was used in the New York, Texas, and Massachusetts third-party tests.

The Georgia test has the most comprehensive performance metrics evaluation of all the tests performed so far by any state. It contains 430 evaluation criteria against 48 in New York and 126 in Massachusetts.

Q. PLEASE DESCRIBE THIRD-PARTY TESTING OF INTERFACES.

A. Allegations are made by the CLECs, primarily AT&T, that the Georgia test is incomplete as it related to electronic interfaces testing because it reviewed versions that pre-dated the OSS99 release and did not review any versions of certain other interfaces. This complaint exemplifies the fact that the CLECs will never agree that it is time to review BellSouth's compliance with the Act. Instead, the CLECs will always argue that there is some change in the industry that necessitates delay. From the CLECs' perspective, this is a foolproof strategy because the telecommunications industry is always changing – new technology, new products, and new competitors. BellSouth's (and other RBOCs') interfaces and systems are constantly evolving. Internal, regulatory, and even CLEC-driven changes are incorporated into the systems to increase system functionality and performance. To argue that the Authority should wait for the change to stop is to argue that the Authority should never move forward.

A third-party test, by its nature, must test a snapshot in time. BellSouth enhanced its OSS during the Georgia test, and is enhancing its OSS during the Florida test. The fact that things change during or after the test does not alleviate the probative value of the test – that BellSouth provides adequate access, functionality, and performance to CLECs. The fact that the systems have evolved since the Georgia test should not impact this Authority's use of the test. Otherwise, no third-party test would ever have value.

Moreover, with respect to OSS99, KPMG tested the OSS99 change management pursuant to the STP in the Georgia test. Among other things, the STP was designed to assess the electronic interface change control process as applied to the implementation of OSS99. KPMG examined the methods and procedures that BellSouth used to develop and release the OSS99 applications package and supporting documentation (CM-2). KPMG found that BellSouth satisfied all of the test criteria for change management, including OSS99.

In addition, as I described earlier, BellSouth and AT&T conducted a successful carrier-to-carrier test of OSS99 in the fourth quarter of 1999. AT&T would have this Authority believe that the carrier-to-carrier beta test of OSS99 was unsuccessful.

AT&T further complains that BellSouth did not test LENS or RoboTAG™. The Georgia Commission did not order the testing of LENS, because there was commercial usage for LENS at the time the test began in May 1999. RoboTAG™ was not available at the time the Georgia test was developed. In

addition to this, RoboTAG is a stand-alone product, which BellSouth sells to CLECs that choose not to develop applications to interact with the TAG gateway on their own.

Q. PLEASE DESCRIBE TESTING OF MANUAL SUPPORT SYSTEMS.

A. In other state 271 proceedings, the CLECs, particularly AT&T, have complained that the Georgia test did not include a test of manual processes. The Georgia test did indeed include functional testing of BellSouth's performance on partially mechanized orders that are submitted electronically but fall out for manual handling. KPMG tested partially mechanized orders for, among other things, timeliness and accuracy. In addition, the Georgia Commission added a manual order process evaluation for xDSL and manual loop makeup in the STP, which included evaluation of the xDSL Work Center and Capacity Management evaluation. Using the numbers that the CLECs' mentioned in the state proceedings, 65% of manual orders were indeed included in this testing process.

Q. PLEASE DESCRIBE RELATIONSHIP MANAGEMENT PRACTICES.

A. The Georgia third-party test did not include a test of "relationship management" practices, simply because neither the Master Test Plan nor the Supplemental Test Plan, which were approved by the Georgia Commission, called for such a test. Further, as defined by the Georgia Commission, the original intention of the Georgia test was to focus on BellSouth's OSS systems. In Georgia, commercial

usage of relationship management was not included as part of the Georgia test because many CLECs were already in operation and using the interfaces when the test was developed. "Relationship management" practices were not tested during the third-party test in Texas.

Q. PLEASE DESCRIBE THIRD-PARTY TESTING OF DOCUMENTATION.

A. KPMG has raised various levels of documentation and process issues in both the Georgia and Florida test. To put this in perspective, however, consider that the four volumes of the Local Exchange Ordering ("LEO") Guides, the business rules for TCIF 7.0 interfaces, contain approximately 1200 pages, and the BellSouth Business Rules for Local Ordering, the business rules for TCIF 9.0 interfaces, contains approximately 1800 pages.

In other state 271 proceedings, the CLECs, specifically AT&T, have claimed that BellSouth provides inconsistent and contradictory information, although they have offered no specifics or substantiation of these claims. The CLECs have made a number of generalized allegations that numerous exceptions that were satisfied in the third-party test in Georgia were then opened during the test in Florida. Florida Exception 33, for example, is specifically identified by the CLECs an exception that was opened during the Florida test after having been satisfied during the Georgia test.

The Florida test looked at products that were different from the products that were available at the time of the test in Georgia. CLECs have also made

Q. PLEASE DESCRIBE THIRD-PARTY TESTING OF THE TEST ENVIRONMENTS.

A. In state proceedings, the CLECs have complained that CAVE (CLEC Application Verification Environment) was not tested by KPMG in the Third-Party Test in Georgia. CAVE was not tested during KPMG's test because it did not exist when the Georgia PSC approved the Master and Supplemental Test Plans for the third-party test. BellSouth and a CLEC vendor did not began carrier-to-carrier beta testing of CAVE until April 7, 2001, after the third-party test in Georgia, which tested TCIF 7.0 interfaces, ended. Importantly, BellSouth offered CLECs an open and stable testing environment even before CAVE was implemented.

As part of the third-party test in Georgia, KPMG evaluated this environment and found it satisfactory. (MTP Final Report, CM-2-1-6 to CM-2-1-8, at VII-A-23 to VII-A-28) KPMG evaluated BellSouth (evaluation criterion CM-2-1-6) to determine if "[f]unctioning testing environments were made available to customers for all supported interfaces." KPMG evaluated BellSouth (evaluation criterion CM-2-1-7) to determine if "[c]arrier-to-carrier test environments were stable and segregated from [BellSouth] production and development environments." KPMG evaluated BellSouth (evaluation criterion CM-2-1-8) to determine if "BellSouth provided telephone customer support for interface testing to the CLECs (with on-call support available 24 hours a day, seven days a week for emergencies)." In this environment, CLECs perform required testing, such as those that occur when a CLEC is shifting from a manual to an electronic

environment, or when the CLEC is upgrading its electronic interface from one industry standard to the next.

Q. PLEASE DESCRIBE THIRD-PARTY TEST EVALUATION OF FLOW-THROUGH.

A. KPMG started its flow-through audit in Georgia by using BellSouth's flow-through reports September through November 1999, because they were the most current reports at the time the audit began. As KPMG indicated, they also used BellSouth's flow-through reports of February 2000 and October 2000,which contained the changes that BellSouth had made in response to KPMG's findings.

KPMG did not evaluate the accuracy of BellSouth's "retail" flow-through rate because it was not within the scope of the evaluation, which was designed to assess the degree to which LSRs submitted by CLECs would flow through.

BELLSOUTH'S REGIONALITY

Q. PLEASE DESCRIBE THE INDEPENDENT THIRD-PARTY AUDIT OF BELLSOUTH'S REGIONALITY.

A. BellSouth engaged PricewaterhouseCoopers ("PwC") to examine BellSouth's assertions on the regionality of its OSS. PwC's examination was conducted in accordance with "attestation standards" established by the American Institute of Certified Public Accountants ("AICPA"). An "attest engagement" occurs when a practitioner, such as PwC, is engaged to issue a written communication that concludes whether or not the written assertion of another party, such as BellSouth, is reliable. Under the AICPA attestation standards, an examination is the highest level of assurance that can be provided on an assertion and, if positive, results in an opinion by the practitioner, PwC, that the assertions presented are fairly stated in all material respects.

PwC's attestation is modeled after the SBC's Five-State Regional OSS Attestation Examination that is attached as Exhibit MM-13. Because the Commission viewed this model positively, BellSouth has used it as a roadmap to establish the same burden of proof. The only difference between the attestation examinations of SBC and BellSouth is that BellSouth added a second assertion for two of its manual order input systems used by its Local Carrier Service Center. PwC validated the following "Management Assertions," which are included in Exhibit MM-14.

First, BellSouth uses the same pre-order and order OSS throughout its nine-state region to support wholesale CLEC activity. This validation is based on the criteria established in the *Report of Management Assertions*

inferences that BellSouth's general support of the CLECs is insufficient because KPMG did not do a thorough test of the EDI specifications and other documentation that BellSouth provides to the CLECs. That these were not tested to the CLECs' satisfaction does not automatically make the third-party test in Georgia insufficient.

Q. PLEASE DESCRIBE THE THIRD-PARTY TESTING OF CHANGE MANAGEMENT IN GEORGIA.

A. Evaluation criteria CM 1-1-2 focused upon the essential elements of the change management process and its documentation. CM 1-1-3 focused upon the change management process framework to evaluate, categorize, and prioritize proposed changes. CM 1-1-5 states that, "the change management's process has clearly defined reasonable intervals for considering and notifying customers about proposed changes."

To reiterate, the majority of the CLECs' complaints stem from the fact that the scope of the tests in Georgia and Florida are different. As discussed above, there is no inherent fault in that fact. It does indicate that BellSouth's change management plan continues to evolve, and there is nothing particularly new or controversial about an evolving change management process. The requirements of the change management will continue to evolve. New intervals and processes to improve change management will be developed and implemented.

and Assertion Criteria on BellSouth Telecommunication's Operational Support Systems (Exhibit MM-14).

As it relates to the first assertion, "sameness" is defined as the following:

> The applications and interfaces implemented and available are identical across the nine-state region. "Identical" is defined as one unique set of software coding and configuration ("version") installed on either one or multiple computer servers ("instances") that support all nine-states in an equitable manner.
>
> The processes, personnel and work center facilities are consistently available and employed across the nine-state region and there are no significant aspects to the processes, personnel or work center facilities that would provide one state a greater service level or benefit than the other states in the nine-state region.

Second, BellSouth's DOE (Direct Order Entry) and SONGS (Service Order Negotiation) systems have no material differences in the functionality or performance for service order entry by the LCSC, based on the criteria established in the Report of Management Assertions and Assertion Criteria on BellSouth Telecommunication's Operational Support Systems. PwC examined functionality and performance. The Functionality assertion was based on the following criteria:

- The same LSRs, created from a single set of business rules are used for order entry
- The Service Order Communications System ("SOCS") requires the same LSR screening and validating procedure
- Similar processes are used for creating a Service Order
- SOCS requires checking for and clearing order entry or initiation errors.
- Both systems output must adhere to the service order edits housed in SOCS.

BellSouth also asserted that there was no material difference in performance of order entry between DOE and SONGS based on the following criteria:

- Orders that are input through both DOE and SONGS are created in SOCS on a real-time basis upon submission
- Similar orders from throughout the nine-state region can be input within reasonably similar timeframes, regardless of whether DOE or SONGS is used.
- Service Representatives are cross-trained on both DOE and SONGS and utilize both systems on a regular basis dependent upon the relative volume and type of transactions by state.

PwC concluded that its examination provided a reasonable basis for its opinion, in which it determined that the BellSouth management assertions were fairly stated, in all material respects, as of May 3, 2001, based on the criteria set forth in the Affidavit of Robert L. Lattimore of May 21, 2001, and the *Report of Management Assertions and Assertion Criteria on BellSouth*

Telecommunication's Operational Support Systems (Exhibit MM-14). The PwC Report provides data and validated factual assertions that this Authority can rely upon to establish the regionality of BellSouth's OSS.

There are no material differences between the way data is input in DOE and SONGS. In some state proceedings, CLECs have commented on PwC's remarks regarding how data is input into DOE and SONGS, and differences in the way commands, function keys, and procedures for the two systems. PwC, however, validated that these differences were trivial and certainly not material in nature as it relates to the performance of either system.

PwC did address performance. In fact, PwC completed a performance comparability examination for DOE and SONGS with the following testing approach:

- Observed transactions input into DOE and SONGS and ensured that the process was not materially different. Transactions included each service type (i.e., Resale, Complex, and UNE) and were for each state
- Observed DOE and SONGS data validation controls and ensured that they were not materially different (i.e., required fields). LSRs are created from a single set of business rules for the purposed for submitting transactions. LSRs are submitted to SOCS in the same format and subject to the same SOCS validations
- Ensured that there are no material differences between DOE and SONGS based on the end-user state. This was completed via observation of LSRs

from all states within the BellSouth region and ensuring the process for submission is consistent

- Ensured that there are no material differences between DOE and SONGS launch, logon and navigational commands via observation of service representatives completing daily work
- Observed the process for submitting orders to SOCS and ensured that consistent processes are followed for DOE and SONGS and for each state in BellSouth's region.

Following an informal conference held on May 10, 2001, with the Kentucky PSC during which the PwC report was discussed, BellSouth requested that PwC perform a statistically based evaluation of the time it takes to input orders in DOE versus SONGS along with an analysis of downstream errors. As described below, PwC has completed this evaluation and re-substantiated BellSouth's original assertion that there are no material performance differences in DOE and SONGS.

The specifics are contained in PwC's DOE and SONGS Comparability Accuracy and Timeliness Report of July 20, 2001, which is Exhibit MM-15. Exhibit MM-15 also contains the Affidavit of Mr. Robert L. Lattimore of July 20, 2001. In his affidavit, Mr. Lattimore describes the report along with an overview of the level of involvement of PwC professionals. He identifies that the engagement was performed under the Consulting Standards of the American Institute of Certified Public Accountants (AICPA) and then describes standards of professional competence, due professional care, planning and supervision, and sufficient

relevant data. PwC completed the timeliness assessment using a statistically based methodology. In its report, PwC defined how it reached its sample determination using a confidence level of 95%, a tolerable rate of 1% and an expected rate of 0%. PwC's report defines these terms and expresses the significance of why these levels were selected since PwC's objective was to yield a high confidence level and to minimize the risk of the sample not being representative of the entire population. PwC defined its scope, methodology and procedures used for the timeliness assessment for the transaction input in DOE and SONGS. PwC measured (via a stopwatch) the amount of time it took LCSC service representatives to successfully submit orders into SOCS via DOE and SONGS. PwC found that based on a statistically valid sample, the average input time for DOE was 8 minutes and 22 seconds, while the SONGS input time was 5 minutes and 26 seconds. The less-than-3-minute difference between the two input times is not material. PwC depicted the relationship and the relative materiality of the time incurred inputting an order into DOE and SONGS compared to the FOC timeliness for the partially mechanized orders standard of 18 hours and for the manual orders standard of 36 hours. This depiction can be seen on pages 5 and 6 of the PwC report of July 20, 2001 (Exhibit MM-15). The pie charts demonstrate that the average time to process an order through either system is less than 1% of the overall process for the FOC interval for either partially mechanized or manually submitted orders. There is no material difference for this order input activity particularly when you consider the FOC Timeliness Service Quality Measure ("SQM") standard in which this component process resides. The current standards established by the Georgia Public Service Commission are 18 hours for partially mechanized and 36 hours for non-

mechanized service requests. This report validates the results from the original May 3, 2001 PwC report (Exhibit MM-14).

Additionally, PwC defined its scope, methodology and procedures used for the accuracy assessment for the transaction input in DOE and SONGS. This assessment can also be seen in the July 20, 2001 report (Exhibit MM-15):

To determine the accuracy of orders input into DOE and SONGS, PwC reviewed the history log files maintained in SOCS. PwC documented the orders that experienced downstream system edit errors, which had to be subsequently corrected by a BellSouth service representative. PwC was unable to review SOCS history log files for some orders due to a change in the original order due date which resulted in an earlier completion of the order. The completed order history is purged from SOCS the day after an order completes. In these cases, PwC observed the final status of the order within the Mechanized On-line Billing System ("MOBI"). This allowed them to determine if the order had completed, was in pending status or had been cancelled. PwC did review the SOCS history log files for 239 orders that had been input through DOE and 220 that had been input through SONGS. A distribution across product types and by types of errors can be found in its July 20, 2001 report (Exhibit MM-15). A description of each downstream system edit error type along with examples of what caused the edit errors can also be found in the report. BellSouth utilizes strong edit checks within its systems to help eliminate potential downstream provisioning errors. PwC determined that 19.7% of the orders submitted through DOE and 20.0% of the orders submitted through SONGS experienced downstream system edit

errors. Again, PwC was able to validate that BellSouth's assertion that there is no material difference in performance for service order entry by the LCSCs through the DOE and SONGS systems is accurate and correct.

PwC has now completed two independent assessments on the two BellSouth assertions on regionality. These assessments have concluded that BellSouth's systems are regional and that there are no material differences between DOE and SONGS.

Q. HAS BELLSOUTH IDENTIFIED ANY PROCESSES, SYSTEMS OR PROCEDURES USED IN TENNESSEE THAT ARE DIFFERENT FROM THOSE USED IN GEORGIA AND FLORIDA?

A. Yes. DOE (used in Georgia and Florida, and the other original Southern Bell states) and SONGS (used in Tennessee and the other original South Central Bell states) are different, and those differences – and the materiality of those differences – have been thoroughly audited by PwC, as I have just discussed at length.

Q. HAVE ANY ISSUES ASSOCIATED WITH PREFERENTIAL TREATMENT TO CLEC REQUESTS FROM GEORGIA AND FLORIDA ARISEN?

A. Yes. AT&T has referenced the PwC report and claims that the PwC report provides little useful information regarding the Regionality of BellSouth's OSS

and that BellSouth provided preferential treatment to requests submitted by CLECs in Georgia and Florida.

PwC found this issue during its April 2001 investigation into whether BellSouth's operational support systems used to provide pre-ordering and ordering functions to CLECs are regional in nature. During its examination, PwC conducted numerous interviews with personnel in the Local Carrier Service Centers located in Atlanta, Birmingham and Jacksonville. As a result of these interviews, PwC prepared notes of the substance of the interviews as a part of its backup material. These notes were provided to AT&T and others pursuant to discovery requests in the North Carolina 271 proceeding.

In the summer of 2000, the Georgia Public Service Commission adopted a set of performance standards in its OSS Docket No. 8354-U. Also during this time, the Georgia Commission was in the process of hearing and deciding the performance metrics and standards that would be applied on a permanent basis in Docket No. 7892-U. Earlier in 2000, the Florida Public Service Commission had adopted performance standards to be applied to all CLEC performance in connection with the Florida Third-party Test. These orders included tighter targets for the timeliness of many items, such as FOCs and Rejects that are worked by the LCSC personnel.

As a result, BellSouth took steps to increase the workforce in the LCSCs in order to be able to satisfy these tighter standards. Throughout the late summer and

into the fall of 2000, BellSouth was training and deploying new service representatives into the LCSCs. In addition, and in order to meet the benchmarks for all CLECs in Georgia and Florida, for a short period of time, priority was given to manually submitted requests from these two states.

Priority was given only to requests submitted manually, using fax machines. Mechanized requests are handled through the electronic systems and are handled on a first come, first served basis for the region. For partially mechanized requests, which are those that fall out for handling, these requests are also processed using electronic systems. This treatment for manual requests from Florida and Georgia was started in August 2000 and was to have ended in December 2000. This priority applied to all manually submitted (faxed) CLEC requests in these two states.

In the course of the PwC examination during April, they interviewed personnel at the Birmingham LCSC who had not yet ceased the priority treatment for Georgia and Florida manual requests. This was noted in the minutes of the interview, and produced to AT&T in response to data requests. BellSouth took action to correct this process in the Birmingham LCSC. PwC validated the correction and closed the issue. This issue itself is not contained in the PwC Regionality Reports. The reason is quite simple; this preferential treatment issue was found and resolved with no impact on the scope or reporting of their Attestation on the Regionality of BellSouth's systems.

Q. HOW CAN STATES ASSESS THE IMPACT OF PREFERENTIAL TREATMENT FOR MANUALLY SUBMITTED LSRS FOR CLECS OPERATING WITHIN THEIR JURISDICTION?

A. In its applications and testimony filed in support of its 271 applications, BellSouth has urged all authorities and commissions to adopt performance measures and performance standards adopted by the Georgia Public Service Commission in January of this year, and to judge BellSouth's performance by the very same performance standards that are applied by the Georgia Public Service Commission. These measures and performance standards have been programmed into BellSouth's systems, and the adoption of these by the states will allow every state to directly compare the performance in that state with BellSouth's performance in the other states.

BellSouth publishes measures results on its interconnection website (**http://www.interconnection.bellsouth.com/mss/index.html**) for all nine states utilizing the Georgia measurements and standards. The results for Tennessee along with the other states served by BellSouth can be found on this website. Priority treatment for manual requests in the LCSC for Georgia and Florida would primarily impact two measurements, Reject Timeliness and FOC Timeliness for manually submitted LSRs. The results for these two measures for all nine states can be seen in Exhibit MM-16. For the period July 2000 through July 2001, the results show a consistent improvement in all nine states beginning in October of 2000. For the four disaggregation categories with very significant

volumes, resale residence and business non-mechanized requests, UNE analog loops non-mechanized requests, and UNE-P combinations non-mechanized requests, the data shows that, beginning in the January-March 2001 time period, BellSouth's performance has been consistent across all nine states, with all states exceeding the relevant benchmark on both measures for nearly every month. In short, the actual performance in all of BellSouth's states through July 2001 clearly demonstrates that the priority given to Georgia and Florida manual requests was very short-lived and caused very little disparity in the actual performance between or among states.

Q. PLEASE SUMMARIZE YOUR COMMENTS ON REGIONALITY TESTING.

A. BellSouth adopted the roadmap that SBC used to provide the proof and gain the support and approval of state and federal commissions. PwC examined BellSouth's assertions on the regionality of BellSouth's OSS in accordance with attestation standards established by the American Institute of Certified Public Accountants and PwC concluded that its examination provided a reasonable basis for its opinion that the BellSouth management assertions were fairly stated, in all material respects. This Authority can rely on the PwC report as a component of BellSouth's evidence in this proceeding.

PwC concluded that the:

> Applications and interfaces implemented and available are identical across the nine-state region. "Identical" was defined as one unique set of software coding and

configuration ("version") installed on either one or multiple computer servers ("instances") that support all nine states in an equitable manner. (See the Affidavit of Lattimore of May 21, 2001, which is Exhibit MM-14.

Q. DOES THIS COMPLETE YOUR TESTIMONY?

A. It does.