Suite 700
511 Union Street
Nashville, Tennessee 37219

March 27, 1998

David Waddell
Executive Director
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243-0505

In Re: *BellSouth Telecommunications, Inc.'s Entry into Long Distance InterLata Service in Tennessee Pursuant to Section 271 of the Telecommunications Act of 1996 Docket No. 97-00309.*

Dear Mr. Waddell:

Please find enclosed the original and thirteen copies of Pre-filed Testimony on behalf of Joseph Gillan for AT&T and WorldCom Technologies, Robert V. Falcone, John M. Hamman, Jay M. Bradbury and Katherine M. Dailey for AT&T.

Sincerely,

Jim Lamoureux

cc: Parties of record

BEFORE THE
TENNESSEE REGULATORY AUTHORITY

TESTIMONY OF
JOSEPH GILLAN
ON BEHALF OF
AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, INC.
AND
WORLDCOM TECHNOLOGIES, INC.

IN RE: BELLSOUTH'S ENTRY INTO LONG DISTANCE UNDER SECTION 271

DOCKET NO. 97-00309

March 27, 1998

BEFORE THE
TENNESSEE REGULATORY AUTHORITY

TESTIMONY OF
JOHN M. HAMMAN
ON BEHALF OF
AT&T COMMUNICATIONS OF THE SOUTH
CENTRAL STATES, INC.

IN RE: BELLSOUTH'S ENTRY INTO LONG DISTANCE UNDER SECTION 271

DOCKET NO. 97-00309

March 27, 1998

AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, INC.

TESTIMONY OF JOHN M. HAMMAN

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 97-00309

MARCH 27, 1998

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is John M. Hamman. My business address is 1200 Peachtree Street, NE, Atlanta, Georgia 30309-3579.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND AND EXPERIENCE.

A. I received a Master of Business Administration with a concentration in Marketing from University of Missouri, in 1978. I received a Bachelor of Science degree in Mechanical Engineering from Kansas State University, Manhattan, Kansas in 1970. Over the years, I have attended numerous industry schools and seminars covering a variety of technical and regulatory issues.

I joined AT&T in June 1970 in the Operations Department. My initial assignments included establishing operational methods and support for AT&T's outside workforce and managing the AT&T Midwest Engineering Regional Facility Planning Electronic Data Processing Group. In 1976, I joined the Sales/Marketing organization and held various positions of increasing responsibility selling local services, Customer Provided Equipment, and Network Services to AT&T's largest customers. In 1983, I was the AT&T Primary Markets Sales Center manager for Business customers in Kansas, Missouri, Oklahoma, and Arkansas. In that position, my sales center was the primary

customer contact for AT&T business service orders. In 1986, I took on the responsibility for Business customer billing and collections methods and support for the Southern Region states. In 1990, I became responsible for working with the Local Exchange Carriers ("LECs") reviewing the billing and collections arrangements with AT&T and resolving related errors and disputes arising from that process.

Q. PLEASE DESCRIBE YOUR CURRENT EMPLOYMENT AND THE SCOPE OF YOUR RESPONSIBILITIES.

A. My current responsibilities as part of the AT&T Local Services Division, include providing technical and analytical support activities necessary for AT&T's local service planning in the nine Southern Region states. This responsibility includes being a core member of AT&T's negotiations Subject Matter Expert ("SME") team responsible for unbundled network elements ("UNEs"). In addition, I provide analysis of the Incumbent Local Exchange Carriers' ("ILECs") agreements with Competitive Local Exchange Carriers ("CLECs") regarding the details of local service features, interconnection arrangements, and network architecture to assess their impact on AT&T's local service plans. I recently represented AT&T on the Georgia Local Number Portability ("LNP") Workshop and as Chair of the Georgia LNP Requirements Committee. I served as that committee's representative to the Georgia LNP Steering Committee which interfaced directly with the Georgia Public Service Commission Staff. In that capacity, I worked with other members of the industry in the determination and development of the technical requirements for implementation of LNP in Georgia.

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

A. I have testified as the expert technical witness before state commissions in Alabama, Mississippi, Louisiana, South Carolina, and Kentucky in the AT&T/BellSouth Arbitration hearings and before the commissions in Louisiana, South Carolina, Alabama, Kentucky, Florida, North Carolina and Mississippi regarding BellSouth's entry into the interLATA market.

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

A. The purpose of my testimony is to (1) refute Mr. Milner's assertions that the 87 binders he references in his testimony (30 of which comprise Ex. WKM-1, filed in this proceeding) demonstrate that BellSouth has satisfied the requirements of the competitive checklist in § 271 of the Act; (2) address Mr. Milner's and Mr. Varner's assertions that BellSouth has made the required checklist items "functionally available"; and (3) rebut Mr. Milner's and Mr. Varner's testimony that BellSouth has complied with the competitive checklist. Additionally, I provide a framework that this Authority can use in evaluating whether BellSouth complies with the 14-point checklist contained in section § 271 of the Telecommunications Act of 1996 ("the Act") and whether BellSouth has demonstrated that its Statement of Generally Available Terms and Conditions ("Statement" or "SGAT") complies with §§ 251 and 252(d) of the Act. After reviewing the evidence, this Authority should determine that BellSouth has not yet implemented fully an interconnection agreement or demonstrated that the services and elements it purports to offer in its Statement are available on a non-discriminatory basis if ordered now by a CLEC.

Q. WHY IS IT SO IMPORTANT FOR BELLSOUTH TO COMPLY FULLY WITH SECTIONS 251 AND 252 OF THE ACT AND THE COMPETITIVE CHECKLIST?

A. Until BellSouth fully complies with the Act either through a fully implemented interconnection agreement or through its Statement, AT&T and other CLECs cannot provide the same quality of service to their customers that BellSouth provides to its customers.

BellSouth's cooperation is absolutely necessary for the development of meaningful local exchange competition. BellSouth's ability to leverage its monopoly status in local exchange service into the interLATA market creates a natural incentive to withhold such cooperation from competitors. The Act conditions in-region, interLATA entry on compliance with §§ 251 and 252 of the Act and all the items included in the checklist in § 271. This condition provides an incentive to BellSouth to take the steps necessary to open its monopoly markets, while reducing its incentive and opportunities to discriminate against new competitors. Premature entry into the interLATA market removes the incentive to open the local market to competition.

If BellSouth does not provide interconnection and access to UNEs in compliance with the Act, AT&T's (and other new entrants') customers will receive inferior service. These customers likely will blame AT&T for their service problems, thus damaging AT&T's reputation and its ability to attract and retain users. The widespread competition envisioned by the Act simply will not occur if BellSouth fails to comply with the Act.

Q. WHAT IS REQUIRED FOR THIS AUTHORITY TO APPROVE BELLSOUTH'S STATEMENT AND TO DETERMINE IF BELLSOUTH HAS DEMONSTRATED COMPLIANCE WITH THE CHECKLIST ITEMS?

A. Before it can approve BellSouth's Statement or find that BellSouth has complied with the checklist, the Authority must determine that each and every standard and requirement of §§ 251 and 252(d) of the Act has been met and that the provisions in BellSouth's Statement or arbitrated interconnection agreements can be implemented in a realistic way. If BellSouth does not have the actual capability to provide the services it *claims* to offer, any promises to offer those services are meaningless. Indeed, in its decision rejecting Ameritech's application to provide in-region, interLATA service in Michigan, the FCC stated clearly, "Paper promises do not, and cannot, satisfy a BOC's burden of proof." Memorandum Opinion and Order, CC Docket No. 97-137 ¶ 55 (Aug. 19, 1997) ("Ameritech Order").

To demonstrate compliance with §§ 251 and 252 and with the checklist, BellSouth thus must make each item available in a nondiscriminatory manner. These items must be available in such quantities as may be reasonably demanded by CLECs. Mere promises to provide the items sometime in the future are not sufficient. Without a fully implemented interconnection agreement or Statement that complies with the checklist, this Authority cannot be assured that AT&T and other CLECs can provide or make available the same quality of service to their customers that BellSouth is able to provide to its customers.

BellSouth therefore cannot demonstrate compliance with the requirements of the Act until it provides CLECs with nondiscriminatory access to the 14 checklist items at parity

with the access enjoyed by BellSouth. In order to provide nondiscriminatory access, BellSouth must take several steps for each checklist item: (1) methods and procedures for implementation must be established; (2) operational testing must be performed; (3) actual operational experience must be gained; and (4) actual experience must be measured against performance benchmarks and measurements. Without these steps, the Authority is limited to reliance on BellSouth's assertions.

Q. WHY ARE THESE STEPS SO CRITICAL?

A. The FCC affirmed that these four steps are key to assure not only that BellSouth can prove its compliance with the checklist at the time of its application, but also to demonstrate that it will be able to continue such compliance in the future. Ameritech Order at ¶ 22. First, methods and procedures are critical because they provide a standard set of rules for new entrants seeking to work with BellSouth to provide local service. Id. They also provide BellSouth employees with consistent rules for dealing with new entrants. Absent standard methods and procedures, new entrants cannot plan and deliver service to end users effectively. It is not enough for BellSouth simply to say it will make items available; the parties must work out the details of who, what, when, where and how.

Second, operational testing is necessary to identify and resolve issues that will arise when CLECs work with BellSouth's network and employees. As the FCC has stated, actual commercial usage is the best test of whether a BOC can provide nondiscriminatory access to its network. Ameritech Order at ¶ 138. In the absence of actual experience, at a minimum BellSouth must demonstrate nondiscriminatory access through testing. Id. BellSouth's internal testing does not by itself provide sufficient evidence of operability.

Joint testing with new entrants and/or neutral third parties is much more likely to uncover flaws in the planned interactions between the new entrants and BellSouth. Operational testing beyond BellSouth's internal testing permits the parties to examine the established methods and procedures and make any changes necessary for real-time operations.

Third, actual operational experiences furnish the best information to determine whether BellSouth is providing the checklist items in accordance with the Act. While information gained from testing may be helpful to this Authority, it cannot account for all possible contingencies. Where available, actual operational experiences deliver the most telling evidence of the extent to which new entrants are able to provide service using BellSouth's network.

Fourth, performance measures are necessary to determine whether BellSouth is providing nondiscriminatory access to its network. Ms. Dailey discusses the issue of performance measures in greater detail in her testimony. While BellSouth may intend to provide the statutorily required items in a nondiscriminatory manner, without data generated by performance measures, proof of compliance cannot be established. Initially, new entrants such as AT&T must purchase most of the services, network elements, and interconnection necessary to provide local exchange service exclusively from BellSouth. New entrants cannot provide high quality services to consumers unless BellSouth first provides high quality services to new entrants. Without performance measures and data, there is no way to objectively determine whether new entrants receive interconnection and access to UNEs at parity with that which BellSouth enjoys.

Q. WHY ARE THE CURRENT BELLSOUTH METHODS AND PROCEDURES INSUFFICIENT TO SATISFY THE REQUIREMENTS OF THE ACT?

A. BellSouth's current internal implementation methods and procedures reflect operational arrangements related to the provisioning of BellSouth services under tariffs, contracts, and agreements established prior to the Act. Although they may be sufficient to provide BellSouth services and meet the demands of the pre-Act environment, they are not directly transferable to the nondiscriminatory actions BellSouth must undertake to open the local exchange market. Unbundling and interconnecting the local telephone network is a new activity in which BellSouth is required to make its facilities available, at cost-based, competitively neutral prices, to competitors who will try to use these facilities to win BellSouth's customers. Even if BellSouth has the best of intentions, the process of unbundling local telephone networks is surrounded by uncertainty and likely will be characterized by fitful progress and frequent disputes.

Moreover, BellSouth's pre-Act experience in providing a limited number of services and facilities to Interexchange Carriers, Cable Companies and Competitive Access Providers has only limited relevance to its ability to provide nondiscriminatory access and interconnection for the provision of competitive local exchange services. New methods and procedures must be developed in light of the requirements of the new local market and be tested through real operational experience before BellSouth can prove that it is providing nondiscriminatory access and interconnection equal to that it provides to itself.

Q. WHAT ARE AT&T AND BELLSOUTH DOING TO IMPLEMENT THE TERMS OF THE INTERCONNECTION AGREEMENT SIGNED IN TENNESSEE?

A. AT&T is continuing to work to ensure that it will be able to obtain the statutorily required items in a manner that will allow AT&T to provide its customers with high quality service. There remain significant implementation issues to be resolved. In recent months, AT&T and BellSouth have concentrated on resolving larger important projects, such as provisioning unbundled network elements and AT&T Digital Link service.

While BellSouth has made assurances that it will continue to cooperate in resolving these issues, the simple fact is that this work is not yet complete. Moreover, BellSouth's actions in implementing interconnection agreements in Georgia, Florida, and Kentucky have required AT&T to seek assistance from the state commissions because of delays and other anti-competitive actions by BellSouth. Further, additional work items continue to be identified as the parties move into the uncharted territory of local exchange competition. As discussed in detail in the testimony of Mr. Falcone, BellSouth's proposal to use collocation to provide access to combinations of UNEs raises a myriad of additional questions and issues that the parties must address before a viable option for accessing UNEs can be implemented. More work is required to develop the methods and procedures, operational testing, operational experience and performance benchmarks and measurements necessary to establish whether BellSouth is in compliance with the Act.

Q. WHAT OTHER SAFEGUARDS ARE NECESSARY WITH RESPECT TO THE AUTHORITY'S DETERMINATION REGARDING NETWORK UNBUNDLING ISSUES?

A. BellSouth and the CLECs need sufficient time to work out transitional issues and ensure that the unbundling of network elements has taken place. The transitional issues include resolving issues related to the ordering and testing of unbundled network elements, and measuring BellSouth's ability to provide access to these elements at parity with BellSouth's access. The Act provides for a total overhaul of the local exchange market with the goal of introducing competition and dismantling the monopoly local exchange bottleneck. This is not something that can occur overnight; it is a complicated and difficult process. Accordingly, the Authority should not find that BellSouth has met the Act's unbundling requirements until the transitional issues have been resolved. "Paper unbundling" cannot constitute compliance with the Act.

I. THE BINDERS FILED WITH MR. MILNER'S TESTIMONY DO NOT ESTABLISH THAT BELLSOUTH HAS COMPLIED WITH THE ACT

Q. BELLSOUTH FILED 30 BINDERS WITH MR. MILNER'S TESTIMONY. DOES THIS WRITTEN MATERIAL ESTABLISH THAT BELLSOUTH CAN MAKE AVAILABLE ALL OF THE CHECKLIST ITEMS AND MEET THE NONDISCRIMINATORY REQUIREMENTS OF THE ACT?

A. No. BellSouth cannot establish its compliance with §§ 251 and 252 for each of the checklist items simply by producing 30 binders. As Mr. Milner states, the 30 binders are a subset of a set of 87 binders filed in other states. The binders are merely a repetitious collection of BellSouth's internal operating documents along with some information regarding internal testing conducted by BellSouth in March, 1997. The fact that BellSouth has produced these documents (some of which were copied, verbatim, from BellSouth's access department and thus have no proven application to UNEs in the local market) does not prove that BellSouth actually can provide resale and access to UNEs

under the terms and conditions required by the Act. These binders, if anything, reveal that BellSouth is not yet prepared to open its monopoly market to competition. The binders contain materials that are largely duplicative, incomplete, disorganized, and difficult to follow. They are insufficient to establish that BellSouth is capable of providing the items in its Statement in a just, reasonable and nondiscriminatory fashion.

Q. WHAT WOULD YOU EXPECT TO SEE IN AN ADEQUATE SET OF MEASURES AND PROCEDURES TO SUPPORT ACCESS TO BELLSOUTH'S NETWORK?

A. As stated above, BellSouth must demonstrate for each item that it has: (1) nondiscriminatory methods and procedures for implementation; (2) internal, third party, and/or CLEC operational testing results that confirm nondiscriminatory access; (3) meaningful actual operational experience; and (4) performance measurements against which operational experience may be measured. The material in the binders provided by Mr. Milner does not satisfy this standard. We have reviewed the full set of 87 binders and reached the following conclusions:

First, the methods and procedures provided in the binders appear to be nothing more than existing BellSouth procedures that have been reordered and duplicated. The binders contain copies of pages from the Local Interconnection and Facility Based Ordering guide that already have been provided in this hearing and documents that reflect methods for providing access to long distance carriers that are dated prior to the Act. Moreover, those documents are duplicated repeatedly in the binders and, in many cases, duplicates in the binder appear to be errors in the compilation of the binders.

Second, to the extent that testing has been performed, the testing experience referenced in the binders reflects nothing more than BellSouth's internal testing experience. BellSouth

does not provide any of the test parameters or the test results that would allow a third party to confirm that BellSouth can provide the checklist items in a nondiscriminatory manner. For example, references in the test report summaries state that the billing data was not completed to verify that billing would be available and accurate. The information in the binders indicates that orders were forced through the system without complete information in order to complete the tests, and there is no explanation as to why this was necessary. In some instances, in order to process orders, tables consisting of the data elements necessary to order the service had to be updated to allow the orders to complete. There is no mention of updating the methods to ensure that the tables will be current when a CLEC begins sending orders through the system.

Third, the operational experiences BellSouth provides are merely "live activity" summaries showing data collected by BellSouth from their data systems of the USOCs ordered and completed in their databases. The information in the binders does not indicate that the elements being deployed actually are being used by CLECs, and most importantly, there is no verification that these services are being provided in a nondiscriminatory manner. The binders also contain no statements as to whether there have been any complaints from CLECs using the services. The number of operational experiences that BellSouth lists in the binders is minimal at best. The binders certainly do not demonstrate that BellSouth has sufficient experience to verify that it can provide CLECs the checklist items through all of the different technologies that exist in the BellSouth network.

Finally, the binders do not contain performance measurements for either BellSouth or a CLEC. In many cases the provisioning intervals to provide service are left blank or require a service inquiry to determine the interval. BellSouth has neither set standards for

nondiscriminatory access nor stated how it will measure its performance against those standards.

Q. DO THE BINDERS FILED WITH THIS AUTHORITY SUFFER FROM THE SAME DEFICIENCIES NOTED WITH THE FULL SET OF 87 BINDERS FILED ELSEWHERE?

A. BellSouth's latest filing of 30 binders with this Authority appears to have fewer of the types of assembly and copying problems found in the complete set of binders. However, the more important substantive issues have not been addressed. The binders do not appear to have been updated since they were first filed in June, 1997 in Georgia.

Q. SHOULD THIS AUTHORITY RELY ON INFORMATION IN THE BINDERS TO DETERMINE WHETHER BELLSOUTH HAS COMPLIED WITH THE CHECKLIST?

A. No. The binders do not demonstrate that BellSouth's Statement complies with the checklist. Rather, the material demonstrates that BellSouth is not yet prepared to implement fully its agreements with any CLEC and cannot ensure that it actually can provide the checklist items. In fact, the problems I have identified with the material in the binders are consistent with the problems that CLECs already have experienced in attempting to obtain UNEs and the services for resale from BellSouth without adequate and reliable methods and procedures in place. BellSouth simply has not yet completed the work necessary to implement the paper promises in its Statement.

II. "FUNCTIONAL AVAILABILITY" IS NOT THE APPROPRIATE STANDARD FOR DETERMINING CHECKLIST COMPLIANCE

Q. MR. MILNER REPEATEDLY STATES IN HIS TESTIMONY THAT CHECKLIST ITEMS ARE "FUNCTIONALLY AVAILABLE." IS THIS THE APPROPRIATE STANDARD FOR DETERMINING COMPLIANCE WITH THE CHECKLIST?

A. No. Section 271 of the Telecommunications Act of 1996 ("the Act") states that Bell operating companies must provide nondiscriminatory access to UNEs in accordance with §§ 251(c)(3) and 252(d)(1). Section 251(c)(3) requires LECs to make UNEs available "on rates, terms and conditions that are just, reasonable, and nondiscriminatory." 47 U.S.C.A. § 251(c)(3). This is the statutory standard for determining whether BellSouth has complied with the competitive checklist. BellSouth, however, attempts to avoid noncompliance with the standard by claiming that each checklist item is "functionally available." Indeed, Mr. Milner uses the phrase "functionally available" no less than twenty times in his testimony. See Milner Dir. at 3, 8, 9, 16, 20, 27, 29, 36, 39, 42, 45, 47, 53, 55, 57, and 67. Mr. Varner also uses the phrase in his testimony. See Varner Dir. at 35. That term does not appear in the Act. Mr. Milner states on page 8 that he means by that term that a checklist item has been "fully implemented and is available" whether or not another carrier has requested the item. Thus, the term, as defined by Mr. Milner, does not address the critical aspects of the Act's requirement that BellSouth provide "just, reasonable and nondiscriminatory" access. Moreover, as addressed below, the items on the checklist are not "fully implemented" nor "available" because methods and procedures for providing these items are not in place, operational testing is not complete, and for many items, there is no operational experience.

III. BELLSOUTH HAS NOT COMPLIED WITH THE COMPETITIVE CHECKLIST

Q. HAS BELLSOUTH COMPLIED WITH THE 14-POINT CHECKLIST?

A. No. Although BellSouth claims that it has already interconnected with other networks, and implemented unbundling, a significant number of operational and technical matters remain to be resolved before BellSouth can demonstrate compliance with §§ 251 and 252(d) of the Act and the 14 point checklist. In this section, I address the following Checklist items found in § 271(c)(2)(B): (1) Interconnection, (2) Unbundled Network Elements, (3) Poles, Ducts, and Rights of Way, (4) Local Loops, (5) Local Transport, (6) Local Switching, (7) Telephone Numbers, (9) 911/E911 Services, Directory and Operator Services, (10) Signaling and Databases, (11) Local Number Portability and (13) Reciprocal Compensation. Mr. Gillan addresses checklist items 2 and 6 in greater detail in his testimony. Mr. Falcone discusses the issue of collocation and how that affects BellSouth's ability to provide UNEs in accordance with the checklist item 2. Mr. Bradbury discusses in his testimony how the lack of adequate Operations Support Systems affects all of the checklist items. Ms. Dailey discusses how performance measurements are critical to ensure nondiscriminatory access.

CHECKLIST ITEM 1--INTERCONNECTION

Q. WHAT IS INTERCONNECTION?

A. Interconnection is the way that competing carriers connect to the local networks, both BellSouth's and others.

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. Under § 271(c)(2)(B)(i) of the Act, BellSouth must provide interconnection in accordance with the standards and pricing rules of §§ 251(c)(2) and 252(d)(1). Section 251(c)(2) requires BellSouth to provide interconnection for the transmission and routing of telephone exchange service and access, at any technically feasible point, at least equal in quality to that BellSouth provides to itself, on rates, terms and conditions that are just, reasonable and nondiscriminatory. The quality of interconnection provided to CLECs must be "indistinguishable" from that BellSouth provides to itself. FCC First Report and Order ¶ 224 (Aug. 8, 1996) ("FCC First Report and Order").

In order to satisfy checklist item one, BellSouth must establish methods and procedures to implement the most efficient interconnection architecture to permit a CLEC's and BellSouth's networks to work together. This includes joint engineering practices, administrative procedures, specific timelines for implementation of the various arrangements, joint testing procedures to verify interconnection, joint practices for resolution of issues related to interconnection, and performance measurements for each party to meet in the provisioning of these arrangements.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING INTERCONNECTION IN ACCORDANCE WITH THE CHECKLIST?

A. No. BellSouth states it has provided interconnection, but offers no evidence to prove that it has provided interconnection that is equal in quality to that which BellSouth provides to itself. If BellSouth has any such evidence it has failed to produce it. For example, BellSouth's agreements with other LECs which have been in place for some time might provide some evidence of interconnection quality provided to other LECs, but BellSouth has not made them part of its case. Without review of these agreements, the Authority

and other carriers cannot determine if the terms of interconnection BellSouth is offering new entrants are better or worse than the terms BellSouth offers to other carriers in existing agreements. Therefore, it is impossible to determine whether BellSouth is offering new entrants terms that are nondiscriminatory.

Q. ARE THERE ANY ADDITIONAL ISSUES THAT BELLSOUTH MUST RESOLVE TO COMPLY WITH THE ACT'S INTERCONNECTION REQUIREMENTS?

A. Yes. BellSouth must establish that the methods and procedures related to interconnection through collocation are nondiscriminatory. Mr. Falcone addresses the issue of nondiscriminatory access to collocation in his testimony.

CHECKLIST ITEM 2 -- NONDISCRIMINATORY ACCESS TO UNBUNDLED NETWORK ELEMENTS

Q. WHAT ARE UNBUNDLED NETWORK ELEMENTS UNDER THE ACT?

A. Unbundled network elements or UNEs are the facilities or equipment used in the provision of a telecommunications service. The Act defines a "network element" as "a facility or equipment used in the provision of a telecommunications service . . . . includ[ing] features, functions, and capabilities that are provided by means of such facility or equipment." 47 U.S.C.A. § 153(29). AT&T requested access to 12 UNEs in arbitration with BellSouth, and BellSouth agreed to provide them. UNEs can be used to interconnect AT&T's facilities with each BellSouth network element at any point designated by AT&T that is technically feasible. The elements may be used individually and in combination with other network elements to provide telecommunications services.

Attached to my testimony is JMH-1, a chart describing the 12 UNEs included in the AT&T/BellSouth interconnection agreement.

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. The Act provides that for each UNE, required provisioning includes the ability to order any one or a combination of all the elements; to specify features, functions, and capabilities of the UNEs; to be assured that billing methods are in place for each UNE; and to know that BellSouth provides a means to test the elements and ensure they work together as expected.

Q. HAS BELLSOUTH COMPLIED WITH THIS CHECKLIST ITEM?

A. No. Under Checklist Item 2, BellSouth must provide nondiscriminatory access to network elements in accordance with the requirements of §§ 251(c)(3) and 252(d)(1) of the Act. Section 251(c)(3) requires BellSouth to provide nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms and conditions that are just, reasonable and nondiscriminatory. Nondiscriminatory access means at a minimum, that the terms and conditions are offered equally to all requesting carriers, and where applicable, they must be equal to the terms and conditions under which BellSouth provisions the elements to itself. As shown below, BellSouth has not provided nondiscriminatory access to network elements as required.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING UNES IN ACCORDANCE WITH THE ACT?

A. No. During similar proceedings before the Public Service Commissions in Georgia, Kentucky, Alabama, Florida, North Carolina, Mississippi, Louisiana and South Carolina

each CLEC that had attempted to obtain UNEs from BellSouth expressed dissatisfaction with their ability to obtain and use these UNEs to provide service to end users. Indeed, BellSouth was unable to produce a single user of the UNEs who expressed satisfaction with this process. The testimony provided in those hearings shows BellSouth has not demonstrated that it possesses both the technical competence and the willingness to provide network elements other than interconnection trunks to CLECs. And, in this proceeding, BellSouth has provided no additional evidence to demonstrate that it can provide access to UNEs in accordance with § 251(c)(3).

Q. WHAT HAS BEEN AT&T'S EXPERIENCE WITH OBTAINING ACCESS TO UNES FROM BELLSOUTH?

A. AT&T attempted to order UNEs that make up the unbundled platform in Tennessee, Kentucky and Florida, but BellSouth has been unable to implement the UNE platform or provide unbundled network elements on a nondiscriminatory basis. I address AT&T's operational experience with attempts to order the unbundled platform and unbundled network elements in more detail below. The requirements of the Act and the policy issues related to the unbundled platform are discussed in detail in the testimony of Mr. Gillan. In addition, Mr. Falcone addresses BellSouth's failure to identify methods and procedures by which it will provide access to combinations of UNEs through collocation.

Q. WHAT IS THE "UNBUNDLED PLATFORM"?

A. The unbundled platform is a combination of UNEs, consisting of the network interface device, loop (combination of the loop distribution, loop feeder, and the loop concentrator/multiplexer), local switching, operator systems, common and dedicated transport, signaling and call-related data bases, and tandem switching. The platform permits a new local service provider to offer local exchange and exchange access service.

With this combination, a local service provider can offer a full range of telecommunications services to end users and other carriers. When providing service with the platform, a CLEC experiences more flexibility while shouldering more risk, than when it simply resells BellSouth services that BellSouth already provides to end users.

Q. BESIDES ACCESS TO UNBUNDLED NETWORK ELEMENTS, DOES THE PLATFORM RELATE TO OTHER CHECKLIST ITEMS?

A. Yes. Because the platform is composed of unbundled network elements, BellSouth's ability to provide the platform also reflects its ability to provide access to the specific network elements comprising the platform. BellSouth would be unable to demonstrate its ability to provide nondiscriminatory access to the platform if it cannot provide such access to the individual unbundled network elements.

Q. DOES THE TELECOMMUNICATIONS ACT PERMIT USE OF AN UNBUNDLED PLATFORM?

A. Yes. The Act specifically provides that "[a]n incumbent local exchange carrier shall provide such UNEs in a manner that allows requesting carriers to combine such elements in order to provide telecommunications service." 47 U.S.C.A. § 251(c)(3). The United States Court of Appeals for the Eighth Circuit recently confirmed that CLECs must be permitted to purchase UNEs and combine them in any way they choose to create a telecommunications service. Iowa Utils. Bd. v. FCC, 120 F.3d 753 (8th Cir. 1997). Mr. Gillian discusses this issue in more detail in his testimony.

Q. WHAT HAS BEEN AT&T'S EXPERIENCE ORDERING UNBUNDLED NETWORK ELEMENTS FROM BELLSOUTH, INCLUDING THE UNBUNDLED NETWORK PLATFORM?

A. BellSouth has failed to provide unbundled network elements ordered by AT&T in a nondiscriminatory manner. AT&T has placed orders for UNEs in Tennessee, Kentucky and Florida. The actions of BellSouth in responding to these orders demonstrates that BellSouth is unable to provide access to unbundled network elements in accordance with Checklist Item 2.

Between December, 1997 and February, 1998, AT&T has placed eight orders for UNEs with BellSouth in Tennessee. BellSouth provided timely firm order confirmations for only two of the orders. Moreover, for two orders, AT&T informed BellSouth that the orders were to be supported by AT&T's Operator Services platform. AT&T wanted to ensure that the functionality and routing to AT&T's Operator Services platform was operationally sound, and that billing for the UNE platform and Operator Services was accurate. BellSouth initially failed to provide AT&T with a firm order confirmation of the orders. AT&T was forced to call BellSouth to repeat its request for the UNE platform. When test calls were placed to check the routing to AT&T's platform, the calls instead were routed to BellSouth's branded Operator Services and Directory Assistance platforms. When AT&T inquired about the misrouting in January, 1998, BellSouth responded that because AT&T's platform was not in place in Tennessee, the calls were routed to BellSouth's platform. However, the parties had provisioned and tested the AT&T platform in six central offices in Tennessee to allow the routing of calls to AT&T Operator Services and Directory Assistance. In these six offices the trunk groups had been established to route Directory Assistance calls to BellSouth's unbranded platform and to send Operator Services calls to AT&T's platform. Line class codes for the routing also had been defined. Although BellSouth ultimately routed the orders correctly, it took more than three months for this issue to be resolved.

BellSouth also has failed to provide combinations of UNEs as requested by AT&T in Tennessee. The Interconnection Agreement between AT&T and BellSouth provides that AT&T may order combinations of UNEs. Interconnection Agreement § 1.A. If BellSouth believes that a combination of UNEs ordered by AT&T replicates an existing BellSouth service, BellSouth has the burden of petitioning the TRA to establish that the UNE combination requested by AT&T replicates such a service. Id. BellSouth, however, must provide the UNEs as ordered by AT&T. AT&T requested in one order that operator service calls be routed to its platform, and in another order requested different features of the unbundled switch. BellSouth, however, asserted that such orders replicated existing BellSouth services, and billed AT&T at the resale rate rather than at the unbundled network element price.

To date, AT&T has placed orders for 12 test lines with BellSouth in Kentucky. BellSouth provisioned five of the lines but rejected the remaining seven orders. BellSouth assured AT&T that an electronic interface for ordering would be available by May, 1997; however, BellSouth continues to process orders manually because the electronic interface remains unavailable. In addition, BellSouth has not provided correct billing information for the lines, nor has BellSouth provided daily usage recordings to AT&T that allow AT&T to bill other carriers for access. Two of the orders requested specific local switching features: 900 blocking and Call Hold. The other order did not request any specific features. When AT&T submitted the two orders with specific features, BellSouth responded that AT&T could not order 900 blocking or Call Hold as stand-alone features because the features were unavailable in BellSouth's retail tariffs. BellSouth stated that AT&T would have to order additional features to obtain 900

blocking and Call Hold. This requirement to charge AT&T the resale rate for such services violates the Act and an order of the Kentucky Public Service Commission that requires BellSouth to offer the switch including the features, functions and capabilities provided by the switch at no additional cost. BellSouth's latest response has been that the specific feature orders cannot be processed because the features do not work independently, but that AT&T could pursue the cumbersome and time-consuming bona fide request process to attempt to obtain the features.

For the order without any specific features, BellSouth failed to provide a firm order confirmation after two days. Under the BellSouth/AT&T Interconnection Agreement, the firm order confirmation is required within 24 hours. When AT&T contacted the BellSouth Local Carrier Service Center on October 6, 1997, the BellSouth representative stated that the order was being held because the loop/port combination was not available in Kentucky. When AT&T responded that BellSouth previously had stated that the loop/port combination was available, the BellSouth representative referred the caller to BellSouth's account team. Finally, on November 3, 1997, BellSouth responded that it had issued the order with an error in the Universal Service Order Codes, and that it had corrected the error and reissued the order. AT&T was forced to wait for approximately one month to verify that BellSouth had processed correctly a single order for a loop/port combination that lacked any extra features.

When AT&T ordered the UNE platform in Florida as part of a joint concept testing arrangement, BellSouth again was unable to demonstrate that it can provide it. AT&T first tried to set up a means of communicating our requirements for UNEs through a "footprint" order to define for a particular geographic area, the capabilities AT&T desires

in that area. The purpose of using the footprint order is to ensure that BellSouth will be able to provide those UNEs for AT&T customers in that area. When AT&T submitted its footprint order in Florida, it received no confirmation of the order from BellSouth and no communication on methods and procedures for providing AT&T the requested access. In September, 1997, BellSouth informed AT&T that it had changed the UNE platform ordering process, and faxed AT&T an internal noticed dated one month previous. BellSouth's method of notifying AT&T of such a change is inconsistent with the methods BellSouth previously provided to AT&T. BellSouth's inability to follow the established process for notifying CLECs of changes to its ordering processes demonstrates that BellSouth has not yet implemented adequate methods and procedures for the ordering and provisioning of unbundled network elements.

In addition, the Florida test orders were placed through a manual process, and as discussed in Mr. Bradbury's testimony, manual ordering processes do not comply with requirements of the Act, as confirmed by the FCC's rejection of BellSouth's application to provide in-region, interLATA service in South Carolina and the FCC's Ameritech decision. See Ameritech Order ¶¶ 172-85; In the Matter of Application of BellSouth Corporation, Pursuant to Section 271 of the Communications Act of 1934, as amended, To Provide In-Region, InterLATA Services in South Carolina, CC Docket 97-208 ¶ 143 (Dec. 24, 1997). More importantly, however, BellSouth has failed to provide AT&T with call detail information that would allow AT&T to determine whether and to what extent BellSouth actually is providing UNEs. BellSouth's inability to record and provide the requested UNE data forecloses any meaningful attempt to analyze BellSouth's ability to provide UNEs.

Until AT&T knows what it is getting when it places orders for UNEs, it will not know (1) if they are available or (2) that BellSouth has in place the methods and procedures to provide nondiscriminatory access to UNEs.

Q. WHAT HAS BEEN AT&T'S EXPERIENCE WITH BELLSOUTH'S BILLING?

A. In Tennessee, as stated above, BellSouth improperly billed AT&T at the resale rate for UNE orders. In addition, bills AT&T received from BellSouth in Florida and Kentucky in connection with the joint concept testing contained several errors. For example, in bills received in May and June of 1997, BellSouth failed to include call details for chargeable items such as directory assistance calls to permit AT&T to bill its customers properly.

Q. HAS BELLSOUTH ESTABLISHED THAT IT CURRENTLY IS CAPABLE OF RECORDING AND BILLING USAGE DETAIL FOR UNES?

A. No. BellSouth originally admitted that it was not capable of mechanized billing for UNE combinations or of providing usage sensitive billing for UNEs. BellSouth now claims that it can provide such a bill, but BellSouth has yet to provide an accurate usage sensitive bill to AT&T. Without this capability, BellSouth cannot claim that it has complied with the requirements of the competitive checklist to provide access to UNEs at cost-based rates on a nondiscriminatory basis. Even if a CLEC does not order the entire UNE platform, but seeks to order one or two elements to combine with its own facilities, at this point, BellSouth has not demonstrated its ability to provide accurate usage sensitive billing. In addition, despite its arguments to the contrary, BellSouth also must develop the ability to bill for UNE combinations at UNE rates. The United States Court of Appeals for the Eighth Circuit recently determined that incumbent local exchange

carriers must provide access to combinations of UNEs at cost-based rates even if they duplicate services offered for resale, confirming this Authority's interpretation of the Act. Iowa Utils. Bd. v. FCC, 120 F.3d 753 (8th Cir. 1997). Therefore, BellSouth must develop the capability to bill for the UNE platform at UNE rates.

Q. WHAT IS THE EFFECT OF BELLSOUTH'S INABILITY TO PROVIDE ACCURATE USAGE DATA?

A. First, without usage data, there is no way for a CLEC to check the accuracy of the bill. Second, there is no way for a CLEC to track costs for purposes of creating its own pricing structure. Third, there is no way for a CLEC to monitor network usage to create more efficient networks and more efficient service plans for customers. Fourth, there is no way to bill access charges. FCC regulations provide that the purchaser of local switching becomes the access provider. BellSouth's inability to provide usage billing prevents CLECs from being able to bill access charges.

Q. IS BELLSOUTH IN A POSITION TO PROVIDE THE UNBUNDLED PLATFORM ON A NONDISCRIMINATORY BASIS?

A. No. BellSouth cannot do so now. Three things must happen before BellSouth can implement the unbundled platform.

First, fully tested Operational Support Systems ("OSS") interfaces between BellSouth and CLECs must be in place. Mr. Bradbury's testimony demonstrates that nondiscriminatory OSS interfaces are not available at this time.

Second, the process by which AT&T will specify the particular features, functions and capabilities of the UNEs necessary to serve a customer using the UNE platform, as well

as the methods and procedures that BellSouth will use to implement AT&T's request, must be defined, put in place, and tested. This includes methods and procedures for providing access to combinations of UNEs through the only means that BellSouth has so far identified -- collocation. This issue is discussed in detail in the testimony of Mr. Falcone.

Finally, BellSouth must develop procedures for dealing with large scale transfers of customers to the unbundled platform on a bulk order basis that allows CLECs to specify the UNEs necessary to implement these customers efficiently. If such procedures are not developed, delays in the transfer of customers will occur. AT&T and the other CLECs that offer the unbundled platform will suffer because their service will be viewed by customers as unreliable (even though BellSouth will be responsible for the delay), and AT&T will not be able to serve its customers in substantially the same time and manner as BellSouth.

CHECKLIST ITEM 3 -- POLES, DUCTS, CONDUITS AND RIGHTS OF WAY

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. Under Checklist Item 3, BellSouth must provide nondiscriminatory access to the poles, ducts, conduits, and rights-of-way owned or controlled by BellSouth at just and reasonable rates in accordance with the requirements of 47 U.S.C.A. § 224. Nondiscriminatory access means at a minimum, that the terms and conditions are offered equally to all requesting carriers, and where applicable, they must be equal to the terms and conditions under which BellSouth provisions the elements to itself.

CLECs require the same access to poles, ducts, conduits and rights-of-way as BellSouth provides to itself. BellSouth maintains that it provides this access now under licensing agreements for Interexchange Carriers. However, the access required in the local market will differ from that currently offered. Local competition will require access in many more locations.

Q. HAS BELLSOUTH ESTABLISHED COMPLIANCE WITH THIS CHECKLIST ITEM?

A. No. AT&T and BellSouth have agreed to an implementation guide regarding the process by which AT&T can request access to poles, ducts, conduits and rights-of-way. However, until these methods and procedures have been tested and implemented, BellSouth cannot demonstrate compliance with this checklist item.

CHECKLIST ITEM 4 -- LOCAL LOOPS

Q. WHAT ARE LOCAL LOOPS?

A. The local loop is the network element that provides access to the customer location from the BellSouth local office. In most cases, the local loop consists of the wires that go from the main distribution frame ("MDF") in the local telephone office out into the streets to the connection at the network interface device at the customer location. Local loops provide the transmission medium for all local services. Providing unbundled local loops is a new and different process that BellSouth has not yet fully implemented anywhere in its territory.

Q. WHAT IS REQUIRED TO "FULLY IMPLEMENT" THE UNBUNDLING OF LOOPS?

A. Full implementation requires, at a minimum, a fully tested and functioning process for pre-ordering, ordering, provisioning, maintenance and billing. See FCC First Report and Order ¶ 386. These working processes must be in place, adequately tested, and demonstrated to work in a market environment for both new and existing customers. For example, providing a loop for a new customer involves connecting an available loop through the BellSouth office to the CLEC's connections.

However, changing an *existing* customer from BellSouth to the new CLEC requires an alternative process involving different activities. These activities consist of the following:

1. BellSouth must verify the appearance of the customer's loop on its MDF and pre-wire the cross-connection of the existing loop on the MDF to the CLEC's collocated equipment. The existing BellSouth loop must be physically disconnected from BellSouth's switch and extended to the connection for the CLEC's switch. This provides the "new" dial tone from the CLEC's switch. At the scheduled time, BellSouth must remove the loop connection to its switch and terminate the pre-wired cross-connections to the CLEC's collocated equipment.

2. BellSouth must update the translations in the BellSouth switch so that people calling this customer's number will be routed to the new CLEC switch and the customer can receive incoming calls. This requires that the requested interim number portability method be activated to reflect the customer's new location at

the CLEC's switch. BellSouth must coordinate with the CLEC to ensure that the CLEC is prepared to accept the customer's service at the scheduled time or "at the time of routing to the CLEC switch" to prevent an outage of service for the customer.

Unless these tasks are performed at approximately the same time, the customer may have dial tone but may not have full service such as the ability to receive incoming calls. BellSouth has proposed recombination of the unbundled loop and switch in collocated space as a means of switching customer service from BellSouth to a CLEC's network. Mr. Falcone discusses collocation in detail in his testimony.

Q. HAS BELLSOUTH COMPLIED WITH THIS CHECKLIST ITEM?

A. No. AT&T and other CLECs have not yet received nondiscriminatory access to local loops from BellSouth. BellSouth has the ability today to reuse its customer loops and telephone numbers for its customers desiring a change of service. However, the experiences of AT&T in Tennessee, Kentucky and Florida and testimony of other carriers in Georgia, Kentucky, Alabama, Florida, North Carolina, South Carolina, Louisiana, and Mississippi reveal that the methods and procedures for CLECs desiring to provide customers with the same capability clearly are not in place, nor have they been tested to ensure that service changes will happen in the time frames customers expect. BellSouth's systems are the same throughout the region; there is no reason to expect that BellSouth has capabilities in Tennessee that it does not have in other states.

Q. WHAT WOULD BELLSOUTH HAVE TO DO IN ORDER TO COMPLY WITH CHECKLIST ITEM 4?

A. Under Checklist Item 4, BellSouth must provide local loop transmission from the central office to the customer's premises, unbundled from local switching or other services. In addition, § 251(c)(3) requires BellSouth to provide nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms and conditions that are just, reasonable and nondiscriminatory. Nondiscriminatory access means at a minimum, that the terms and conditions are offered equally to all requesting carriers, and where applicable, they must be equal to the terms and conditions under which BellSouth provisions the elements to itself. Further, BellSouth must provide loops at the same intervals in which BellSouth obtains them for itself.

Q. WHY IS INTERVAL PROVISIONING IMPORTANT?

A. In order to provide nondiscriminatory access to unbundled loops, BellSouth's pre-ordering, ordering, provisioning, maintenance, and billing systems must ensure that CLECs can obtain loops at the same intervals that BellSouth obtains them for itself. This would require the Operations Support Systems that AT&T witness, Mr. Bradbury, describes in his testimony. The new carrier must have the ability to provide the service in the same interval to the customer that BellSouth can through its internal processes.

BellSouth has stated all intervals are subject to negotiation, and it promises only to provide the loops subject to projected workload, features and services requested, and equipment availability. BellSouth believes that these items can be determined only when the order is processed. This discriminatory manner of providing provisioning intervals gives BellSouth the ability to determine unilaterally the rate at which its competitors obtain new customers. Such power imposes intolerable burdens on CLECs, and is antithetical to the development of competition. CLECs cannot make provisioning commitments to their customers if BellSouth will not make provisioning commitments to

the CLECs. As discussed in the testimony of Ms. Dailey, the FCC has stated unequivocally that it will look at actual provisioning intervals to determine whether an ILEC is providing nondiscriminatory access to its network.

Q. WHAT HAS BEEN THE EXPERIENCE OF AT&T AND OTHER CLECS IN OBTAINING LOCAL LOOPS FROM BELLSOUTH?

As discussed above, AT&T's has placed orders for unbundled network elements, including local loops, in Tennessee, Kentucky Florida. These orders included the provisioning of the existing customer local loops. BellSouth has failed to provide firm order confirmations in a timely manner, and had not completed all of the orders within the specified time period. BellSouth also has not provide usage billing data required by AT&T.

Other carriers also have experienced problems trying to obtain local loops from BellSouth. The experiences of NextLink here in Tennessee in their attempt to obtain local loops and transfer customer service to their network demonstrate that BellSouth's procedures are inadequate to provide local loops in a nondiscriminatory manner. During 1997 and 1998, NextLink has submitted numerous orders to BellSouth for the transfer of service from BellSouth to NextLink. In processing these orders and physically transferring the loop, BellSouth's processes caused errors on many of these orders that have resulted in service outages for NextLink customers. In October, 1997, NextLink placed orders to transfer service for business and residential customers. BellSouth technicians began the service cutovers, but when technicians attempted to do the switch translations to complete the cutovers it was discovered that BellSouth offices were running "back up tapes" which prohibit any translation activity. As a result the NextLink customers experienced a service outage. In November, 1997, BellSouth technicians

attempted to cut over eleven loops for a new NextLink customer. The technicians completed the first seven lines, but failed to discover the last four lines were wired incorrectly after making the cuts and no dialtone was received from the NextLink switch. Because the technicians' workload prohibited the immediate completion of rewiring, the customer experienced a service outage of four hours for those lines. ACSI experienced similar problems with BellSouth in Georgia in early 1997. One of ACSI's customers who had experienced delays in obtaining service switched back to BellSouth even after BellSouth called and informed the customer that it was BellSouth's problem and not ACSI's. The customer's comment was very telling. He stated that he realized that the problem was not ACSI's fault, but felt that it would never have happened if he had not switched carriers. This kind of experience is often shared with others and may ruin the CLEC's opportunity to compete in the market.

Q. HAS BELLSOUTH ESTABLISHED COMPLIANCE WITH THIS CHECKLIST ITEM?

A. No. Until BellSouth has the methods and procedures in place to provide local loops in a nondiscriminatory and prompt manner to any requesting CLEC that are equal in quality with BellSouth's, BellSouth cannot demonstrate compliance with this checklist item. BellSouth is not able at this time to implement fully the unbundling of loops either under the Statement or the arbitrated agreements referenced in its testimony because the methods and procedures are not in place and tested. In addition, BellSouth does not yet have an Operations Support System to support nondiscriminatory provisioning and maintenance. These critical shortcomings are addressed in the testimony of Mr. Bradbury.

CHECKLIST ITEM 5 -- LOCAL TRANSPORT

Q. WHAT IS LOCAL TRANSPORT?

A. Local transport is the network element that provides the pathways that connect the local network switches. It provides the carriers with the means to transport calls throughout the local calling area. It consists of both dedicated transport and common transport. Dedicated transport is for the exclusive use of one carrier's customers, and common transport is shared with all carriers.

Q. HAS BELLSOUTH DEMONSTRATED THAT IT IS PROVIDING LOCAL TRANSPORT IN ACCORDANCE WITH THE CHECKLIST?

A. No. BellSouth has problems in providing both forms of transport: dedicated transport and common transport. Under Checklist Item 5, BellSouth must provide local transport from the trunk side of a wireline local exchange carrier switch unbundled from switching or other services. BellSouth also must provide nondiscriminatory access to local transport as an UNE in accordance with the requirements of §§ 251(c)(3) and 252(d)(1) of the Act. Section 251(c)(3) requires BellSouth to provide nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms and conditions that are just, reasonable and nondiscriminatory. Nondiscriminatory access means at a minimum, that the terms and conditions are offered equally to all requesting carriers, and where applicable, they must be equal to the terms and conditions under which BellSouth provisions the elements to itself. FCC First Report and Order ¶ 315. BellSouth has not demonstrated that it can provide such access.

Q. PLEASE DESCRIBE BELLSOUTH'S DIFFICULTIES IN PROVIDING LOCAL TRANSPORT, AS REQUIRED BY CHECKLIST ITEM 5.

A. First, BellSouth states that it has been providing dedicated transport because it is comparable to the access transport provided to IXCs for years. It is important to recognize that BellSouth has been providing transport for interLATA and toll calls only and not for local calls.

Second, BellSouth simply cannot claim that the common transport it currently has in its network can be utilized by CLECs without some additional work. BellSouth has not put in place the methods and procedures that provide certainty that common transport can be provided between end offices and billed on a nondiscriminatory basis. For example, as described above, in Florida, following AT&T's attempts to order the UNE platform, BellSouth has not confirmed that AT&T received shared transport or how BellSouth will render a usage sensitive bill for this shared transport. Therefore, BellSouth cannot claim that it has met the requirements of the Act to provide unbundled local transport.

Until BellSouth demonstrates it has put in place the methods and procedures to provide both dedicated and common transport and test its availability, it cannot meet the requirements of this checklist item.

CHECKLIST ITEM 6 -- LOCAL SWITCHING

Q. WHAT IS LOCAL SWITCHING?

A. Local switching is the network element that provides the connections between the customer's loops and others in the network and connects that customer to the dial tone and the features in the switch. It also provides the information that a carrier will use to

bill both the customer for features used in the switch, and other carriers for access to the customer. The local switch is the "brains" of the network.

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. BellSouth's obligation is to provide nondiscriminatory access to local switching as an UNE. BellSouth must provide nondiscriminatory access to network elements in accordance with the requirements of §§ 251(c)(3) and 252(d)(1) of the Act. Section 251(c)(3) requires BellSouth to provide nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms and conditions that are just, reasonable and nondiscriminatory. Nondiscriminatory access means at a minimum, that the terms and conditions are offered equally to all requesting carriers, and where applicable, they must be equal to the terms and conditions under which BellSouth provisions the elements to itself. This means that BellSouth must provide all of the features, functions, capabilities of the switch. FCC First Report and Order ¶ 412.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING LOCAL SWITCHING IN ACCORDANCE WITH THE CHECKLIST?

A. No. There are several unresolved issues related to provision of local switching. I address AT&T's attempts to obtain unbundled local switching below. The requirements of the Act and the policy issues related to unbundled local switching are discussed in detail in the testimony of Mr. Gillan.

Q. WHAT ARE THE UNRESOLVED ISSUES RELATED TO LOCAL SWITCHING, AS REQUIRED BY CHECKLIST ITEM 6?

A. First, BellSouth has delayed the provision of direct routing to AT&T. Direct routing is the ability for AT&T's customers to reach our operator services and directory services when dialing "0" or "411" just as BellSouth customers are able to dial those numbers to reach BellSouth operators and directory assistance. The FCC has ordered ILECs, "to the extent technically feasible, to provide customized routing, which would include such routing to a competitor's operator services and directory assistance platform." FCC First Report and Order ¶ 536. Direct routing is technically feasible and available today. Generally there are two means to provide direct routing: through switch translations using Line Class Codes ("LCCs") or through an Advanced Intelligent Network database solution.

Direct routing is not currently available from BellSouth using either using LCCs or AIN. AT&T met with BellSouth shortly after the Georgia Agreement was signed on February 3, 1997 to request direct routing for our Georgia customers. In Georgia, in order to accomplish direct routing of directory assistance calls, BellSouth requires AT&T to designate a trunk group for those calls. Because AT&T does not have designated trunks for directory assistance, AT&T uses its interconnection trunks for this purpose. In order to supply BellSouth with a trunk group number to direct the calls, AT&T proposed that customized or direct routing of directory assistance calls be performed by converting all 411 calls made by AT&T customers to 900 numbers and then sending them out over AT&T's interconnection trunks. This conversion is necessary for routing of the calls. AT&T has been unable at this time to complete the work necessary to fully use this direct routing option for our customers because BellSouth has failed to complete agreement with AT&T as to the means of implementing this feature for existing AT&T customers.

The second major unresolved issue relating to unbundled local switching is BellSouth's failure to provide access to all of the features of the switch. Digital switches provide approximately 1000 features to residential and business customers. CLECs must be able to use the full capabilities of the switch just as BellSouth does. In January, 1998, AT&T submitted a formal requested to BellSouth to provide a list of the specific features and functions installed in each of BellSouth's switches, including both those features and functions that are operational and those that are available but not operational. BellSouth responded that it was not obligated to provide any information beyond the description of switching features listed in PSIMS, and that any additional requests for features had to be handled through the bona fide request process. On March 5, 1998, BellSouth wrote to AT&T and stated that the issue of availability of switching features was being discussed by AT&T and BellSouth negotiators. BellSouth must demonstrate that it can provide the full capability of the switch, including the ability for a CLEC to:

- Activate and change features,
- Define the translations for our customers,
- Provide usage billing which includes identification of the Carrier Identification Code or CIC code of the Interexchange carrier for a toll call and the billing of access charges.

A third major problem is AT&T's attempts to obtain billing information for local switching from BellSouth. As I stated earlier, BellSouth must provide usage billing, which includes identification of the Carrier Identification Code of the interexchange carrier for billing of toll calls and access charges. In Florida, BellSouth flatly refused to

provide billing information after AT&T ordered switch ports. BellSouth stated that such purchases were resale orders, and BellSouth had no obligation to provide billing information.

The fact is that none of these items are anywhere near enough to completion to ensure that they can be made available to AT&T.

CHECKLIST ITEM 7 -- 911/E911 SERVICES, DIRECTORY ASSISTANCE, AND OPERATOR SERVICES

Q. WHAT ARE 911/E911 SERVICES, DIRECTORY ASSISTANCE AND OPERATOR SERVICES?

A. 911/E911 services, Directory Assistance, and Operator services are used by all consumers for access to emergency agencies, directory assistance service for telephone number information on all subscribers, and operator service for access to operators, calling cards, collect calls and other customer service applications.

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. Under Checklist Item 7, BellSouth must provide nondiscriminatory access to 911/E911 services, directory assistance services and operator call completion services. Nondiscriminatory access means that at a minimum, the terms and conditions are offered equally to all requesting carriers, and, where applicable, must be equal to the terms and conditions under which BellSouth provisions the elements to itself. 47 U.S.C. § 251(c)(3). The FCC has stated that the RBOC must provide competitors access to 911 and E911 services in the same time and manner that the RBOC obtains such access.

Ameritech Order ¶ 256. RBOCs also must provide access to directory assistance and operator services equal in quality to the access the RBOC provides itself.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING 911/E911 SERVICES, DIRECTORY ASSISTANCE AND OPERATOR CALL COMPLETION IN ACCORDANCE WITH CHECKLIST ITEM 7?

A. No. Although nondiscriminatory access is technically feasible and can be provided by direct routing from the switch or other means, BellSouth continues to brand these services as its own even for AT&T customers. Branding is important to consumers because it eliminates customer confusion. Accordingly, branding aids in achieving parity, making it possible for consumers to reap the benefits of effective competition. See 47 C.F.R. § 51.613(c). The FCC specifically noted that "brand identification is critical to reseller attempts to compete with ILECs and will minimize consumer confusion." FCC First Report and Order ¶ 971. When customers dial "411" today in Tennessee, both the BellSouth customer and the CLEC customer will hear the BellSouth brand. In order for these services to be nondiscriminatory, the CLEC's customer must hear the brand of its own provider, or all customers must hear no brand identification at all.

On the issue of selective routing, the method used by BellSouth to route CLEC calls to CLEC platforms, BellSouth notified AT&T in July, 1997 that AT&T must supply for each Local Service Request the BellSouth-developed selective routing codes in order for BellSouth to provide selective routing for AT&T customers. Such a requirement is unreasonable and impractical. Because these codes are developed and maintained by BellSouth, it is appropriate for BellSouth to determine which codes apply to specific

AT&T service orders. This requirement also violates the standards established by the national Ordering and Billing Forum.

CHECKLIST ITEM 9 -- TELEPHONE NUMBERS

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. BellSouth is the administrator of telephone numbers in its service area. These numbers include both the local exchange numbers for AT&T's switches, and the individual numbers for AT&T customers. All customers of CLECs should have nondiscriminatory access to telephone numbers, as compared to each other and BellSouth. 47 C.F.R. § 51.217(c)(1). Under Checklist Item 9, BellSouth must provide nondiscriminatory access to telephone numbers for assignment to other carriers' telephone exchange service customers until telecommunications numbering administration guidelines, plans or rules are established, after which date BellSouth must comply with such guidelines.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING TELEPHONE NUMBERS IN ACCORDANCE WITH THE CHECKLIST?

A. No. Methods and procedures for assignment of telephone numbers in place that apply equally to everyone including BellSouth must be established and confirmed to work in a competitive environment. In addition, Mr. Bradbury discusses in his testimony the impact of the lack of electronic interfaces on BellSouth's ability to assign telephone numbers in a nondiscriminatory manner, and BellSouth's failure to provide the blocks of numbers promised in its interconnection agreement with AT&T.

CHECKLIST ITEM 10 -- SIGNALING AND DATABASES

Q. WHAT ARE SIGNALING AND DATABASES?

A. Unbundled signaling and databases are necessary for a telecommunications carrier with its own switching facilities to access the ILEC's SS7 signaling network for originating and completing calls to each other's network. The signaling elements are the signaling links, the signal transfer points, and the databases used for routing of calls. They comprise a "mini network" that connects the networks and provides the intelligence for call routing and completion.

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. Under Checklist Item 10, BellSouth must provide nondiscriminatory access to databases and associated signaling necessary for call routing and completion. BellSouth must demonstrate that it provides such access in the same manner that it provides access to itself. This includes access to signaling networks, including signaling links and signaling transfer points, which give the requesting carrier the ability to send signals between its switches, its switches and BellSouth's switches, and its switches and third party networks connected to BellSouth's signaling network. FCC First Report and Order ¶¶ 479-83.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING SIGNALING AND DATABASES IN ACCORDANCE WITH CHECKLIST ITEM 10?

A. No. Here again, BellSouth has not provided the methods and procedures that show nondiscriminatory access. Furthermore, the parties have not completed testing necessary to determine BellSouth's ability to provide non-discriminatory access. For example, testing is required to determine how the parties will provide access to its Advanced Intelligent Network ("AIN"). Before this testing can start, the parties must first agree on

testing processes. The importance of the testing process is illustrated by the AIN study performed by BellSouth and AT&T in November 1995. Although the parties both participated in the testing, they came to radically different conclusions about the results of the tests, reinforcing the need for prior agreement on how testing will be performed and analyzed. Once the process is established, testing and operational experience will demonstrate if there are problems to be resolve. At this point, neither this Authority nor CLECs can determine whether BellSouth will be able to comply with this checklist item.

CHECKLIST ITEM 11 -- NUMBER PORTABILITY

Q. WHAT IS LOCAL NUMBER PORTABILITY?

A. Local Number Portability ("LNP") as used in this testimony refers to "service provider portability." Service provider portability allows a customer to change local service providers while retaining his or her telephone number at the same location and the same service without impairment of functionality. Because historically there has been only one provider serving a local exchange area, there has not been a need, until now, for LNP. The current network architecture therefore does not allow a customer to change his or her local service provider and retain the same number. This lack of LNP presents a significant barrier to the introduction and growth of local exchange competition.

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. Under Checklist Item 11, BellSouth must provide interim number portability through remote call forwarding, direct inward dialing trunks, or other comparable arrangements, with as little impairment of functioning, quality, reliability, and convenience as possible.

47 C.F.R. § 52.27; FCC Number Portability First Report and Order ¶¶ 110-16. BellSouth also must comply with the implementation schedule established by the FCC with regard to long-term number portability. 47 C.F.R. § 52.23.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING NUMBER PORTABILITY IN ACCORDANCE WITH CHECKLIST ITEM 11?

A. No. While BellSouth has made progress, it has not yet met its LNP obligations under § 271 of the Act. See In the Matter of Telephone Number Portability, FCC Order No. 96-286, First Report and Order (July 2, 1996.) ("Number Portability Order"). Until such time as permanent LNP is offered, BellSouth must offer interim number portability ("INP") solutions which provide as little impairment of features, functioning, quality and inconvenience as possible. BellSouth offered to provide Remote Call Forwarding ("RCF") and Direct Inward Dialing ("DID") in Tennessee as INP solutions.

Remote Call Forwarding and Direct Inward Dialing have been used only recently to provide number portability in situations where customers change carriers. In the past, these methods were used only for BellSouth customers who remained BellSouth customers but wanted to forward their number to a new location. The Act requires BellSouth to provide number portability in situations where customers change carriers. There are several key differences:

- Carriers will be ordering number portability, not customers;
- New switches and network arrangements must be put in place by the CLECs that are not there today; and

- BellSouth must implement and test billing methods and procedures to make LNP available.

Q. OTHER THAN RCF AND DID AS OFFERED IN THE STATEMENT, ARE THERE ANY OTHER SOLUTIONS REQUIRED TO MEET THE STANDARD OF NONDISCRIMINATORY ACCESS?

A. Yes. AT&T requested in negotiations, and BellSouth agreed to provide, Route Indexing - Portability Hub ("RI-PH") as the INP solution for customers with large quantities of telephone numbers in Tennessee. RCF and DID, are not sufficient to address the needs of these customers. Retaining their existing telephone numbers through an INP solution that is invisible to the end user is extremely important to these customers. Only the most effective solutions that allow competitors to serve all customers are nondiscriminatory. If RCF and DID are the only available means of INP, many of these customers with large quantities of numbers likely will refuse to switch CLECs until a permanent number portability solution becomes available.

To meet the needs of these customers, an INP method is needed that conserves the use of telephone numbers so as to avoid number exhaust and resulting area code splits. RI-PH is the most effective INP solution for these customers and is more efficient in meeting their requirements because of the large quantity of telephone numbers and large number of incoming calls these customers will receive. Tests confirmed RI-PH was technically feasible. BellSouth has agreed to provide RI-PH to AT&T. However, CLECs ordering from the Statement are limited to RCF and DID, unless they make a request through the BFR process. Since BellSouth already had agreed to provide this solution to AT&T, BellSouth also should include RI-PH as another form of INP in its Statement.

In Georgia for our AT&T Digital Link customers, BellSouth also has not provided billing information to AT&T to verify the successful completion of this number portability test. Without billing information, AT&T cannot confirm the successful porting of its AT&T Digital Link numbers. This two-month delay in resolving something BellSouth has agreed to provide demonstrates the difficulties CLECs will encounter when implementing signed and commission-approved interconnection agreements. AT&T and BellSouth have not yet tested porting of AT&T Digital Link numbers in Tennessee, and must complete these tests before any assessment can be made.

Q. HAS BELLSOUTH ESTABLISHED COMPLIANCE WITH THIS CHECKLIST ITEM?

A. No. Until BellSouth has the methods and procedures in place to provide any requesting CLEC with number portability either through a permanent or interim solution, it cannot meet this checklist item. AT&T must have confidence that LNP will work and will be implemented with as little impairment of features, functioning, quality, and inconvenience as possible. Until the industry solution for permanent number portability is available in Tennessee, AT&T will have to rely on BellSouth's network to provide interim number portability for our customers. As there is no permanent solution currently available, and BellSouth has not demonstrated yet that it can provide a nondiscriminatory interim solution, BellSouth cannot claim that it has complied with this checklist item.

CHECKLIST ITEM 13 -- RECIPROCAL COMPENSATION

Q. WHAT IS RECIPROCAL COMPENSATION?

A. Reciprocal compensation is the means that local carriers use to compensate each other for the costs to interconnect and handle the calls from the other's network. There are various industry means to do this including: meet point billing; bill and keep; and multiple bill, single tariff.

Q. WHAT MUST BELLSOUTH DO TO COMPLY WITH THIS CHECKLIST ITEM?

A. Under Checklist Item 13, BellSouth must provide reciprocal compensation arrangements in accordance with the requirements of § 252(d)(2). Section 252(d)(2) defines just and reasonable reciprocal compensation as providing for (i) the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; and (ii) costs on the basis of a reasonable approximation of additional costs of terminating such calls.

Q. HAS BELLSOUTH DEMONSTRATED IT IS PROVIDING THE MEANS FOR RECIPROCAL COMPENSATION IN ACCORDANCE WITH THE CHECKLIST?

A. No. Until BellSouth has the methods and procedures for billing in place, it has not complied with this checklist item. This issue was discussed above in relation to interconnection and access to UNEs. The 87 binders do not even address this checklist item. Until BellSouth demonstrates that it can provide usage sensitive billing for UNEs, BellSouth will be unable to meet this checklist item.

Q. PLEASE SUMMARIZE YOUR TESTIMONY

A. All of the requirements of §§ 251, 252, and 271 are important to local competition and all of them must be satisfied. In order to meet these requirements BellSouth first must take several steps.

BellSouth first must have in place the instructions, or methods and procedures for its personnel to provide the required checklist items in a nondiscriminatory manner. These instructions or methods and procedures are not the equivalent of methods and procedures that BellSouth has in place currently. Providing services to Interexchange carriers and competing access providers is not the same as providing access to new local market entrants. Bell South must develop new methods and procedures that address all of the detailed steps that will be necessary to make the statutorily required items available.

Second, BellSouth has to test these methods and procedures to demonstrate BellSouth actually can provide the items, in real time. BellSouth must perform internal testing, testing with other carriers, and third party testing to determine that its methods and procedures do work.

Third, BellSouth must demonstrate that it actually is providing the items on request. At this point, BellSouth has not even identified the Statement or Interconnection Agreement on which it intends to rely in seeking preapplication approval from this Authority, much less pointed to operational experience of any consequence to demonstrate that it has complied with the requirements of §§ 251, 252 and 271.

Fourth, BellSouth must have in place the performance measurements that will demonstrate that the access BellSouth provides to its network is nondiscriminatory.

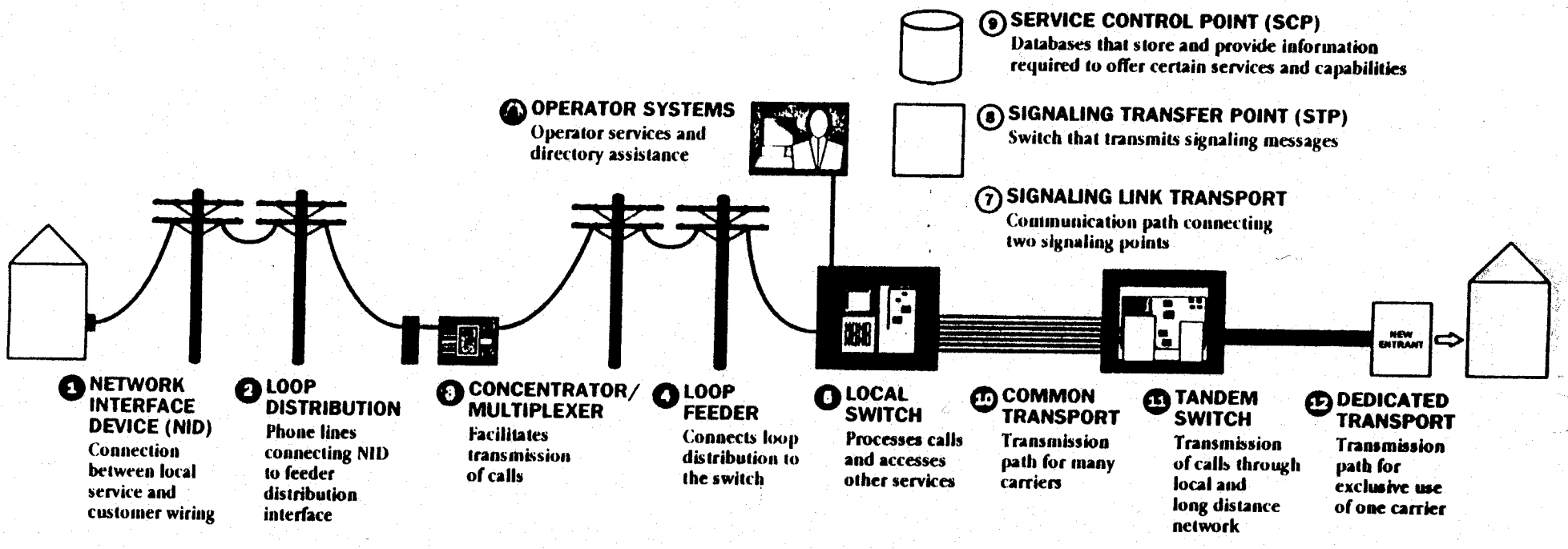
Initially, new entrants such as AT&T must purchase most of the services, network elements, and interconnection necessary to provide local exchange service exclusively from BellSouth. New entrants, therefore, cannot provide high quality services to consumers unless BellSouth first provides high quality services to new entrants. Without performance measurements, there is no way to determine that BellSouth complies with the requirements of the Act.

Premature approval of BellSouth's petition will harm the telecommunications marketplace. BellSouth today enjoys tremendous advantages in the delivery of service to customers in Tennessee through its control of the local network. Additionally, while BellSouth may support current industry efforts to resolve these issues, it will have less incentive to do so if it is allowed to provide interLATA services before it has complied with §§ 251 and 252(d) and the checklist.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

The Unbundled Network Elements



BEFORE THE
TENNESSEE REGULATORY AUTHORITY

TESTIMONY OF
JAY M. BRADBURY
ON BEHALF OF
AT&T COMMUNICATIONS OF THE SOUTH
CENTRAL STATES, INC.

IN RE: BELLSOUTH'S ENTRY INTO LONG DISTANCE UNDER SECTION 271

DOCKET NO. 97-00309

March 27, 1998

AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, INC.

TESTIMONY OF JAY M. BRADBURY

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 97-00309

MARCH 27, 1998

BACKGROUND

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is Jay M. Bradbury. My business address is 1200 Peachtree Street, Atlanta, Georgia.

Q. PLEASE DESCRIBE YOUR CURRENT POSITION AND RESPONSIBILITIES.

A. I am employed by AT&T as a Manager in the Local Infrastructure and Access Management Organization. Since August, 1995, I have been involved in the negotiation and implementation of interfaces for operational support systems necessary to support AT&T's entry into the local telecommunications market.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I graduated with a Bachelor of Arts degree in History from The Citadel in 1966. I have taken additional undergraduate and graduate courses at the University of South Carolina and North Carolina State University in Business and Economics. In 1987 and 1988, I participated in Advanced Management Programs at Rutgers University and the University of Houston.

I began my AT&T career in 1970 as a Chief Operator with Southern Bell's Operator Services Department in Raleigh, North Carolina. From 1972 through 1987, I held various positions within Southern Bell's (1972 - 1984) and AT&T's (1984 - 1987) Operator Services Departments where I was responsible for the planning, engineering, implementation and administration of personnel, processes and network equipment used to provide local and toll operator services and directory assistance services in North Carolina, South Carolina, Kentucky, Tennessee and Mississippi. In 1987, I transferred to AT&T's External Affairs Department in Atlanta, Georgia, where I was responsible for managing AT&T's needs for access network interfaces with South Central Bell, including the resolution of operational performance, financial and policy issues. From 1989 through November 1992, I was responsible for AT&T's relationships (including the negotiation and administration of billing and marketing contracts, card honoring contracts, facility contracts, and the support of sales of Network Systems products) with Independent Telephone Companies within the South Central Bell States and Florida. From November 1992 through April 1993, I was a Regulatory Affairs Manager in the Law and Government Affairs Division responsible for the analysis of industry proposals before regulatory bodies in the South Central States to determine their impact on AT&T's ability to meet its customers needs with services that are competitively priced and profitable. In April of 1993, I transferred to the Access Management Organization within AT&T's Network Services Division as a Manager - Access Provisioning and Maintenance with responsibilities for on-going management of processes and structures in place with Southwestern Bell to assure that their access provisioning and maintenance performance met the needs of AT&T's Strategic Business Units.

Q. WHAT IS THE SCOPE OF YOUR TESTIMONY?

A. My testimony examines whether the operational support system ("OSS") interfaces offered through BellSouth's Statement of Generally Available Terms ("SGAT") comply with the Telecommunications Act of 1996 (the "Act") and its implementing regulations. In particular, I examine whether such interfaces provide CLECs with nondiscriminatory access to BellSouth's OSS functions.

BellSouth's OSS interfaces are discriminatory. With few exceptions, the BellSouth interfaces fail to provide CLECs with the same capabilities BellSouth possesses. For example, most of BellSouth's interfaces require more human intervention to perform OSS functions than is required when BellSouth uses its own OSS to perform the same or equivalent functions. Human intervention increases work time, error rates, and costs for CLECs. In addition, BellSouth's proposed interfaces cannot perform the same functions as BellSouth's internal OSS and their capacity is questionable. Furthermore, BellSouth has not provided adequate technical data regarding its proposed interfaces, which often do not comport with existing and emerging industry standards, and that has hindered, if not prevented, CLECs from developing their own internal systems and processes that would be compatible with BellSouth's proposed interfaces.

BellSouth also has not provided sufficient empirical evidence to support its claim that the proposed interfaces actually provide nondiscriminatory access to BellSouth's OSS. In short, BellSouth has not demonstrated that it has met the requirements of the Act. For these reasons and others discussed below, the Tennessee Regulatory Authority ("TRA") should find that BellSouth's OSS interfaces, as they exist today, do not comply with the requirements of Section 251 of the Act or the competitive checklist under Section 271 of the Act.

OSS REQUIREMENTS UNDER THE ACT

Q. WHAT ARE OPERATIONAL SUPPORT SYSTEMS ("OSS")?

A. Operational support systems are computer-based systems and databases that telecommunications carriers use to perform essential customer and business support functions, including pre-ordering, ordering, provisioning, maintenance & repair, and billing. Computer-based OSS enable telecommunications carriers to transmit data electronically between different systems, thereby maximizing efficiency and effectiveness in the performance of these essential support functions. In addition to computer-based systems and databases, OSS also include any necessary manual processes performed by personnel located in various types of "centers" in the absence of a computer-based process.

Without electronic OSS interfaces and efficient manual processing centers, effective competition within the local telecommunications market will not develop. Exhibit JMB-1 is a copy of the handouts I used during the OSS Workshop on March 5 and 6 to discuss the role of OSS in the development of effective local competition.

Q. HAS THE FEDERAL COMMUNICATIONS COMMISSION ("FCC") ADDRESSED ACCESS TO OSS?

A. Yes. The FCC "conclude[d] that OSS and the information they contain fall squarely within the definition of 'network element' and must be unbundled upon request under section 251(c)(3) . . .." FCC Order No. 96-325 ¶ 516 (Aug. 8, 1996) (hereinafter "FCC Interconnection Order"); FCC Order No. 97-418 ¶ 83 (Dec. 24, 1997) (hereinafter "FCC South Carolina Order"). In addition, the FCC concluded that OSS functions are subject to the duty imposed by Section 251(c)(3) on incumbent local exchange carriers to provide

nondiscriminatory access to network elements, and the duty imposed by Section 251(c)(4) to provide resale services under just, reasonable, and nondiscriminatory conditions. FCC Interconnection Order ¶ 517; FCC South Carolina Order ¶ 83. The FCC recognized a "competing carrier that lacks access to operations support systems equivalent to those the incumbent LEC provides to itself, its affiliates, or its customers, 'will be severely disadvantaged, if not precluded altogether, from fairly competing.'" FCC South Carolina Order ¶ 82; see FCC Interconnection Order ¶ 518.

Q. HAS THE FCC EXPLAINED WHAT CONSTITUTES NONDISCRIMINATORY ACCESS?

A. Yes. In its Interconnection Order, the FCC found that nondiscriminatory access "necessarily includes access to the functionality of any internal gateway systems the incumbent employs in performing [pre-ordering, ordering, provisioning, maintenance and repair, and billing] functions for its own customers." FCC Interconnection Order ¶ 523. The FCC defined "internal gateway system" as "any electronic interface the incumbent LEC has created for its own use in accessing support systems for providing pre-ordering, ordering, provisioning, repair and maintenance, and billing." FCC Interconnection Order ¶ 523, n. 1274. Examples of internal gateway systems that BellSouth uses in Tennessee are Regional Negotiation System ("RNS") and Service Order Negotiation System ("SONGS"). Calhoun Direct at 22. Accordingly, BellSouth must provide CLECs with nondiscriminatory access to the functionalities of RNS, SONGS, and other internal gateway systems.

The FCC provided greater detail regarding the incumbent LEC's obligation to provide nondiscriminatory access to OSS functions in its various orders on Section 271 applications from BellSouth and other RBOCs. The FCC explained that incumbent LECs must provide access to OSS functions that sufficiently supports each of the three modes

of competitive entry strategies established by the Act (interconnection, unbundled network elements, and services offered for resale) and must not favor one strategy over another. FCC Order 97-298 ¶ 133 (Aug. 19, 1997) ("FCC Ameritech Order"). Incumbent LECs, moreover, have an obligation to provide interfaces that allow competing carriers of all sizes a meaningful opportunity to compete in the local exchange market. FCC Ameritech Order ¶ 220. In other words, an incumbent LEC must provide multiple interfaces to competing carriers unless a single interface is economically efficient to use by both larger and smaller CLECs. FCC Ameritech Order ¶ 220, n. 566.

The FCC found that "[f]or those OSS functions that are analogous to OSS functions that an incumbent LEC provides to itself -- including pre-ordering, ordering and provisioning for resale services -- a BOC must offer access to competing carriers equivalent to the access the BOC provides itself." FCC South Carolina Order ¶ 98; see FCC Ameritech Order ¶ 139. The FCC also found that "access to OSS functions must be offered such that competing carriers are able to perform OSS functions in 'substantially the same time and manner' as the BOC" FCC South Carolina Order ¶ 98.

In addition, the FCC found that "for those OSS functions that have no retail analogue, such as ordering and provisioning of unbundled network elements, a BOC must offer access sufficient to allow an efficient competitor a meaningful opportunity to compete." FCC South Carolina Order ¶ 98; see FCC Ameritech Order ¶ 141.

Q. DOES NONDISCRIMINATORY ACCESS TO OSS RELATE TO SECTION 252 AND SECTION 271 OF THE ACT?

A. Yes. Under Section 252(f)(2) of the Act, a State commission may not approve an Statement of Generally Available Terms ("SGAT") unless the SGAT complies with Section 251, Section 252(d), and the respective implementing regulations. As explained

above, the FCC regulations require a Regional Bell Operating Company ("RBOC") to provide nondiscriminatory access to its OSS in order to comply with Section 251(c)(3) regarding network elements, and Section 251(c)(4) regarding resale. FCC Order ¶ 525. Accordingly, State commissions may not approve an SGAT that does not provide for nondiscriminatory access to the RBOC's OSS.

Under Section 271, the FCC may not approve an RBOC's application under either Track A or Track B unless that RBOC complies with the competitive checklist. The FCC has concluded that an examination of a BOC's OSS performance is necessary to evaluate compliance with section 271(c)(2)(B)(ii) and (xiv)" regarding nondiscriminatory access to network elements and the resale of telecommunication services without discriminatory or unreasonable limitations or conditions. FCC Ameritech Order ¶ 83. The FCC further concluded that an "examination of a BOC's OSS performance is . . . integral to our determination whether a BOC is offering all of the items contained in the competitive checklist." FCC Ameritech Order ¶ 84.

Q. DID THE FCC EXPLAIN ITS APPROACH TO ANALYZING NONDISCRIMINATORY ACCESS TO OSS FUNCTIONS?

A. Yes. The FCC concluded that the BOC has the evidentiary burden to demonstrate that it is providing nondiscriminatory access to all OSS functions. FCC's Ameritech Order ¶ 204. To analyze the evidence, the FCC adopted a two-part inquiry. Under the first part of the inquiry, the FCC must evaluate "whether the BOC has deployed the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions and whether the BOC is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them." FCC South Carolina Order ¶ 96; FCC Ameritech Order ¶ 136. As part of that first evaluation, the FCC must determine whether the BOC has deployed sufficient electronic and manual interfaces to

allow CLECs to access all of the necessary OSS functions. FCC Ameritech Order ¶ 137. The FCC also must determine whether the BOC has provided CLECs with: (a) technical specifications necessary to integrate the BOC's OSS with the CLEC's OSS; (b) information necessary to format and process electronic transactions to flow through BellSouth's OSS (e.g., interfaces, transmission links, and legacy systems) quickly and efficiently; and (c) internal business rules and ordering codes necessary to place orders efficiently. FCC South Carolina Order ¶ 111; FCC Ameritech Order ¶ 137. In addition, the FCC must determine whether the BOC's OSS are designed to accommodate both the current demand and projected demand of competing carriers for access to OSS functions. FCC Ameritech Order ¶ 137.

Under the second part of the inquiry, the Commission will examine operational evidence to determine whether OSS interfaces are operationally ready for commercial usage. FCC South Carolina Order ¶ 96; FCC Ameritech Order ¶ 138. The most probative evidence is actual commercial usage. FCC South Carolina Order ¶ 97; FCC Ameritech Order ¶ 138. The FCC found that performance measures with which to compare BOC retail and wholesale performance, and to measure exclusively wholesale performance, are a necessary prerequisite to demonstrating compliance with the FCC's nondiscrimination and "meaningful opportunity to compete" standards. FCC's Ameritech Order ¶ 204. Clear and concise performance measurements are critical to ensuring that competing carriers are receiving the quality of access to which they are entitled. FCC's Ameritech Order ¶ 209. A BOC, moreover, must provide supporting operational data even where the BOC currently does not measure certain performance characteristics for its retail operations. FCC's Ameritech Order ¶ 210.

The FCC stated that it may consider other indicators of performance that are less reliable than operational evidence, such as carrier-to-carrier testing, independent third party

testing, and internal testing -- but only if the BOC can demonstrate that competing carriers are not currently using a particular OSS function because of a business decision rather than the lack of practical availability of the function. FCC's Ameritech Order ¶ 138. The persuasiveness of third party review is dependent upon the conditions and scope of that review. FCC's Ameritech Order ¶ 216. Third party reviews, however, should encompass the entire obligation of the incumbent LEC to provide nondiscriminatory access and, where applicable, should consider the ability of actual competing carriers in the market to conduct business using the incumbent's OSS access. FCC Ameritech Order ¶ 216.

Q. WHAT ARE THE CHARACTERISTICS OF AN INTERFACE THAT PROVIDES NONDISCRIMINATORY ACCESS TO AN INCUMBENT LEC'S OSS?

A. For an interface to satisfy the Act's nondiscrimination requirements, the interface must demonstrate, at a minimum, the characteristics described below. See also Exhibit JMB-2. Appropriate operational data and performance measurements are necessary to determine whether the proposed OSS interfaces meet these five characteristics. See FCC Ameritech Order ¶¶ 138, 141-42, 204-213. An interface with these characteristics will minimize the differences in OSS functional capabilities between the incumbent LEC and the CLEC:

> **Electronic** -- The interface must be a machine-to-machine interface (computer application program to computer application program) that provides fully electronic interaction between the incumbent LEC's OSS and the CLEC's OSS. FCC South Carolina Order ¶¶ 152-166. A machine-to-machine interface decreases the time, reduces the cost, and improves the accuracy of a CLEC's performance of OSS functions.

Functionality -- The interface must provide all CLECs with the capability to perform the same OSS functions with at least the same level of quality, efficiency, and effectiveness that the incumbent provides to itself. FCC Interconnection Order ¶ 523; FCC South Carolina Order ¶ 98; FCC Ameritech Order ¶ 139. For those functions that do not have a retail analogue, the incumbent LEC must offer access to such OSS functions sufficient to allow an efficient competitor a meaningful opportunity to compete. FCC South Carolina Order ¶ 98.

Documented -- The interface must be documented both adequately and sufficiently in advance to allow CLECs a reasonable opportunity to develop and deploy their own necessary systems, work processes, and employee training to use the interface. FCC South Carolina Order ¶ 111; FCC Ameritech Order ¶¶ 137, 215. Properly documented interfaces will facilitate the completion of those necessary tasks in a manner that provides CLECs a meaningful opportunity to compete.

Capacity -- The interface must have the capacity to meet combined market volumes of all CLECs with response times that are equivalent to those the incumbent LEC provides itself. FCC Ameritech Order ¶¶ 137, 194. Sufficient capacity will ensure that the OSS interfaces do not become a bottleneck that impedes a CLECs ability to compete.

Standards -- The interface must comply with existing telecommunications industry standards or ease the transition to evolving standards regarding:

- What is to be communicated (message protocol component)
- Specific information to be communicated (data elements)
- Language and Rules for Communication (communication protocols).

The use of industry standards is the most appropriate solution to meet the needs of a competitive local exchange market. FCC's Ameritech Order ¶ 217. The lack of industry standards, however, does not excuse an incumbent LEC from meeting its obligation to provide nondiscriminatory access to OSS functions. FCC's South Carolina Order ¶ 121, n. 362.

PROPOSED INTERFACES TO BELLSOUTH'S OPERATIONAL SUPPORT SYSTEMS

SYSTEMIC PROBLEMS

Q. ONE OF THE CHARACTERISTICS OF A NONDISCRIMINATORY INTERFACE IS THAT THE INTERFACE IS ELECTRONIC. ARE BELLSOUTH'S INTERFACES FULLY ELECTRONIC?

A. No, because BellSouth's OSS interfaces do not provide the full range of required integration. Integration is the capability to combine OSS functions into a unified process. Integration can be internal or external. (Exhibit JMB-3 illustrates the concepts discussed below.) Integration is important because it minimizes manual processes that add costs, delays, and errors in performing OSS functions. With integration, consumers will receive higher quality services at a lower price.

Internal integration refers to the capability to combine OSS functions within the incumbent LEC or the CLEC. Integrating pre-ordering and ordering functions is an example of internal integration.

External integration refers to the capability to connect the incumbent LEC's OSS with the CLEC's OSS through machine-to-machine interfaces. The EDI Ordering interface is an

example of external integration because it allows a CLEC's OSS to communicate electronically with BellSouth's OSS for the purpose of ordering certain services. External integration generally enables internal integration, but not vice versa. For example, LENS is internally integrated but is not capable of external integration. Put another way, BellSouth integrates the pre-ordering and ordering functions of LENS, but LENS is a human-to-machine interface.

The FCC is quite clear that an RBOC must provide OSS interfaces that are externally integratable. A debate exists, however, on whether the FCC requires RBOCs to perform internal integration itself (i.e., provide an integrated interface like LENS), provide interfaces that a CLEC can integrate internally (i.e., provide an integratable pair of interfaces like EC-Lite pre-ordering with EDI ordering), or both. The Application Programming Interface ("API") that BellSouth is developing could be both integrated and externally integratable. An interface like API would provide the best of both worlds. CLECs of all sizes could choose to perform the integration itself to satisfy its own unique requirements or choose to avoid the significant expense associated with customized integration and use the BellSouth-integrated interface.

The FCC requires incumbent LECs to provide access to the functionality of any internal gateway system that the incumbent uses for its own customers. FCC Interconnection Order ¶ 523; FCC Ameritech Order ¶ 134, n. 325. BellSouth's internal gateway systems (RNS and SONGS) have an integrated functionality. Consequently, BellSouth has to provide access to that functionality. In support of its Section 271 application for South Carolina, BellSouth contended that the integration of pre-ordering and ordering is the responsibility of the CLEC. FCC South Carolina Order ¶ 153. The FCC did not express any opinion on the validity of BellSouth's contention. Rather, the FCC evaluated the validity of BellSouth's claim that its interfaces were integratable. FCC South Carolina

Order ¶ 152-166. The FCC found that BellSouth had impeded CLEC's efforts to integrate LENS pre-ordering with EDI ordering and, therefore, did not provide CLECs with nondiscriminatory access to OSS functions for pre-ordering.

While the FCC has not ruled directly on the issue of integrated v. integratable interfaces, the FCC has stated that incumbent LECs have an obligation to provide interfaces that allow competing carriers of all sizes -- large and small -- a meaningful opportunity to compete in the local exchange market. FCC Ameritech Order ¶ 220. Incumbent LECs have an affirmative obligation to provide multiple interfaces if a single interface is not economically efficient to use by both larger and smaller CLECs. FCC Ameritech Order ¶ 220. Accordingly, BellSouth has an affirmative obligation to provide an interface that integrates pre-ordering and ordering functions if it is not economically efficient for smaller CLECs to perform the internal integration.

Q. DOES BELLSOUTH INTEGRATE ANY PRE-ORDERING INTERFACES WITH ITS EDI ORDERING INTERFACE?

A. No. BellSouth integrates the pre-ordering and ordering functions of LENS, but LENS is not integrated with the EDI ordering interface. Unlike the EDI ordering interface, however, BellSouth does not claim that LENS ordering interface is nondiscriminatory. An integrated, discriminatory interface does not satisfy BellSouth's obligation to provide nondiscriminatory access to OSS functions.

Q. DOES BELLSOUTH PROVIDE A PRE-ORDERING INTERFACE THAT A CLEC CAN INTEGRATE WITH THE EDI ORDERING INTERFACE?

A. Yes. A CLEC could integrate the EC-Lite pre-ordering interface with the EDI ordering interface. However, it probably is not economically efficient at this time for many

CLECs to integrate EC-Lite with EDI because EC-Lite will not be an industry standard interface.

BellSouth claims that CLECs can integrate its so-called LENS-CGI with the EDI ordering interface, but LENS-CGI will not provide CLECs with nondiscriminatory access. As a preliminary matter, the LENS-CGI specification does not appear to have all of the required information to perform the necessary development effort and BellSouth has not kept that specification current. In any event, the LENS-CGI specification will not provide nondiscriminatory access. In September 1996, BellSouth proposed a CGI specification that would not require the use of the underlying Hyper Text Markup Language ("HTML") presentation data stream. BellSouth, however, subsequently changed its mind and chose to use HTML presentation as part of the data delivery mechanism for LENS-CGI. The FCC has found that an integration method that involves HTML presentation data stream would not provide nondiscriminatory access. FCC South Carolina Order ¶ 153, 162-64. HTML presentation forces CLECs to proceed through each of the LENS presentation screens, just as a person using the system would, rather than being able to use the data independently of BellSouth's screens as the original CGI proposal would have allowed. This results in a slower, less efficient integration than is available to BellSouth for its retail operations. Because it is slower and less efficient, the so-called LENS-CGI will not provide nondiscriminatory access to BellSouth's OSS functions.

Q. DOES BELLSOUTH PROVIDE ANY INTERFACES THAT ARE EXTERNALLY INTEGRATABLE?

A. Yes. The EC-Lite pre-ordering interface is externally integratable, but as stated above it is doubtful that it is economically efficient for many CLECs to integrate EC-Lite. The EDI ordering interface is externally integratable. In addition, the Electronic Bonding

Interface ("EBI") for trouble reporting is externally integratable. Conversely, the LENS interface (pre-ordering and ordering) and the Trouble Analysis and Facilitation Interface ("TAFI") for maintenance and repair are not externally integratable.

Q. ONE OF THE CHARACTERISTICS OF A NONDISCRIMINATORY INTERFACE IS THAT THE INTERFACE IS DOCUMENTED. ARE BELLSOUTH'S INTERFACES SUFFICIENTLY DOCUMENTED?

A. No. The FCC has concluded that incumbent LECs must provide CLECs with: (1) the specifications necessary to instruct competing carriers on how to modify or design their systems to communicate with the RBOC's interface and legacy systems; (2) all of information necessary to format and process their electronic requests so that these requests flow through the interfaces, transmission links, and legacy systems as quickly and efficiently as possible; (3) any internal business rules, including ordering codes, that the competing carriers need to place orders through the system efficiently; and (4) service guides, cooperative training and consultation with competing carriers, and information regarding system changes. FCC Ameritech Order ¶ 137, 215. BellSouth has not fully met those requirements.

BellSouth has made considerable progress in providing an initial distribution of the bulk of the information that CLECs require. That initial production of the necessary information, however, is only half the battle. The other half of the battle is updating the documentation to correct errors and omissions, and to reflect changes in the interfaces. The second half of the battle is particularly important because of the state of BellSouth's software processes during the development of its OSS interfaces.

BellSouth recently engaged Bellcore to prepare a report that evaluated BellSouth's software processes for electronic interfaces. As part of that evaluation, Bellcore

measured BellSouth's software process maturity. Software process maturity defines the extent to which a specific process is defined, managed, measured, controlled, and effective. Bellcore found that BellSouth is at maturity level one (the Initial Level) and has taken the first step towards achieving maturity level two (the Repeatable Level). Bellcore states that "[a]t the Initial level, the software development environment is undefined (ad hoc) and unstable. The software processes are constantly being changed or modified as the work progresses. The software process capability at this level is unpredictable." Considering this evaluation, it is not surprising that BellSouth's documentation for its interfaces contain many errors and omissions that must be corrected before it can be considered sufficient for CLECs.

BellSouth and a number of CLECs are working together to develop and implement a change management process. This process should provide a means by which BellSouth and CLECs can implement changes to OSS interfaces an a timely, efficient, and effective manner. Advance notification and coordination will help reduce the costs and operational disruptions associated with changes to OSS interfaces. The development of the change management process should be complete in May 1998 and be ready for implementation. AT&T is hopeful the change management process will resolve existing problems and prevent future problems, but proper implementation is critical to the success of this effort.

In sum, BellSouth has made progress in providing the necessary documentation for OSS interfaces, but deficiencies continue to exist.

Q. ONE OF THE CHARACTERISTICS OF A NONDISCRIMINATORY INTERFACE IS CAPACITY. HAS BELLSOUTH DEMONSTRATED THAT ITS OSS INTERFACES HAVE SUFFICIENT CAPACITY?

A. No. BellSouth has provided a summary description of a capacity test that BellSouth conducted on January 15, 1998. That summary description, however, suggests that the capacity test was seriously flawed in a number of respects.

First, BellSouth has not demonstrated that the projected volume requirement was reasonable. Indeed, even though BellSouth engaged the accounting firm of Ernst & Young to witness the capacity test, BellSouth did not request that Ernst & Young analyze whether the projected volume requirement was reasonable. BellSouth projected that order volumes would be 10,500 orders per day in November, 1998. Capacity, however, should be measured on a per hour basis to account for peak order periods. If BellSouth's automated OSS cannot handle peak hourly volumes, BellSouth will be unable to process high volumes of CLEC orders on a timely basis.

Second, BellSouth has not demonstrated that its capacity testing methodology was reasonable. In May 1997, IBM prepared a report for BellSouth entitled "BellSouth Encore Volume Test Assessment." In that report, IBM made a number of recommendations on volume testing. BellSouth, however, did not implement many of those recommendations in the January 15, 1998 volume test. For example:

Peak Loads -- IBM recommended that BellSouth validate the capacity for a peak busy hour, but BellSouth did not include a peak busy hour in its latest capacity test.

Transaction Type -- IBM recommended that BellSouth validate its assumption of 80 percent EDI orders and 20 percent LENS orders. BellSouth, however, used

an 80/20 split between EDI and LENS orders without validating that assumption. Operational experience indicates that the split is actually 80 percent LENS orders and 20 percent EDI orders.

Access Method -- IBM also recommended that the BellSouth ensure that the capacity test provide coverage for representative access methods (e.g., dial-in, LAN-to-LAN, internet). BellSouth's capacity test, however, assumed that all LENS transactions (pre-ordering and ordering) would occur over a LAN-to-LAN connection even though historical experience indicates that most LENS transactions occur via dial-up or internet.

Third, BellSouth has not provided any capacity test for its manual processes. A significant volume of CLEC orders have and will continue to require some degree of manual processing. Accordingly, BellSouth should demonstrate its capacity to process CLEC orders manually on a timely basis.

For all of the above reasons, BellSouth has not demonstrated that its OSS has the requisite capacity to handle expected volumes.

INDIVIDUAL INTERFACES

Q. WOULD YOU DISCUSS THE DIFFERENT INTERFACES FOR EACH MAJOR OSS FUNCTIONAL AREA?

A. Yes. I discuss below BellSouth's proposed interfaces for each of the major OSS functional areas (pre-ordering, ordering & provisioning, maintenance & repair, and billing). I also describe the specific reasons why BellSouth's proposed interfaces do not currently provide CLECs with nondiscriminatory access to BellSouth's OSS.

PRE-ORDERING INTERFACE

Q. WHAT IS PRE-ORDERING?

A. The FCC Rules define "Pre-Ordering" and "Ordering" together. Under the FCC Rules, pre-ordering and ordering "includes the exchange of information between telecommunications carriers about current or proposed customer products and services or unbundled elements or some combination thereof." 47 C.F.R. § 51.5. In other words, pre-ordering is the exchange of information necessary to prepare an order, whereas ordering is the actual transmission of the order, along with attendant acknowledgments, notices, and status reports. Pre-ordering ordinarily takes place while the customer is on the telephone. Pre-ordering functions include: (1) determining the customer's existing services; (2) determining the services and features available to that customer; (3) validating the customer's address; (4) assigning a telephone number; (5) scheduling appointments for required site visits and establishing due dates for the commencement of services.

Q. WHAT KIND OF ELECTRONIC INTERFACES FOR PRE-ORDERING ARE AVAILABLE UNDER BELLSOUTH'S SGAT?

A. The SGAT offers access to pre-ordering functions through Local Exchange Navigation System ("LENS") and EC-Lite. Varner Affidavit, Exhibit AJV-1 (SGAT) at 8.

In evaluating LENS, the TRA should understand that LENS operates in two modes -- "Inquiry" and "Firm Order." It is important to recognize the differences between the Inquiry Mode and the Firm Order Mode because, as a practical matter, CLECs must use the Inquiry Mode to perform pre-ordering functions to support EDI orders, whereas the Firm Order Mode supports LENS ordering. BellSouth relies on the EDI ordering

interface to satisfy is obligation to provide nondiscriminatory access to ordering functions. Accordingly, the TRA should focus only on the capabilities of the Inquiry Mode of LENS, as did the FCC in evaluating BellSouth's Section 271 applications for South Carolina and Louisiana.

Q. DOES EITHER PRE-ORDERING INTERFACE HAVE THE CHARACTERISTIC OF REFLECTING INDUSTRY STANDARDS?

A. No. LENS was never seriously considered as a potential industry standard. EC-Lite, on the other hand, was seriously considered as an industry standard but was not completely adopted. Two of the three components of EC-Lite (its data elements and communications protocols) are still being considered, but the message protocol element component was not adopted. Currently, two pre-ordering interfaces remain under consideration: the Common Object Request Brokering Architecture ("CORBA"); and EDI using Secure Sockets Layer Version 3 ("EDI/SSLv3"). BellSouth is currently developing a Application Programming Interface ("API") based on the use of CORBA that will provide access to pre-ordering and ordering functions. BellSouth expects to complete the development of API by the end of 1998.

A system based on industry standards provides many advantages over a non-standard interface. For example, an interface reflecting industry standards are more stable because it is not subject to unilateral changes. CLECs can plan and implement their operations more efficiently and effectively if the OSS interface is stable. Interfaces based on industry standards also allow CLECs who conduct business with more than incumbent LECs to operate fewer OSS interfaces, which decreases a CLEC's costs and increases its operational effectiveness and efficiency.

Q. YOU STATED EARLIER THAT ONE OF THE FIVE CHARACTERISTICS OF A NONDISCRIMINATORY INTERFACE IS THAT THE INTERFACE MUST BE ELECTRONIC. DO BELLSOUTH'S PRE-ORDERING INTERFACES HAVE THAT CHARACTERISTIC?

A. Not completely. As noted above in the discussion about integration, LENS is not electronic because: (1) LENS is a human-to-machine interface and, therefore, is not externally integratable; and (2) the pre-ordering function of LENS is not integrated or integratable with the industry-standard EDI ordering interface. The so-called LENS-CGI specification cannot provide nondiscriminatory access to BellSouth's OSS because of its reliance on the HTML presentation data stream.

EC-Lite, on the other hand, is an electronic pre-ordering interface. It is doubtful, however, that EC-Lite is economically efficient many CLECs to use over the long term because the industry has not adopted EC-Lite as a standard for pre-ordering. It does not make sense at this time for a CLEC to integrate the EC-Lite interface with its internal OSS since EC-Lite will not be an industry standard. Indeed, AT&T will continue to evaluate the development of industry standards to determine whether it makes more business sense to transition to a different interface such as the Application Programming Interface ("API"). Even if AT&T eventually transitions to a different interface, the EC-Lite development effort would not be wasted. Much of that development effort should be transferable to another interface.

Q. YOU STATED EARLIER THAT ONE OF THE FIVE CHARACTERISTICS OF A NONDISCRIMINATORY INTERFACE IS THAT THE INTERFACE MUST HAVE FUNCTIONALITY. DOES BELLSOUTH'S PRE-ORDERING INTERFACES HAVE THAT CHARACTERISTIC?

A. No. Neither LENS nor EC-Lite provide CLECs with equivalent pre-ordering capabilities as BellSouth provides itself through its RNS or SONGS interfaces. The most critical pre-ordering deficiency that continues to exist involves due dates.

Q. PLEASE EXPLAIN THE PRE-ORDERING DEFICIENCY INVOLVING DUE DATES.

A. Until recently, BellSouth had testified that the Direct Order Entry Support Application Program ("DSAP") calculated due dates for BellSouth's retail customers and for CLECs using LENS in the Firm Order Mode. See FCC South Carolina Order ¶ 172, n. 501. Specifically, BellSouth asserted that DSAP calculated due dates based on an intricate set of logic incorporating all the variables that can influence due dates. Now, however, BellSouth is testifying that DSAP only provides due date information and the particular interface (RNS or SONGS for BellSouth, and LENS Firm Order Mode for CLECs) actually calculates the due date using information obtained from DSAP and service representative input.

Regardless of whether DSAP or RNS/SONGS actually performs the intricate due date calculation, BellSouth has the obligation to provide CLECs with equivalent due-date calculation functionality. BellSouth, however, does not offer that functionality through either the Inquiry Mode of LENS or EC-Lite. BellSouth, moreover, has advised the Georgia Public Service Commission that BellSouth cannot provide a due date calculation functionality until December 31, 1998. In the same breath, however, BellSouth has argued that CLECs can easily develop their own due date calculation functionality. If it will take BellSouth until the end of the year to provide such functionality after having developed the same functionality in other interfaces (such as RNS, SONGS, and the Firm Order Mode of LENS), it certainly will take CLECs significantly longer at considerably more expense than BellSouth to develop an equivalent due date calculation functionality. Without that functionality available through the Inquiry Mode of LENS and EC-Lite, BellSouth is not providing nondiscriminatory access to its OSS for pre-ordering.

The due date capability in the Firm Order Mode of LENS does not provide nondiscriminatory access. The FCC recognized the problems associated with having the due date calculation function available only in the Firm Order Mode of LENS. FCC South Carolina Order ¶ 172. In its South Carolina Order, the FCC explained that CLECs first would expend additional time and effort to obtain calculated due dates because the Firm Order Mode requires CLECs to proceed through unnecessary screens and input additional information. After obtaining the calculated due date, CLECs would have to cancel the LENS order if the CLEC was using the industry standard EDI ordering interface, which is the only ordering interface BellSouth claims to be nondiscriminatory. After canceling the LENS order, the CLEC then must input into its EDI order much of the same information the CLEC previously inputted into the LENS order. This process consumes significantly more time and human resources than BellSouth must expend to obtain a calculated due date for its customers through RNS or SONGS and, therefore, is discriminatory.

Q. WHY ARE DUE DATES SO CRITICAL?

A. From the customer's view point, the due date is probably the most important piece of pre-ordering information that the CLEC obtains from BellSouth. The customer is interested about when the CLEC can commence to provide services. Obviously, the CLEC would like to commence service as soon as possible. The CLEC, however, does not want create a negative first impression by failing to meet the offered due date. CLECs, therefore, need to have a reasonable degree of confidence that BellSouth can provision the required services or network elements in accordance with the due date offered.

Several other factors compound the problems associated with the lack of a calculated due date. One factor is BellSouth's refusal to allow CLECs to reserve due dates. During the

early stages of interconnection negotiations, AT&T requested BellSouth provide a due date **reservation** process for CLECs. Several other incumbent LECs provide such a capability, and the Ordering and Billing Forum has endorsed due date reservations as a guideline. BellSouth, however, has adamantly refused to provide this capability. Without the capability to reserve a due date, CLECs cannot be certain that the due date it offered to the customer will be the same as the due date offered by BellSouth to the CLEC in the Firm Order Confirmation ("FOC"). BellSouth, moreover, has not consistently provided FOCs on a timely basis. Exhibit JMB-4, at 3-4. Until a CLEC receives a FOC, it cannot be reasonably certain that the requested due date is available. In addition, a large percentage of EDI orders fall out to manual processing. If BellSouth does not process these orders quickly, the requested due date may not be available when the order is finally processed. Furthermore, BellSouth's performance data indicates that it often takes BellSouth one or two days longer to provision services for CLEC customers than for BellSouth customers. For all of these reasons, it is nearly impossible for CLECs to offer its customers the same due dates with an equivalent level of confidence in that due date as BellSouth can offer to its customers. As a result, CLECs may be forced to offer a customer a due date that anticipates delays in the ordering and provisioning process to ensure that it meets the due date, even though such due dates are not competitive with BellSouth.

Q. ARE THERE OTHER FUNCTIONAL DEFICIENCIES IN BELLSOUTH'S PRE-ORDERING INTERFACES?

A. Yes. As explained above, the FCC requires BellSouth to provide CLECs with access to the functionalities available through BellSouth's internal gateway systems such as RNS and SONGS. FCC Interconnection Order ¶ 523; FCC Ameritech Order ¶ 134, n. 324; FCC South Carolina Order ¶ 96, n. 282. BellSouth, however, has admitted in other proceedings that its pre-ordering interfaces do not provide CLECs with access to the

same kind of functionality of RNS or SONGS. Provided below are some examples of the functionalities that are available to BellSouth but are not available to CLECs:

- Listing of all NXX's available to serve a specific customer
- Access Numbers for use of services such as Voice Mail and Remote Call Forwarding
- Capability to reserve up to 25 telephone numbers
- Search capability for finding IXC PIC codes
- Implementation dates for new services in a central office
- Ringing patterns for lines with RingMaster service
- Direct access to desired pre-ordering function

Because BellSouth is not providing access to the same functionalities that are available to BellSouth through its internal gateway systems (RNS and SONGS), BellSouth is not meeting its obligation to provide nondiscriminatory access to its OSS functions. FCC Interconnection Order ¶ 523.

ORDERING

Q. WHAT IS ORDERING?

A. Ordering is the process of placing a request into the incumbent LEC's OSS for a set of products and services, unbundled network elements, or combination thereof.

Q. DOES THE DRAFT SGAT ADDRESS ELECTRONIC INTERFACES FOR ORDERING?

A. The SGAT states:

> BellSouth provides CLECs electronic options for the exchange of ordering and provisioning information. The Exchange Access Control and Tracking System (EXACT) is for service requests

involving interconnection trunking and many unbundled network elements. BellSouth provides an Electronic Data Interchange (EDI) arrangement for resale requests and some unbundled network elements. As an alternative to the EDI arrangement, BellSouth also provides through LENS an ordering and provisioning capability that is integrated with the LENS pre-ordering capability.

Varner Affidavit Ex. AJV-1 (SGAT) at 8.

In previous Section 271/SGAT hearings, BellSouth has stated that it is not relying upon LENS to provide nondiscriminatory access to ordering and provisioning functions. As a result of such statements, the FCC did not evaluate the adequacy of the LENS interface in making its determination as to whether BellSouth provides nondiscriminatory access to ordering and provisioning functions. FCC South Carolina Order ¶ 94. The ordering and provisioning component of LENS, therefore, no relevance to this proceeding and is not addressed in my testimony.

Q. CAN YOU DESCRIBE BELLSOUTH'S PROPOSED ORDERING INTERFACES?

A. Yes. BellSouth offers two types of EDI ordering interfaces: EDI and EDI-PC. The EDI interface utilizes a mainframe computer and allows the CLEC to develop its own presentation system. The EDI-PC interface utilizes a personal computer that provides its own presentation system and stands fully separate from all other interfaces. For resale services, both EDI interfaces limit CLECs to ordering only residential and business POTS, and four complex services (PBX trunks, SynchroNet® (a private line data service), ISDN-Basic-Rate service, and hunting. For network elements, both EDI interfaces limit CLECs to ordering only four particular network elements (2-wire analog

loop, 2-wire analog port, interim number portability ("INP"), and 2-wire analog loop with INP).

The EXACT interface is the same industry-standard interface that processes access service requests from interexchange carriers and special access orders from end users. CLECs are limited to ordering only the following network elements through EXACT: (1) one-way trunking; (2) two-way trunking; (3) multiple tandem interconnection; (4) 800 database; (5) LIDB; (6) DACC; (7) CCS7 A-Link Signaling; and (8) CCS7 B-Link Signaling.

Q. DOES BELLSOUTH PROVIDE NONDISCRIMINATORY ACCESS TO ITS OSS FOR ORDERING?

A. No, it does not. BellSouth's EDI ordering interface does not meet the criteria of a nondiscriminatory interface:

Q. ARE BELLSOUTH'S ORDERING INTERFACES ELECTRONIC?

A. Not completely. As discussed above, BellSouth's EDI ordering interface is neither integrated or integratable with the LENS pre-ordering interface. The EDI interface is integratable with the EC-Lite pre-ordering interface, but EC-Lite is not economically efficient for any CLEC (except perhaps AT&T) to use over the long term because EC-Lite will not be an industry standard.

BellSouth's EDI ordering interface also is not functioning as a fully electronic interface because a large percentage of service orders require manual processing. As discussed below, CLECs must order many types of services and network elements using paper forms instead of EDI. With respect to EDI orders, BellSouth's EDI interface automatically sends orders for certain products and services to manual processing by

BellSouth. Furthermore, approximately 40 percent of all CLEC EDI orders do not flow through BellSouth's system without some degree of human intervention.

Q. DO BELLSOUTH'S ORDERING INTERFACES PROVIDE THE REQUISITE FUNCTIONALITY?

A. No. BellSouth's ordering interfaces are discriminatory because those interfaces: (1) do not provide CLECs with equivalent capability to submit electronic orders for most complex services; and (2) do not provide CLECs with the capability to submit electronic orders for most network elements.

1. Complex Services

CLECs must manually order most complex services because BellSouth does not provide CLECs with the capability to order complex services electronically. In contrast, BellSouth personnel have the capability to enter orders for complex services into BellSouth's internal interface for business services (SONGS) and such orders are processed electronically. To meet its obligations to provide nondiscriminatory access to OSS functions, BellSouth must provide CLECs with equivalent functionality to order complex services electronically.

BellSouth attempts to confuse the straight-forward issue of ordering complex services by raising pre-ordering issues. There is no debate that it takes more time and effort to obtain pre-ordering information necessary to complete a complex order than is necessary for a POTS order. Once the CLEC obtains the pre-ordering information for complex services, however, the CLEC should have the capability order the complex service electronically instead of faxing an order to BellSouth so that BellSouth can input the order into its internal OSS interface. CLECs should not have to rely on a BellSouth account team and BellSouth's CLEC service center to input complex orders. Indeed, these BellSouth

organizations will likely be a bottleneck that restricts a CLEC's ability to order complex services efficiently, effectively, and confidentially.

2. Network Elements

CLECs can submit electronic orders for only a very limited number of individual network elements (three network elements using EDI and eight network elements using EXACT), and no combinations other than 2-wire analog loop with INP (via EDI). BellSouth, however, offers numerous network elements under its SGAT. Indeed, Attachment A to BellSouth's SGAT lists eight pages of network elements that are available to CLECs. The inability of CLECs to order network elements electronically will impede efforts to use unbundled network elements as a competitive entry strategy. Manual processing of orders for network elements simply cannot support any large scale market entry.

Q. HOW DO THE DEFICIENCIES IN BELLSOUTH'S ORDERING INTERFACES AFFECT A CLEC AND ITS CUSTOMERS?

A. Because of the deficiencies of BellSouth's EDI ordering interface, a CLEC will have to use manual processes to perform many ordering functions for its customers whereas BellSouth can use electronic processes to perform the same or equivalent functions when competing against CLECs. These manual processes do not provide nondiscriminatory access to BellSouth's OSS because the manual processes are more expensive, slower, and more prone to errors than the electronic processes that BellSouth provides for itself.

Q. HAS BELLSOUTH PROVIDED ANY DATA TO SUPPORT ITS CLAIM THAT IS PROVIDING NONDISCRIMINATORY ACCESS TO ORDERING FUNCTIONS?

A. BellSouth has provided some data, but that data does not support its claim that it is providing CLECs with nondiscriminatory access to ordering functions. BellSouth has

provided "flow through" reports that contains data relating to the number of service orders that BellSouth processes manually and electronically. AT&T is unable to verify the accuracy of the underlying data, but notes that the December 1997 and January 1998 reports contain mathematical errors and contains data that is inconsistent with other BellSouth reports. In any event, the flow reports raise at least three interesting points:

- CLECs submit nearly 50 percent of all service orders via fax or mail. Evidently, many CLECs believe that BellSouth's ordering interfaces (EDI and LENS) often times do not provide any real advantage over manual ordering.
- CLECs submit approximately 80 percent of all electronic orders via LENS. One explanation for the relative popularity of LENS over EDI is that LENS ordering is integrated with LENS pre-ordering whereas EDI ordering is not even integratable with LENS pre-ordering.
- Over one third of EDI and LENS orders fall out to manual processing. This relatively high level of manual fall out indicates that significant problems continue to exist in how CLECs submit electronic orders and how BellSouth processes such orders.

PROVISIONING

Q. WHAT IS PROVISIONING?

A. The FCC Rules state that provisioning "involves the exchange of information between telecommunications carriers where one executes a request for a set of products and services or unbundled network elements or combination thereof from the other with the attendant acknowledgments and status reports." 4 C.F.R. § 51.5. In other words, provisioning is the process of implementing the order for telecommunications service. The attendant acknowledgments and status reports associated with provisioning include functional acknowledgments, firm order confirmation, order error/rejection notices, the monitoring of service order status, the reporting of service order jeopardies, and notification of order completion.

Q. WHAT INTERFACES DOES BELLSOUTH PROPOSE IN ITS SGAT TO PROVIDE ACCESS TO PROVISIONING FUNCTIONS?

A. The same interfaces BellSouth proposes to use for ordering (EDI, LENS, and EXACT).

Q. DO BELLSOUTH'S INTERFACES PROVIDE CLECS WITH NONDISCRIMINATORY ACCESS TO OSS FUNCTIONS FOR PROVISIONING NOTICES?

A. No. BellSouth's interfaces do not provide nondiscriminatory access to its OSS with respect to the following provisioning notices:

Firm Order Confirmations ("FOCs")

FOCs advise CLECs that BellSouth has accepted a service order and provides CLECs with a committed due date. The FCC has recognized that the timely return of a FOC is critical to a CLEC's ability to provide the same level of service and information to their customers that an incumbent LEC can provide to its retail customers. FCC South Carolina Order ¶ 122. Accordingly, the FCC concluded that an incumbent LEC "needs to provide FOC notices to competing carriers in substantially the same time that its retail operations receive the retail analogue." Id. BellSouth obtains the retail analogue to the FOC almost instantaneously. The FCC, however, found that BellSouth was not providing FOCs to CLECs on a timely basis. Id.

To date, AT&T still does not receive a large percentage of FOCs in substantially the same time that BellSouth receives the retail analogue. Exhibit JMB-5 is the latest report that BellSouth provided to AT&T regarding BellSouth's performance in providing FOCs on a timely basis. The report demonstrates that AT&T receives FOCs within 4 hours only for 50.7 percent of its orders, and within 24 hours for only 83.9 percent of their orders. This data, moreover, covers only those orders that are processed electronically. Any orders

that require some degree of manual processing, which is a significant percentage of all orders, are not included. If included, it is likely that the percentages for FOCs within 4 hours and FOCs within 24 hours would be much lower.

Reject Notices/Error Notices

Reject notices/error notices advise CLECs that a particular order is defective and must be corrected. The FCC has recognized that the "[t]imely delivery of order rejection notices has a direct impact on a new entrant's ability to serve its customers, because new entrants cannot correct errors and resubmit orders until they are notified of their rejection by BellSouth." FCC South Carolina Order ¶ 117. BellSouth provides itself the retail analogue of reject/error notices through its internal electronic interface immediately during order preparation and between a few seconds to thirty minutes after releasing an an order to Service Order Control System ("SOC"). FCC South Carolina Order ¶ 118. The FCC, however, found that BellSouth was not providing CLECs with reject/error notices in a timely manner or electronically. FCC South Carolina Order ¶ 118-20. Accordingly, the FCC concluded that BellSouth was not providing reject/error notices on a nondiscriminatory basis. FCC South Carolina Order ¶ 116.

Problems continue to exist with BellSouth's provisioning of reject/error notices. The data available to AT&T indicates that the FCC's earlier findings are still accurate today. Exhibit JMB-6. BellSouth has implemented EDI Version 7.0, which includes a new electronic reject/error message capability, and that should enable BellSouth to transmit electronic reject/error notices for a number of specific errors in EDI orders. Performance data should demonstrate whether BellSouth's performance in providing timely reject/error notices has improved with this new capability. EDI Version 7.0, however, is only a partial solution because it does not provide reject/error notices for all types of errors for all types of services and products. For example, EDI Version 7.0 provides reject/error

notices for only a certain subset of error types. For those error types not covered by EDI Version 7.0, BellSouth will continue to use manual processes. Furthermore, EDI Version 7.0 can provide reject/error notices only for EDI orders. BellSouth, moreover, will continue to use manual processes for orders types that cannot be submitted via EDI, or that are submitted via another ordering interface. In sum, EDI Version 7.0 is an unproven and partial solution to the reject/error notice problem.

Jeopardy Notices

Jeopardy notices advise CLECs that BellSouth cannot meet a confirmed due date. The FCC has recognized that an incumbent LECs failure to provide timely jeopardy notices that would allow a CLEC to reschedule a service appointment with its customer will compound the negative impact of missed due dates. FCC South Carolina Order ¶ 130. The FCC found that BellSouth was not providing timely notice of service jeopardies caused by BellSouth and, therefore, was not providing nondiscriminatory access to its OSS. FCC South Carolina Order ¶ 131.

Since the FCC rejected BellSouth's Section 271 application for South Carolina, BellSouth has not changed its processes for providing CLECs with jeopardy notices for BellSouth caused delays. Not surprisingly, timely jeopardy notices continue to be a problem area. Jeopardy notices for BellSouth-caused delays, moreover, are manual which compounds the timeliness problem because it takes more time for CLECs to process manual jeopardy notices than electronic jeopardy notices. In short, nothing has changed and BellSouth still does not provide nondiscriminatory access to its OSS for provisioning.

Pending Orders

BellSouth service representatives have a high level of certainty that the same order they enter into RNS or SONGS is the same order received by SOCS. Consequently,

BellSouth's service representatives do not have an critical requirement to view the details of pending orders. CLECs, however, are in a different position. CLECs have a lower level of certainty that the same ordered submitted is the same order received by SOCS. The reason for this lower level of certainty is the risk of transmission problems, BellSouth system coding errors for orders processed electronically, and human error for orders involving any degree of human intervention. Without the capability to view the details of pending orders, CLECs are unable to determine whether what they ordered is the same as what BellSouth's OSS thinks was ordered. Without the ability to determine order accuracy proactively, customer complaints will typically be the method by which CLECs find out that its customers did not receive what was ordered.

While BellSouth has recently agreed to work with CLECs to resolve this problem, no progress has been made. BellSouth, moreover, has taken the position in the Georgia OSS technical workshop that no problem exists, which does not bode well for a near-term solution to this problem.

Detailed FOCs and Completion Notices

Detailed FOCs and Completion Notices are a common sense alternative solution to the problems associated with the CLEC's inability to view orders as they exist within BellSouth's SOCS that are discussed above. AT&T has consistently requested the delivery of detailed FOCs and CNs which mirror the SOCS order back to the CLEC. BellSouth, however, has consistently refused to provide this common sense solution.

Q. DO BELLSOUTH'S INTERFACES PROVIDE CLECS WITH NONDISCRIMINATORY ACCESS TO OSS FUNCTIONS FOR PROVISIONING?

A. No. In its order rejecting BellSouth's Section 271 application for South Carolina, the FCC concluded that "a meaningful measure of parity is one that measures the interval from when BellSouth first receives an order to when service is installed." FCC South Carolina Order ¶ 137. BellSouth is in the process of collecting that data and has stated that such data should be available in the second quarter of 1998. Without that data, however, the BellSouth cannot demonstrate that it is providing parity to CLECs.

BellSouth has provided data that measures the interval between when an order has cleared SOCS and when the order is completed. The FCC has found that such a measure is not sufficient to demonstrate parity. FCC South Carolina Order ¶ 134. Nevertheless, the data generated by this measure (the most recent being January 1998) indicates BellSouth is not provisioning resold services to CLEC customers in equivalent intervals as BellSouth provisions retail services to its customers. On average, BellSouth takes one to two days longer to complete resold service orders CLEC customers than retail service orders for BellSouth customers. Orders for network elements, moreover, take significantly longer to complete than orders for resold or retail services. Thus, CLECs using network elements as a competitive entry strategy are faced with significantly longer intervals to provide service when competing against BellSouth. Without the ability to provide services via resale and network elements in an equivalent interval as BellSouth, CLECs will be competitively disadvantaged.

MAINTENANCE & REPAIR

Q. WHAT IS MAINTENANCE AND REPAIR?

A. The FCC Rules provide that maintenance and repair "involves the exchange of information between telecommunications carriers where one initiates a request for maintenance or repair of existing products and services or unbundled network elements or combination thereof from the other with attendant acknowledgments and status reports." 4 C.F.R. § 51.5. In other words, maintenance and repair involves the monitoring and fault management activities that assure the proper functioning of local services. These activities include trouble reporting, and the testing, monitoring and correction of reported troubles.

Q. WHAT KIND OF ELECTRONIC INTERFACES FOR MAINTENANCE AND REPAIR IS BELLSOUTH PROPOSING TO OFFER UNDER ITS SGAT?

A. The SGAT states that "BellSouth provides two options for electronic trouble reporting. For exchange services, BellSouth offers CLECs access to the Trouble Analysis Facilitation Interface (TAFI). For individually designed services, BellSouth provides electronic trouble reporting through an electronic communications gateway." Varner Affidavit Exhibit AJV-1 (SGAT) at 9. BellSouth also has developed an local exchange trouble reporting system, which AT&T refers to as its Electronic Bonding Interface ("EBI") and BellSouth calls its Electronic Communication Trouble Administration ("ECTA") gateway.

Q. WILL EBI AND TAFI PROVIDE A CLEC WITH NONDISCRIMINATORY ACCESS TO BELLSOUTH'S OSS FOR MAINTENANCE AND REPAIR FUNCTIONS?

A. No. TAFI has more extensive functionality than EBI, but TAFI is a human-to-machine interface. Consequently, when a CLEC submits a trouble report via TAFI, that order must be manually entered into the CLEC's own internal OSS. EBI, on the other hand, is a machine-to-machine interface, but does not have the functionality of TAFI.

Since April 1996, AT&T has been requesting BellSouth to provide access to TAFI functionality through a machine-to-machine interface like EBI. Initially, BellSouth agreed to AT&T's request. In its preliminary report to the Georgia PSC on OSS interfaces dated June 21, 1996 (page 15), BellSouth stated that it "has investigated the possibility of adding to the existing [EBI] gateway a system called . . . TAFI." In response to BellSouth's preliminary report, the Georgia PSC ordered BellSouth to complete "the TAFI enhancements to allow full operation of the required access by March 31, 1997." Georgia PSC Order, Docket No. 6352-U (July 2, 1996). BellSouth, however, had refused to provide that arrangement until just recently. Now, BellSouth has agreed that AT&T's request is a good idea, but has been unwilling to commit to an implementation date. Without an implementation date, it is doubtful that CLECs will gain access to TAFI functionality through a machine-to-machine interface in the foreseeable future.

Q. HAS BELLSOUTH PROVIDED ANY DATA TO SUPPORT ITS CLAIM THAT IS PROVIDING NONDISCRIMINATORY ACCESS TO MAINTENANCE & REPAIR FUNCTIONS?

A. BellSouth has provided some data, but that data does not support its claim that it is providing CLECs with nondiscriminatory access to maintenance and repair functions. Exhibit JMB-7 reflects AT&T's maintenance and repair expereince during calendar year

1997, and Exhibit JMB-8 reflects BellSouth's self reporting of its delivery of maintenance and repair to AT&T during February of 1998. In February, BellSouth reports that 25% of AT&T's customers with troubles remained out of service after 24 hours, and 18.64% of customers who had experienced trouble in the past 30 days experienced a repeat of that trouble. BellSouth has not provided comparative data for its own customers, but the percentages applicable to AT&T customers appear to be relatively high.

BILLING

Q. WHAT IS BILLING?

A. The FCC Rules provide that billing "involves the provision of appropriate usage data by one telecommunications carrier to another to facilitate customer billing with attendant acknowledgments and status reports. It also involves the exchange of information between telecommunications carriers to process claims and adjustments." 4 C.F.R. § 51.5. In other words, billing involves the process by which an incumbent LEC records and transfers data that enables a CLEC: (1) to bill its customers for telecommunication services (i.e., customer usage data) or other telecommunications carriers for access and call termination/transport; and (2) to pay the incumbent LEC for services rendered.

Q. WHAT KIND OF ELECTRONIC INTERFACES FOR BILLING IS BELLSOUTH PROPOSING TO OFFER UNDER ITS SGAT?

A. It is not clear. The SGAT does not identify any interfaces for billing carriers under the section entitled "Interfaces for Operational Support Systems." Varner Affidavit AJV-1 (SGAT) at 8-9. The SGAT provides that "[b]illing for interconnection services will be through the Carrier Access Billing System ('CABS')." Id. at 5. The SGAT, however, does not state how BellSouth will bill CLECs for network elements. With respect to

billing for resale services, the SGAT states that detailed guidelines for billing of resold services are contained in the CLEC Ordering Guide. Id. at 27. The CLEC Ordering Guide, however, does not address how BellSouth proposes to bill a CLEC.

With respect to billable usage information, the SGAT only states:

> BellSouth provides CLECs electronic files containing billable usage associated with resold exchange lines, unbundled ports, and ported telephone numbers.

Id. at 9.

Q. DOES THE SGAT PROVIDE A CLEC WITH NONDISCRIMINATORY ACCESS TO BELLSOUTH'S OSS BILLING FUNCTIONS?

A. No. First, BellSouth does not provide CLECs with nondiscriminatory access to customer usage data. Specifically, BellSouth has not demonstrated that it is capable of providing CLECs with Access Daily Usage Files ("ADUFs"). In addition, BellSouth has not provided CLECs with usage data for flat rate calls. Second, BellSouth also does not provide CLECs with accurate, mechanized bills for resale and network elements purchased by the CLEC.

Q. PLEASE EXPLAIN HOW BELLSOUTH IS NOT PROVIDING NONDISCRIMINATORY ACCESS TO USAGE DATA?

A. As stated above, BellSouth has not demonstrated that it is capable of providing CLECs with ADUFs. In connection with technical workshop conducted pursuant to an order by the Georgia Public Service Commission, BellSouth had agreed to provide ADUFs by December 31, 1997. BellSouth missed that deadline and delivered an ADUF to AT&T on February 19, 1998. That ADUF, however, was not readable. BellSouth subsequently delivered a readable ADUF to AT&T on March 16, 1998. That ADUF contained

interLATA access data but did not contain intraLATA access data. CLECs need both interLATA and intraLATA access data.

BellSouth also has not provided CLECs with access to usage data for flat rate calls. Such data is useful to CLECs for the purposes of deciding where to build or place network elements, as well as structuring competitive pricing alternatives. Providing usage data for flat rate calls is technically feasible. BellSouth claims that it would be costly to provide CLECs with rated usage data for flat rate calls because BellSouth allegedly would have to increase the capacity of its billing system. CLECs, however, probably would not want the usage data to be rated in the first place. Rather, CLECs would want the usage data in standard EMR format. BellSouth has not asserted nor demonstrated that it would be prohibitive costly to provide unrated usage data for flat rate calls in EMR format.

Q. PLEASE EXPLAIN HOW BELLSOUTH DOES NOT PROVIDE CLECS WITH ACCURATE, MECHANIZED BILLS FOR RESALE AND NETWORK ELEMENTS PURCHASED BY THE CLEC.

A. BellSouth has provided AT&T with test CABS-formatted bills for resold services. These test bills, however, proved to be inaccurate. The total amount reflected on the CABS-formatted bills were consistently different than the actual total of the individual amounts for each item on the bill, sometimes by as much as $50,000. Exhibit JMB-9 is a summary of discrepancies that AT&T uncovered while reconciling the CABS-formatted bills.

Even the paper CRIS bills that AT&T has received for resold services have been inaccurate. For example, AT&T recently submitted a billing investigation request to BellSouth seeking a refund of $320,000 in over-billings for customer migrations in Georgia alone. Evidently, BellSouth was assessing the wrong amount for service orders.

In addition, BellSouth has not provided AT&T with mechanized bills for network elements. The paper bills (both CRIS and CABS) provided by BellSouth, moreover, do not delineate the separate charges for each network element purchased by AT&T. Rather, the bills simply lump several of the network element charges together an attaches a total amount to the group of elements. Exhibit JMB-10 is a summary of the network elements for which BellSouth has provided separate charges through either its CRIS or CABS billing system as of February 20, 1998. The word "no" indicates that BellSouth has not provided separate charges on bills. AT&T and other CLECs need bills with separate charges for each purchased network element in order to determine the accuracy of the bill and measure AT&T costs.

SUMMARY

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. BellSouth must provide nondiscriminatory access to its OSS in order to comply with Section 251 and 271 of the Act. BellSouth's pre-ordering interfaces (LENS and EC-Lite) do not provided CLECs with the same functionalities that BellSouth provides itself through its RNS and SONGS interfaces. In addition, it is commercially impracticable to integrate these pre-ordering interfaces with the CLEC's own OSS.

BellSouth's ordering interfaces (EDI and EXACT) do not provide CLECs with sufficient functionality. CLECs cannot submit electronic orders for the same range of services as BellSouth. CLECs, moreover, can electronically order only a handful of network elements. BellSouth's ordering interfaces also do not provide CLECs with sufficient functionality to receive electronic provisioning notices on a timely basis.

BellSouth's maintenance and repair interfaces (EBI and TAFI) do not provide CLECs with nondiscriminatory access. EBI is a machine-to-machine interface that lacks the requisite functionality. TAFI, on the other hand, has adequate functionality but is a human-to-machine interface. AT&T has requested that BellSouth provide access to TAFI functionality through EBI, which should provide better access to BellSouth's OSS for maintenance and repair functions. BellSouth has agreed conceptually but has not committed to an implementation date.

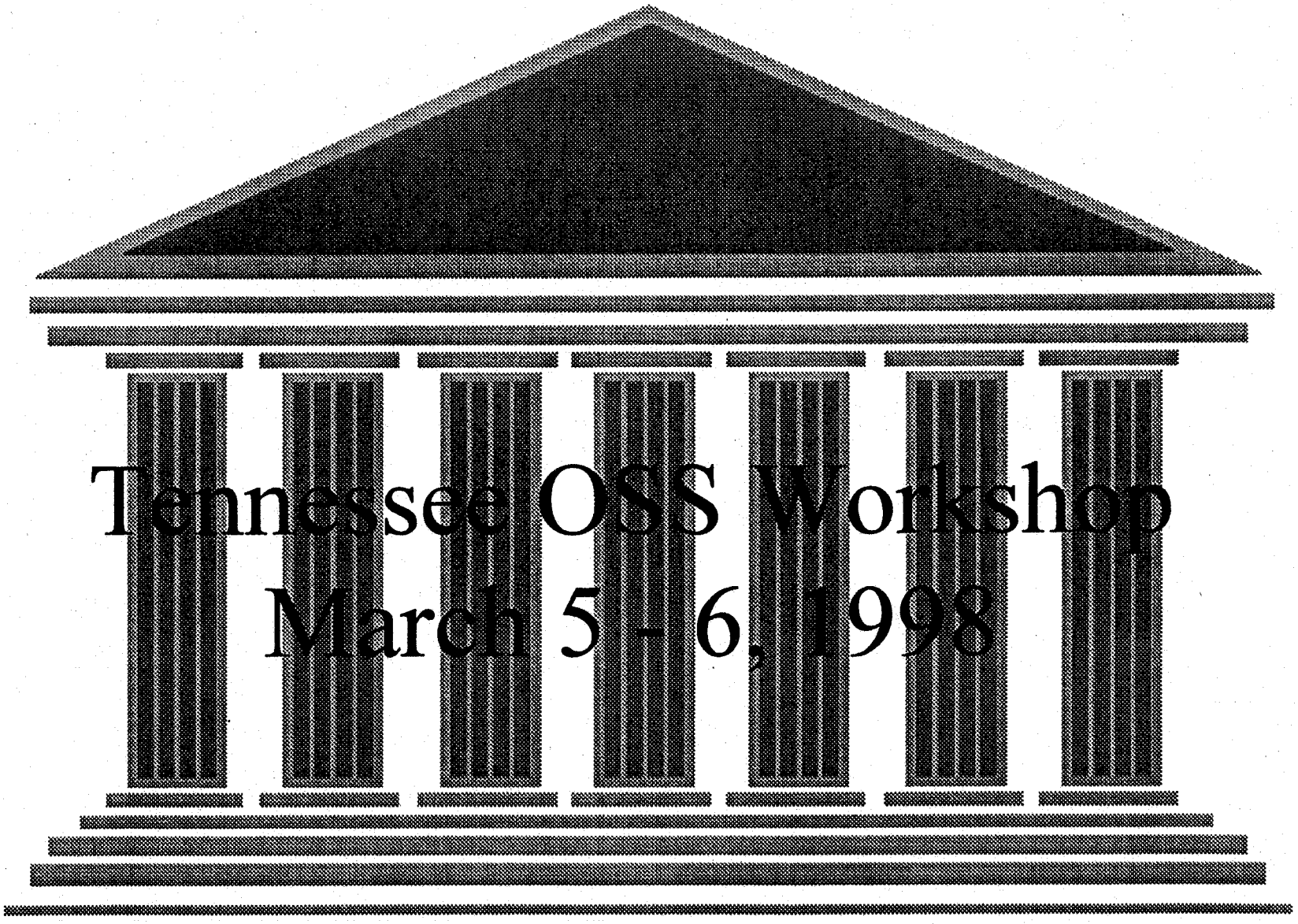
BellSouth's billing interfaces also do not provide CLECs with nondiscriminatory access. CLECs are unable to obtain important usage data. BellSouth, moreover, has been able to provide accurate and timely mechanized bills.

In addition, BellSouth has not provided empirical evidence demonstrating that its interfaces met the requirements of the Act. The performance data that BellSouth has provide indicate that BellSouth provides better access to OSS functions for itself and its retail customers than BellSouth provides to CLECs and their customers.

For these reasons and the reasons explained above, I recommend the TRA find that BellSouth's proposed OSS interfaces do not yet comply with the provisions of Sections 251 and 271 of the Act, and reject BellSouth's SGAT.

Q. DOES THAT COMPLETE YOUR TESTIMONY?

A. Yes.

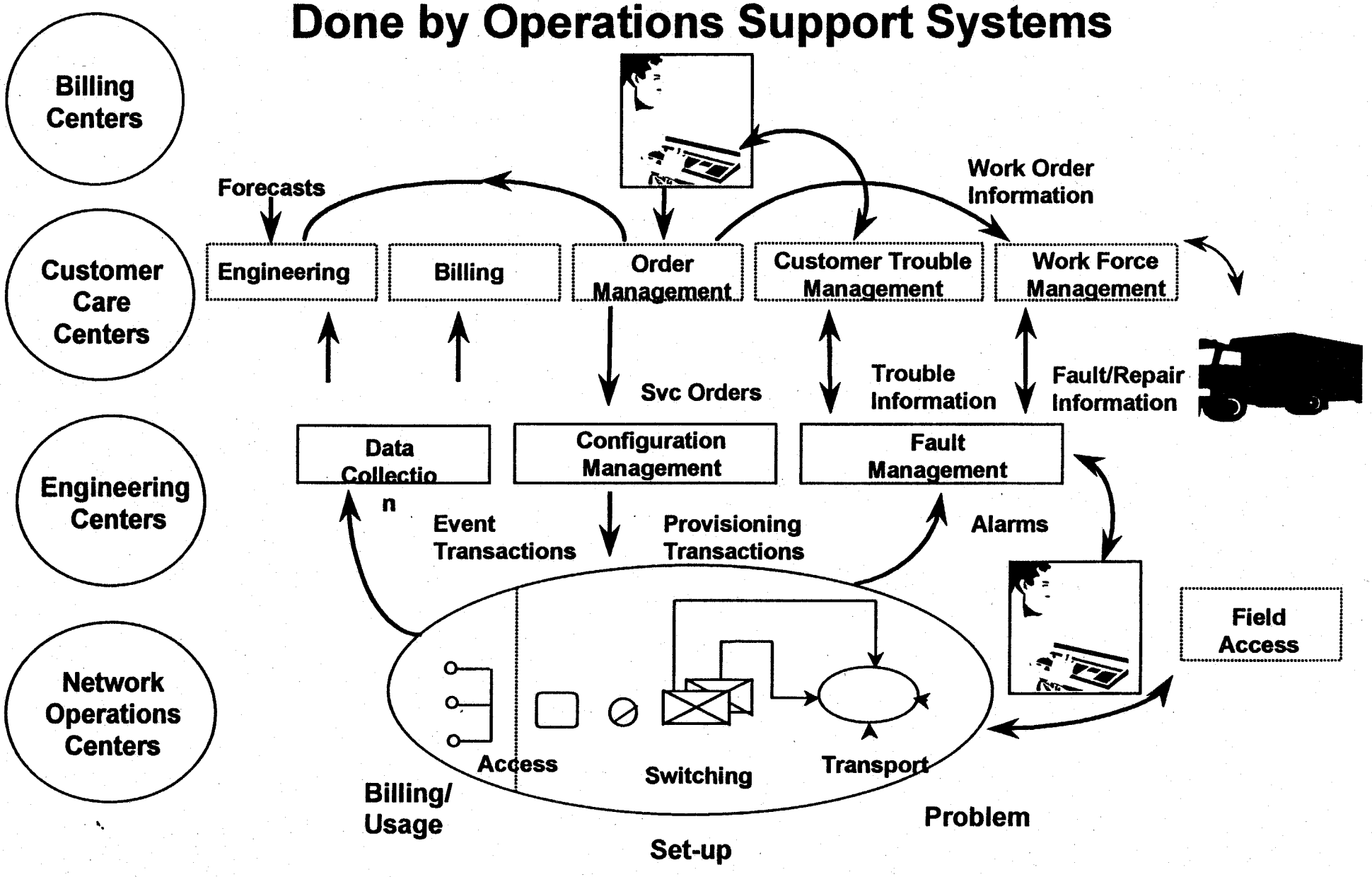


Tennessee OSS Workshop
March 5 - 6, 1998

Operations Functions

A Telecom Provider Needs All of These Functions:

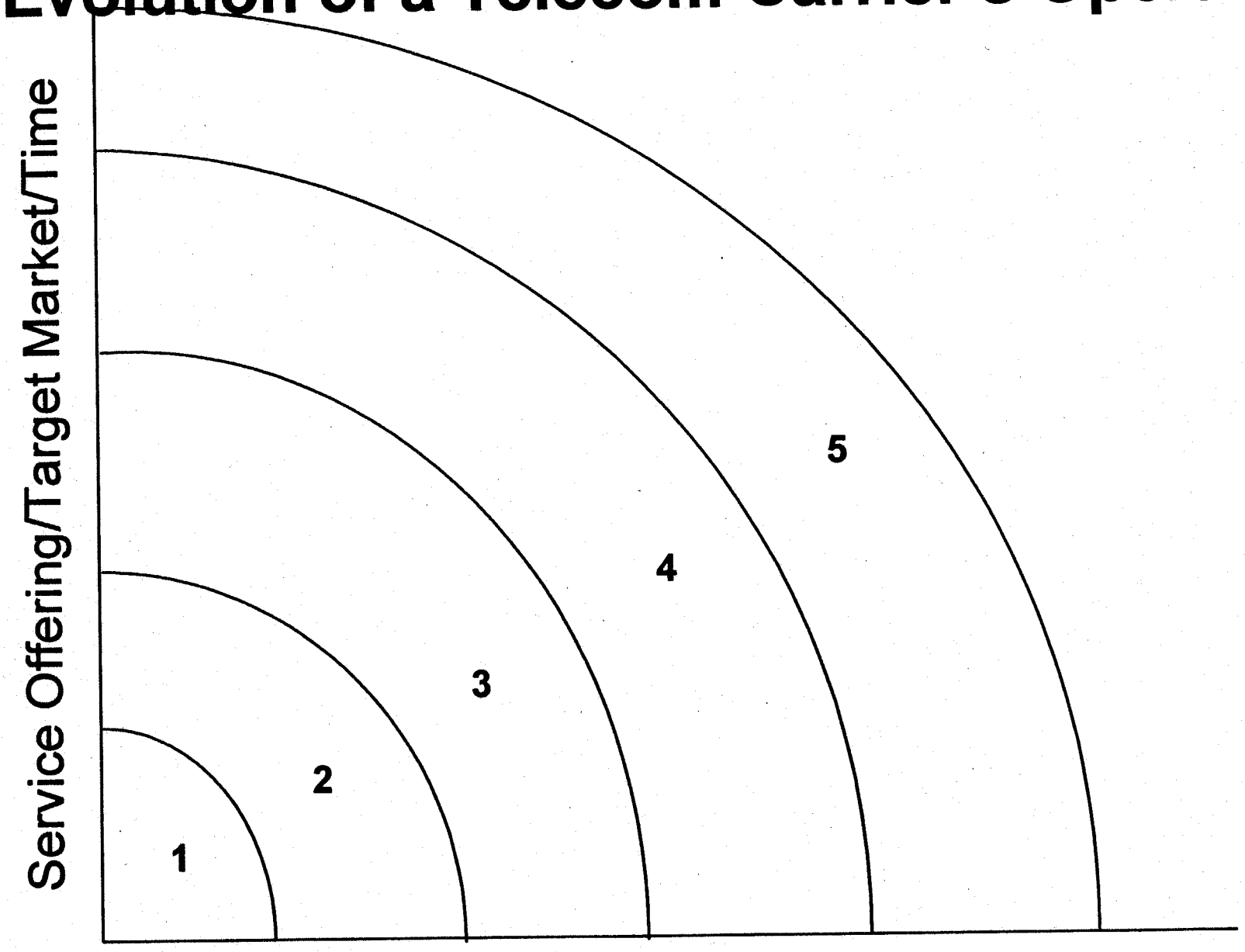
Done by Operations Support Systems



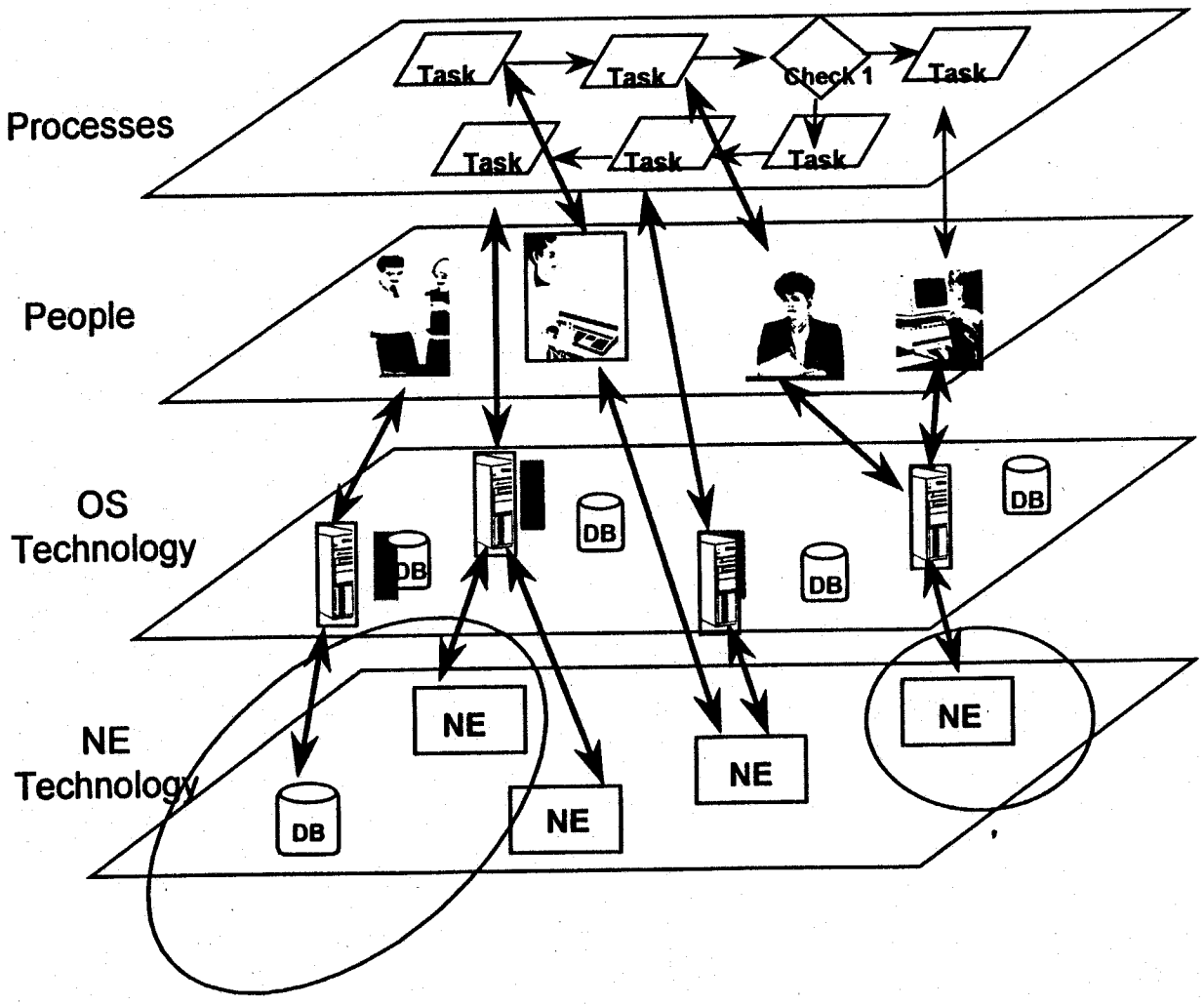
Evolution of a Telecom Carrier's Operations

STAGE 1	STAGE 2	STAGE 3	STAGE 4	STAGE 5
Manual Operations	Centralization & Mechanization	Automation	End-to-End Process (Re)Engineering	Competition Driven Operations
Operations Done by Human Beings, Using Manual Tools and Terminals Connected to NEs.	*Computer Based Software, Narrow Applications, Little or No System-to-System Interaction*	*System-to-System Interfaces Centralized Work Management and Expense Reduction*	*Engineered Information Processes, Most Operations Employ Automation*	*Speed and Competitive Position Paramount. Massive Investment in Customer Focused Operation and Speed*
Low Density Demand for Basic Services		*Basic Telecom - munications in Place Striving for Efficiency*	*Efficiency Orientation*	*Competition Driven*
	1970's	*1980's*	*Early 1990's*	*Mid 1990's*

Evolution of a Telecom Carrier's Operations



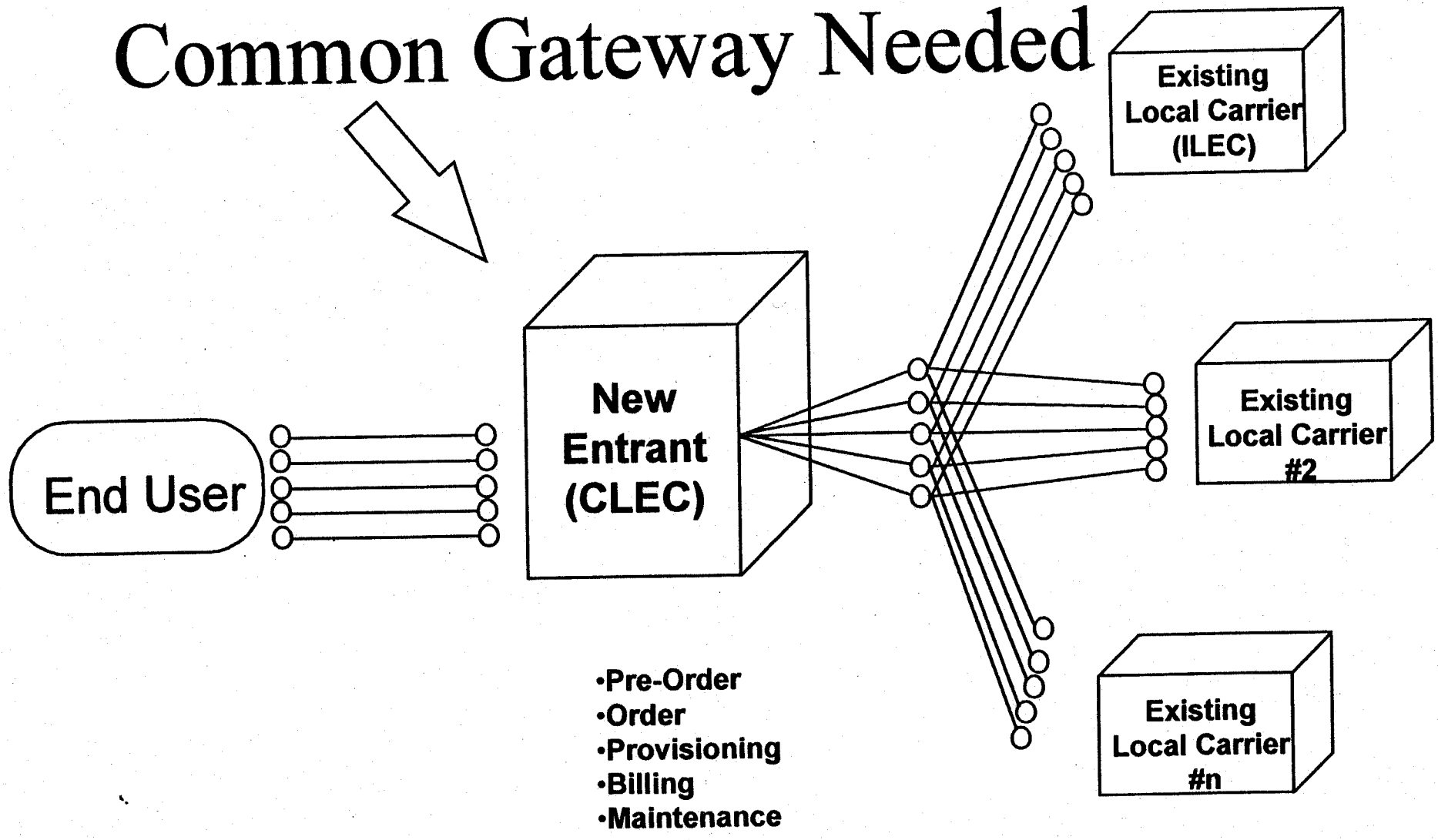
Implementing the OSS Functions



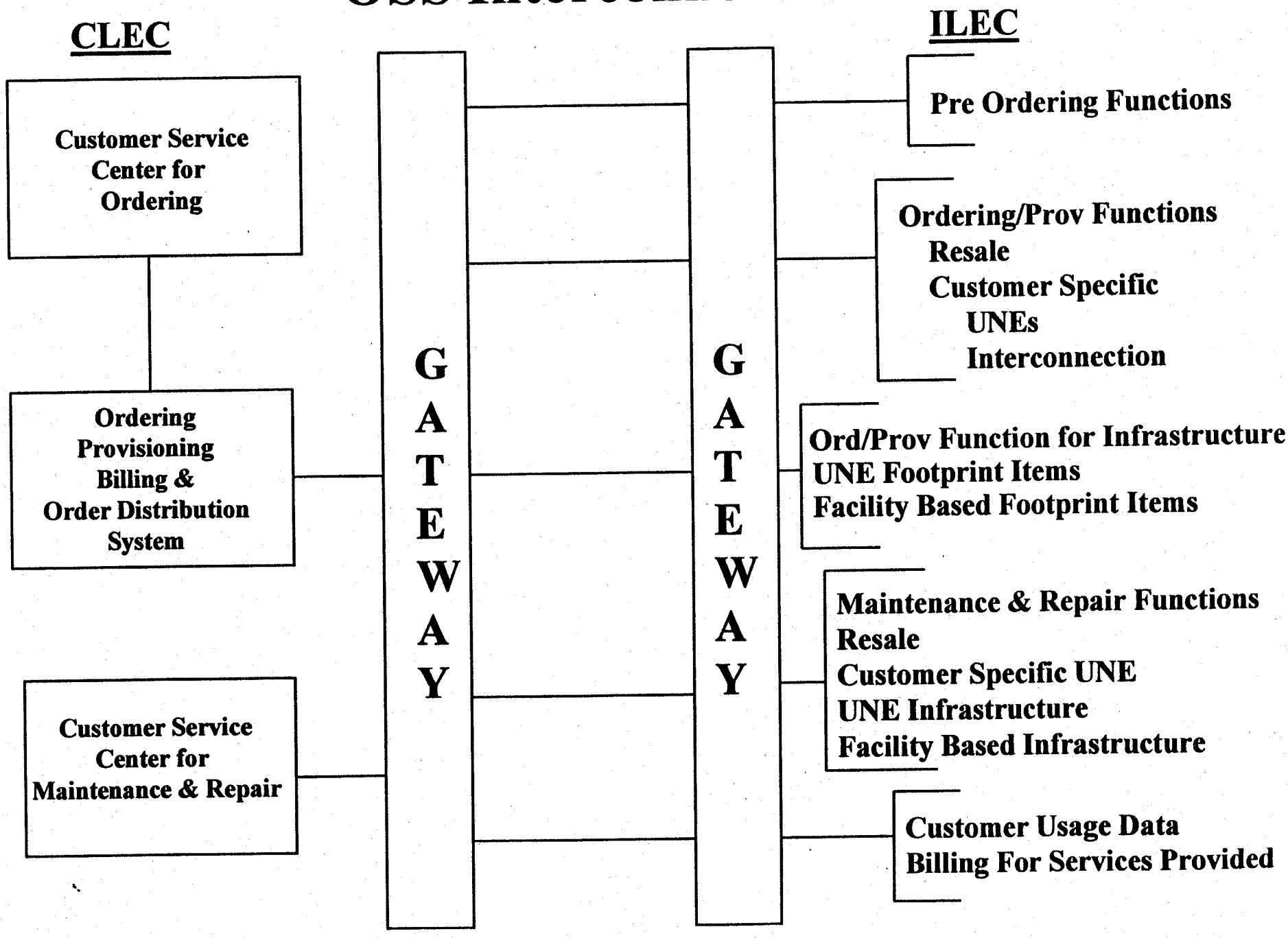
OSS Technology, Process, Training, Data Architecture, and Data Communications Must Be Planned Together To Support All Forms of Market Entry

- Resale
- Unbundled Element
- Interconnection

OSS Interconnection



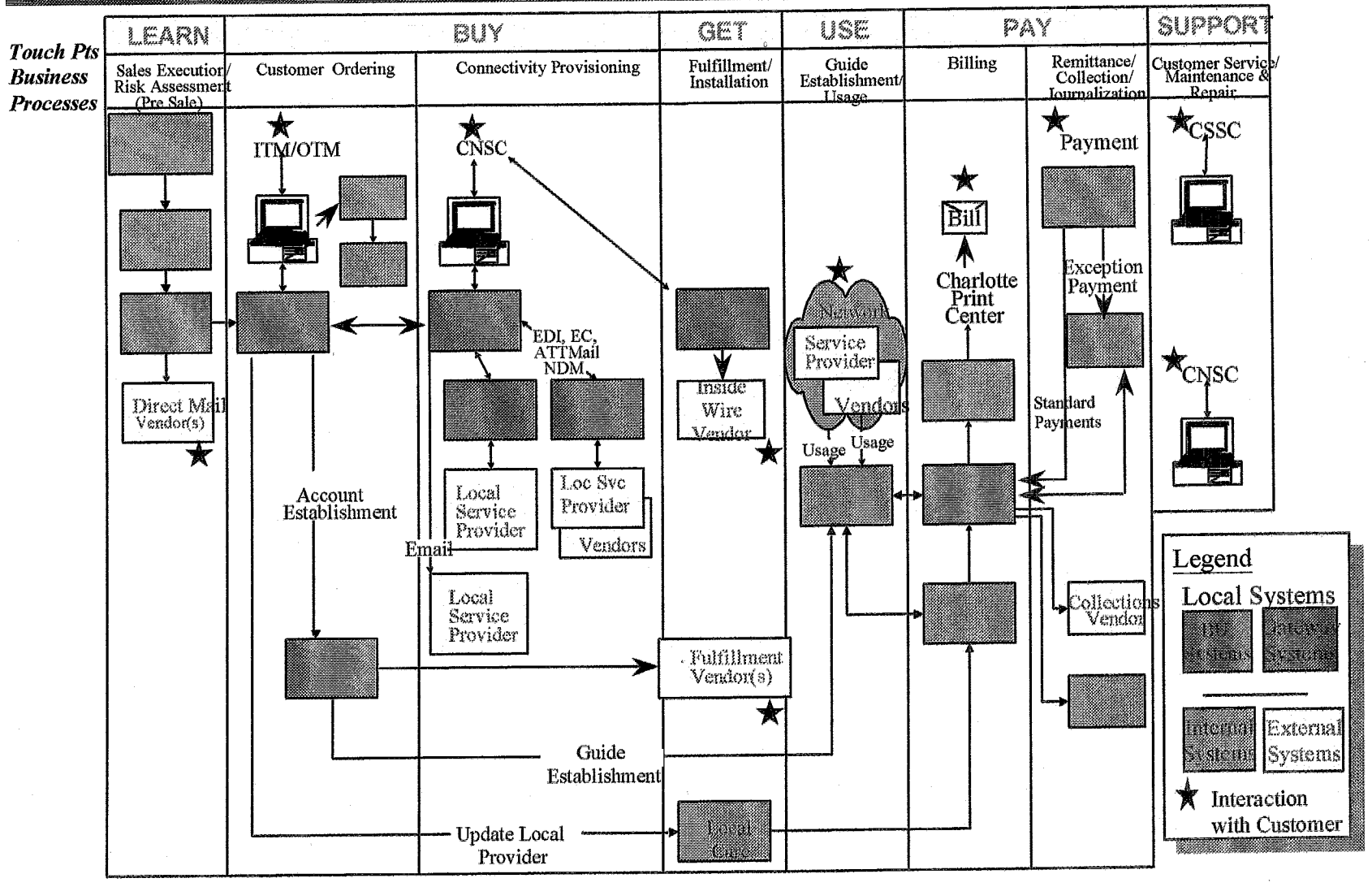
OSS Interconnection



AT&T Utilization of BellSouth's Electronic Interfaces for Local Service

Interface	Purpose	Period of Use
Regional Street Address Guide/Inter-exchange Carrier Reference (RSAG/IC-REF)	Address Validation	February-September 1997
Products and Services Inventory Management System - Central Office Features and Functions Inventory (P/SIMS-COFFI)	Service and Feature Availability	February 1997 ---
Automated Telephone/Line Administration System (ATLAS)	Telephone Number Reservation	February-September 1997
Local Exchange Navigation System (LENS) - Pre-Ordering	Telephone Number Reservation Customer Service Records Address Validation Service and Feature Availability Due Date Calendar/Calculation	September 1997 --- Until Operational Availability of EC-Lite Pre-Ordering Interface - - -
EC-Lite --- Pre-Ordering	Same as LENS	Service Readiness Testing Began Jan. 1998
Electronic Data Interchange - Mainframe (EDI)	Ordering/Provisioning - Resale and Customer Specific Network Elements	February 1997 ---
Electronic Data Interchange - Personal Computer (EDI - PC)	Ordering/Provisioning - Same as EDI	Attempting Certification Since Jan. 1998
Exchange Access Control and Tracking System (EXACT)	Ordering/Provisioning - Infrastructure Network Elements	December 1997
Electronic Bonding Interface (EBI) – Interim	Maintenance and Repair	Not in Use By AT&T
Electronic Bonding Interface (EBI) – Long Term	Maintenance and Repair	In Testing
Trouble analysis Facilitation Interface (TAFI)	Maintenance and Repair	Evaluated July 1997
Exchange Message Record (EMR)	Customer and Carrier Usage Billing	February 1997 ---
Carrier Access Billing System (CABS)	Bill from BellSouth to AT&T	Not Yet Accurate In Testing Since Aug. 1997
Local Account Management/Customer Account Record Exchange (CARE)	Management of Customer of LD PIC Information	February 1997 ---

Entry into local service is complex...



Characteristics of a Non-Discriminatory Interface

ELECTRONIC

- Provides for Communications between Operation Support Systems
- Involves No Additional Human Intervention

FUNCTIONALITY

- Provides New Entrants with the Capabilities Necessary to Perform Operations Support Functions with at Least the Same Level of Quality, Efficiency and Effectiveness as the Incumbent Provides Itself

DOCUMENTATION

- Provides New Entrants with the Necessary Information to Develop and Deploy Compatible Systems and Processes
- Requires Distribution of Necessary Information Sufficiently in Advance to Allow a New Entrant Reasonable Time to Complete Development and Deployment Efforts

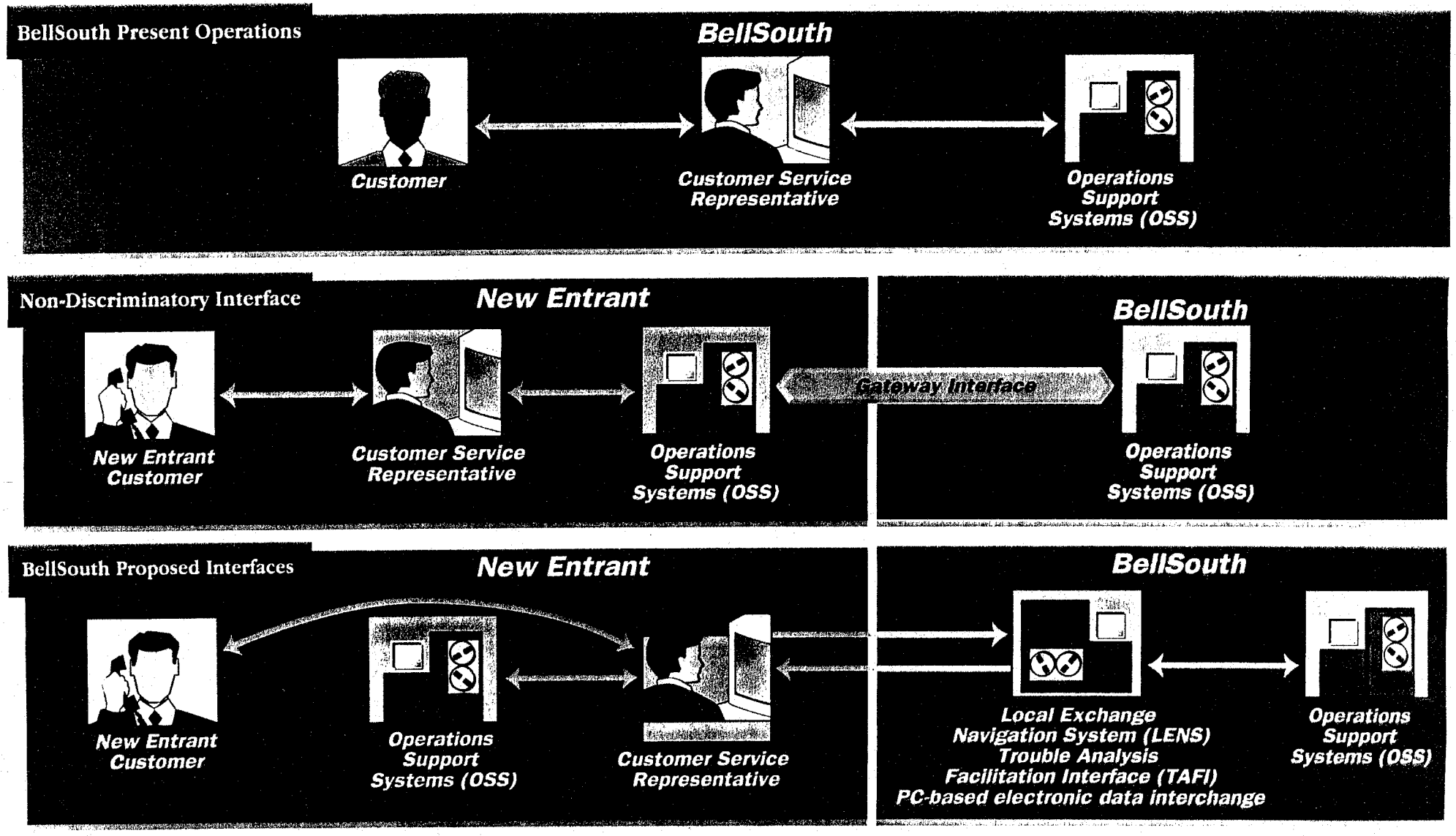
CAPACITY

- Provides Sufficient Throughput to Process Combined Requirements of All New Entrants
- Provides Equivalent Response Times

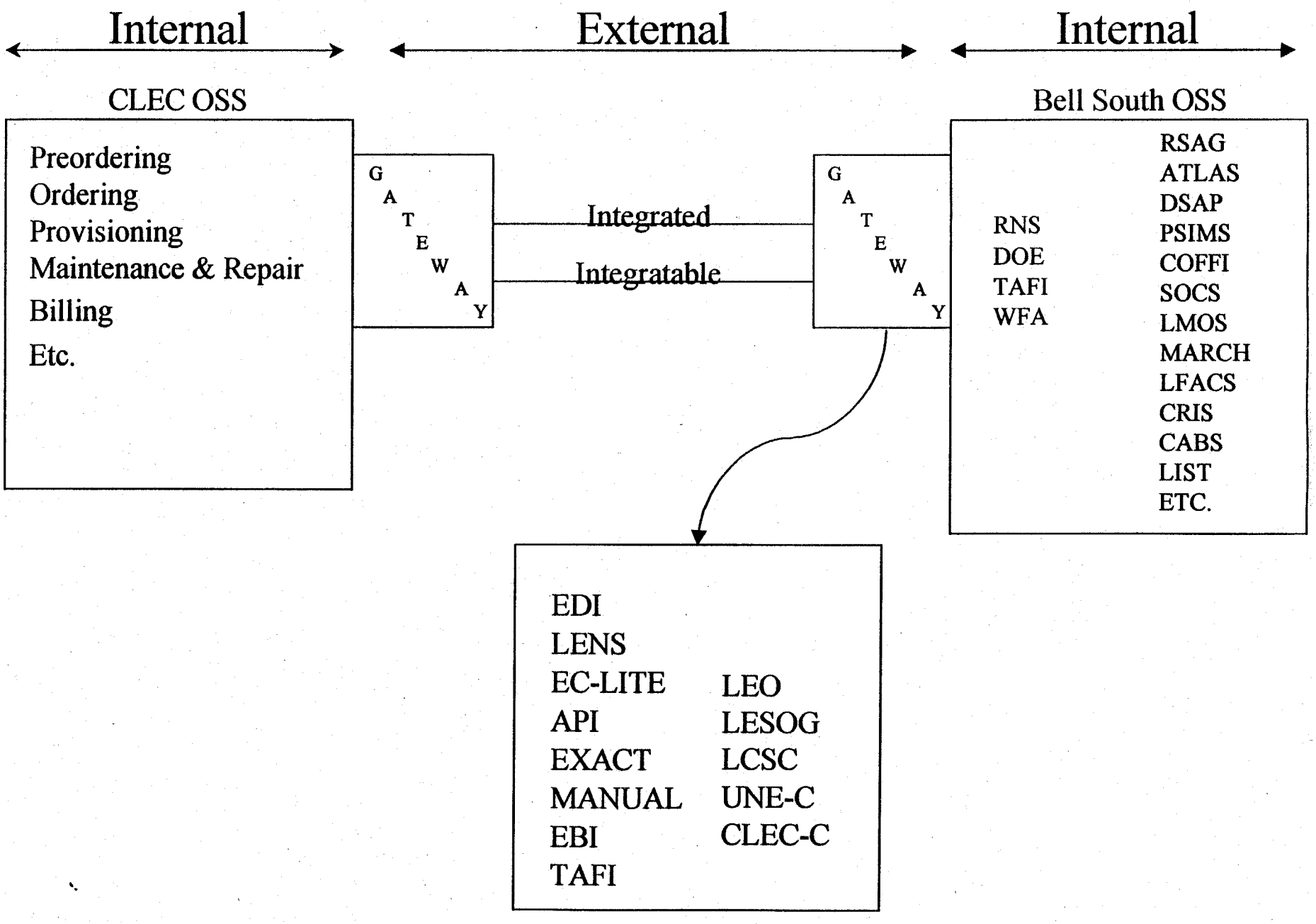
STANDARDS

- Complies with Existing National Telecommunications Industry Standards
- Eases the Transition to Evolving National Telecommunication Industry Standards

BellSouth Proposed Interfaces to Operations Support Systems (OSS) are Discriminatory -- Require Additional Human Intervention



OSS Integration

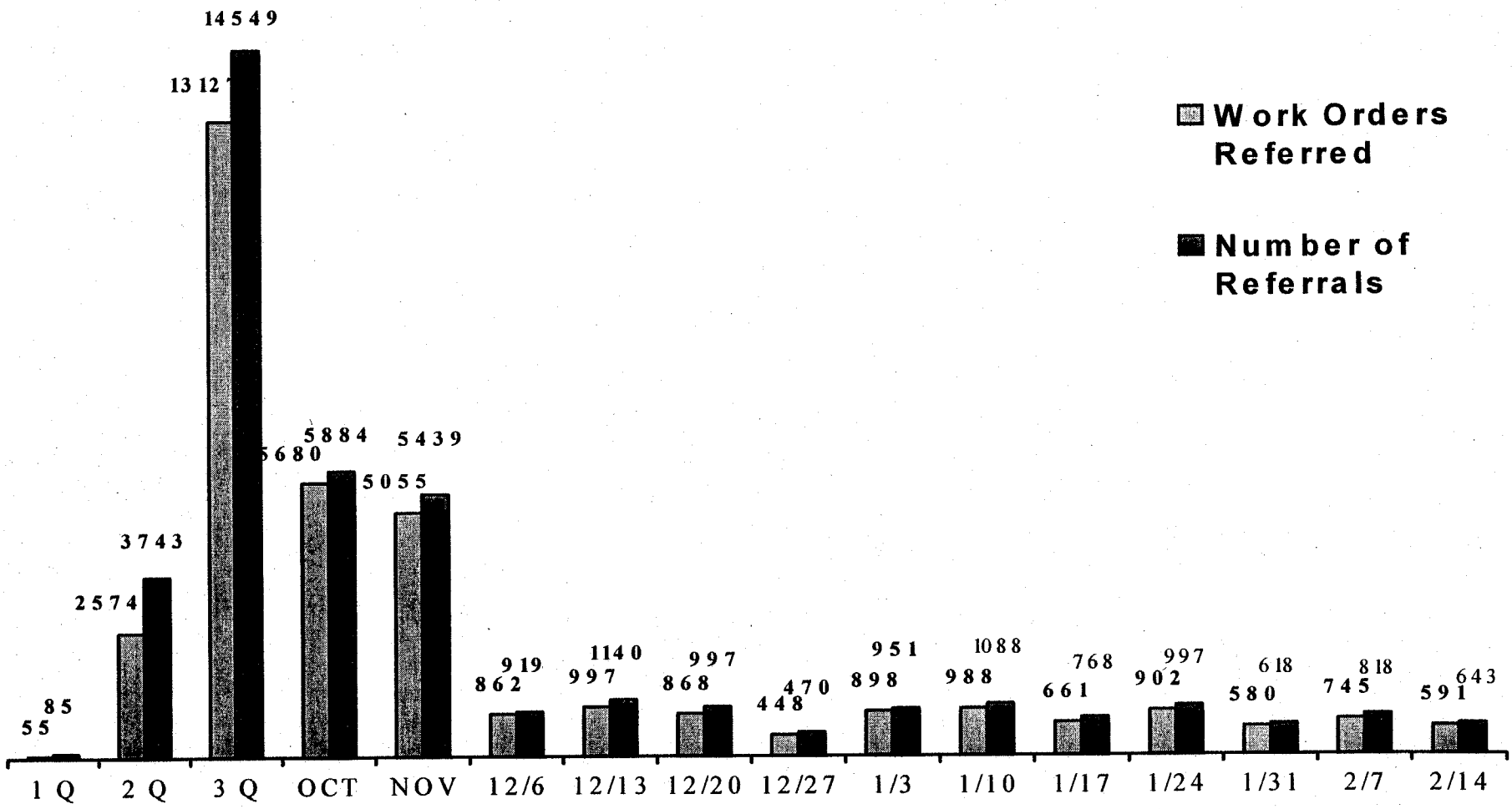


PROVISIONING PERFORMANCE:

BellSouth Telecommunications Georgia and Florida

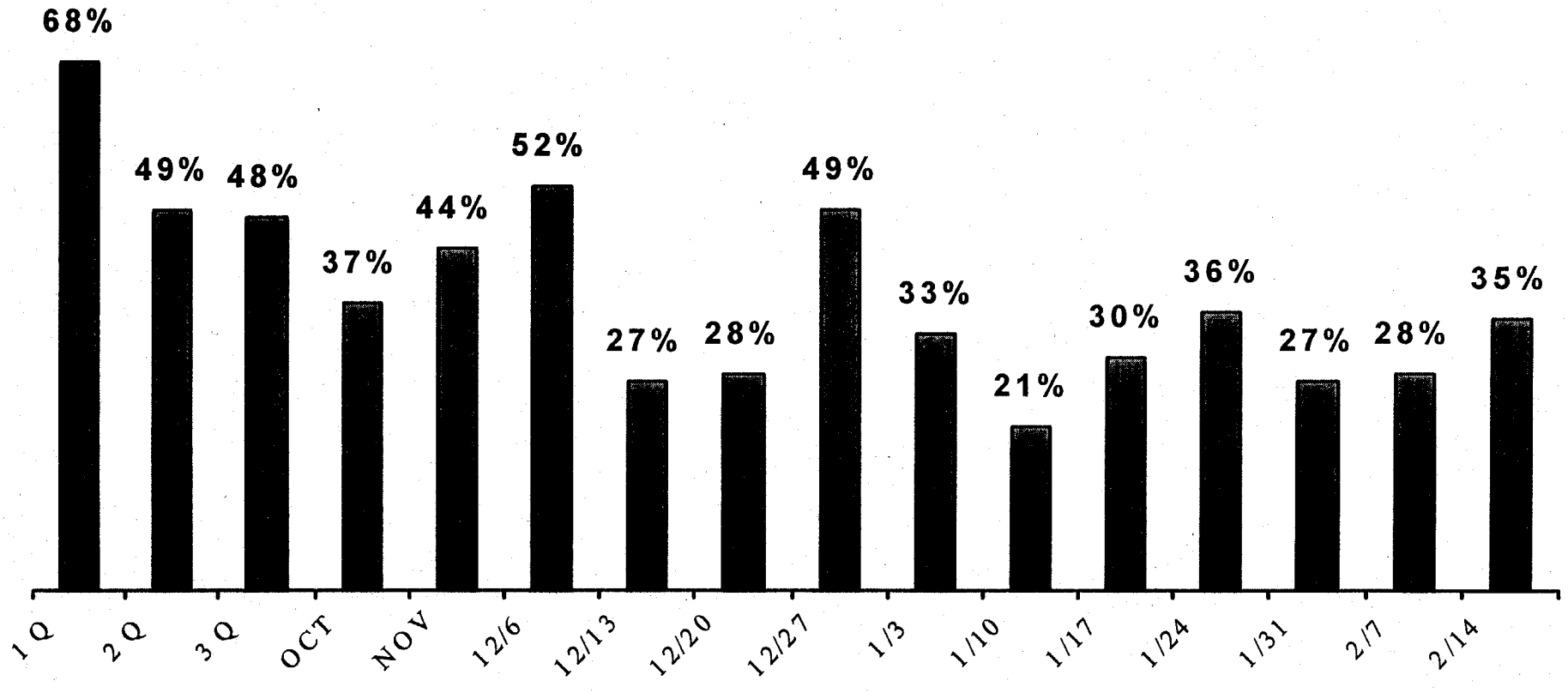
(3/17/97 Through 02/14/98)

BellSouth Georgia and Florida Performance
Volume Of Work Orders & Referrals



BellSouth Georgia and Florida Performance
Order Response Turnaround - Firm Order Confirmations

% FOC Response Not Received Within 24 Hours



Quarter / Month / Week Ending

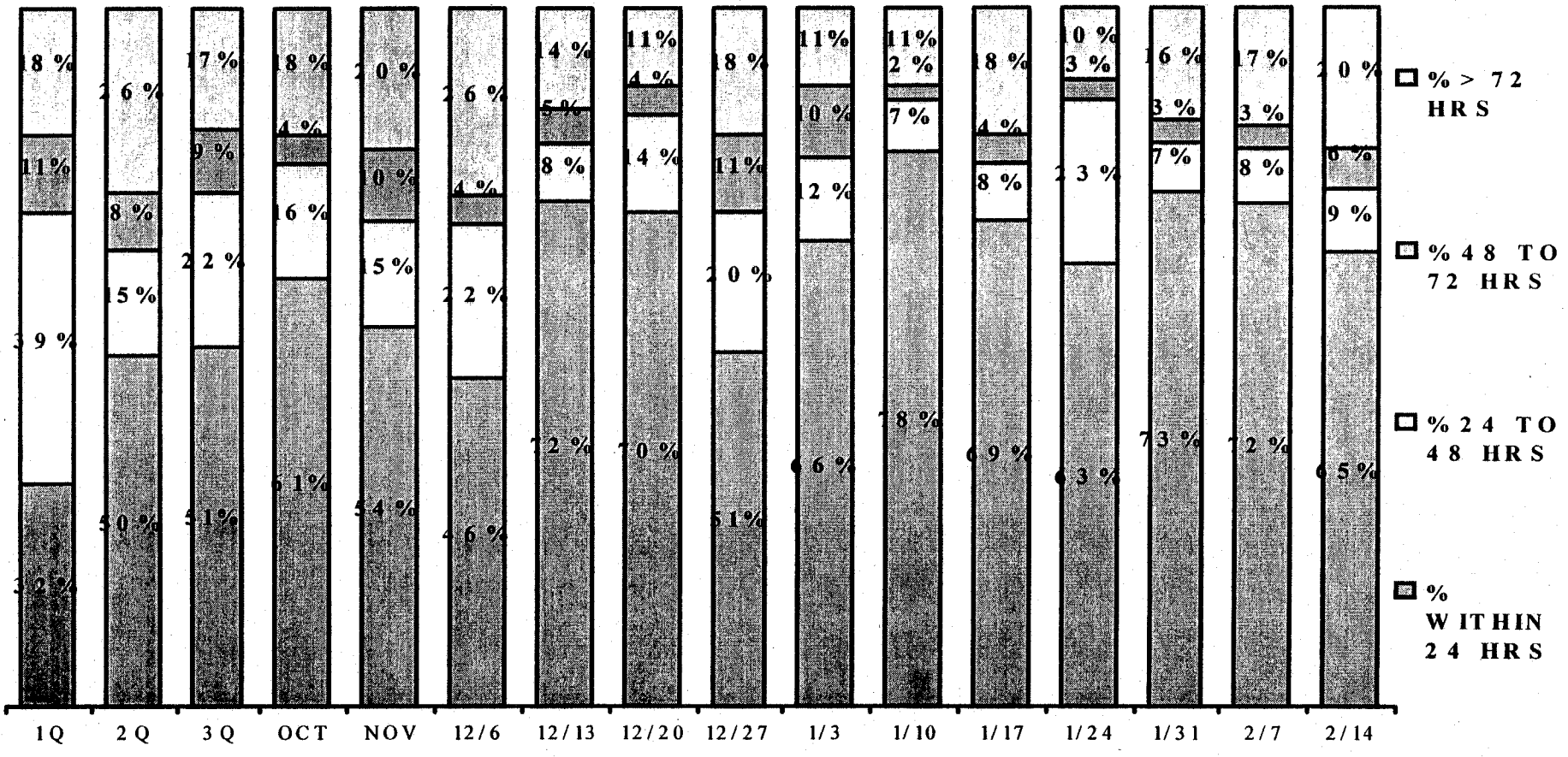
NUMBER OF WORK ORDERS REFERRED EACH MONTH / WEEK:

55	2574	13127	5680	5055	862	997	868	448	898	988	661	902	580	745	591

BellSouth Georgia and Florida Performance

Order Response Turnaround - FOCs

Weekly % Of FOC's Received By Intervals

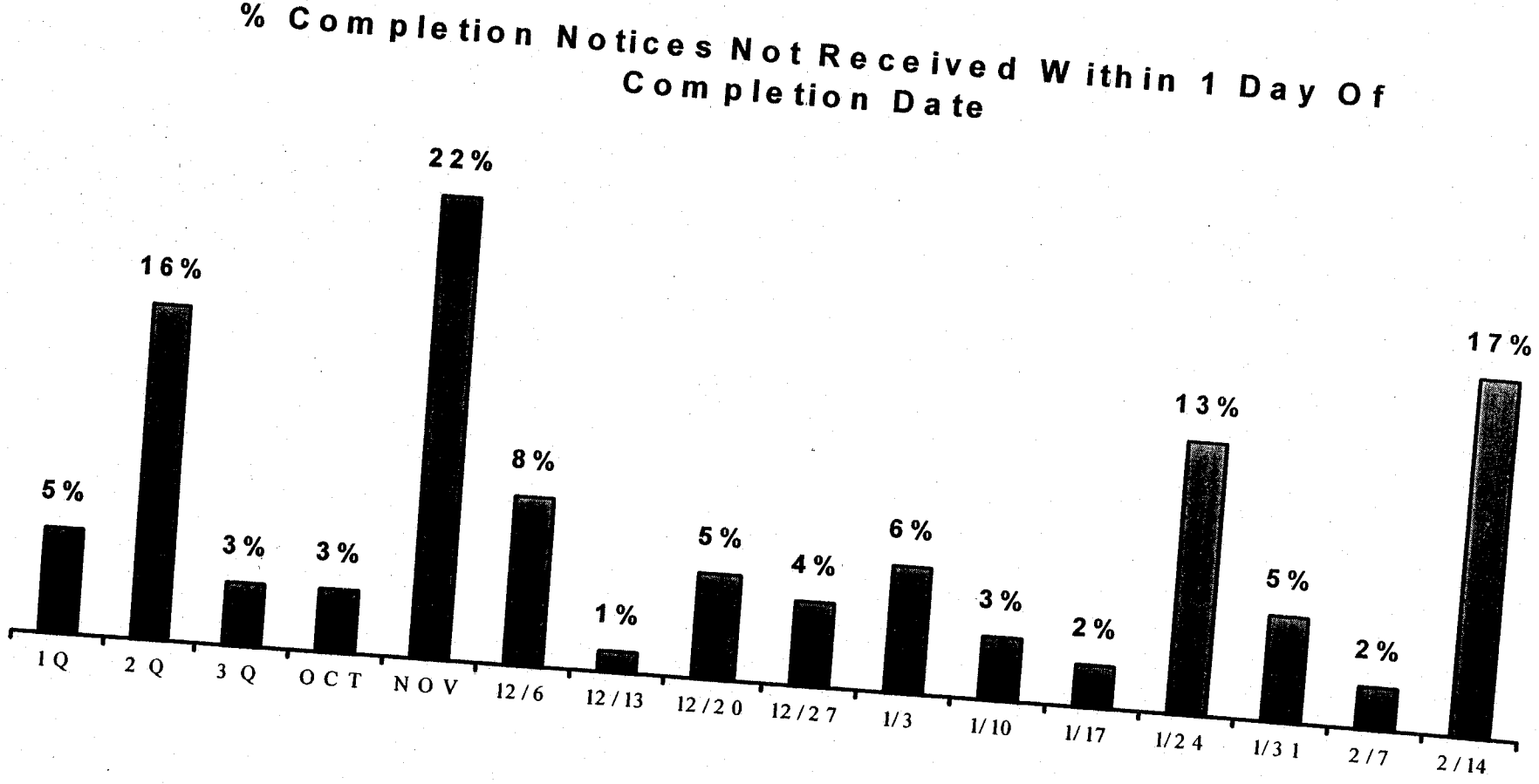


NUMBER OF WORK ORDERS REFERRED EACH QTR / MONTH / WEEK:

1Q	2Q	3Q	OCT	NOV	12/6	12/13	12/20	12/27	1/3	1/10	1/17	1/24	1/31	2/7	2/14
55	2574	13127	5680	5055	862	997	868	448	898	988	661	902	580	745	591

BellSouth Georgia and Florida Performance

Completion Notice Turnaround



NUMBER OF TOTAL ORDERS COMPLETED EACH QTR / MONTH / WEEK:

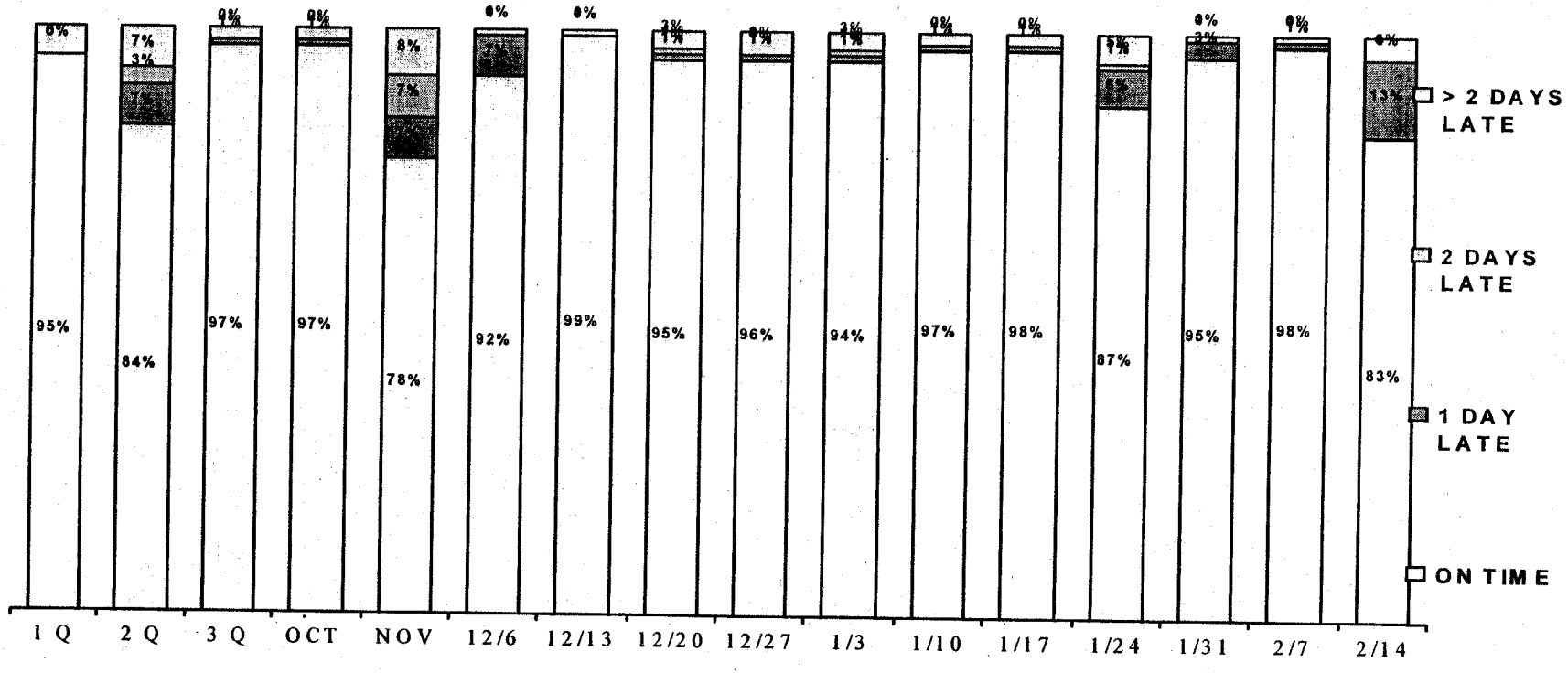
21	866	7900	3772	3809	774	436	470	342	328	512	527	521	525	550	532

Count Includes New, Migration and Other Orders

BellSouth Georgia and Florida Performance

Completion Notice Turnaround

Weekly % Of Completion Notices Received By Intervals



NUMBER OF TOTAL ORDERS COMPLETED EACH QTR / MONTH / WEEK:

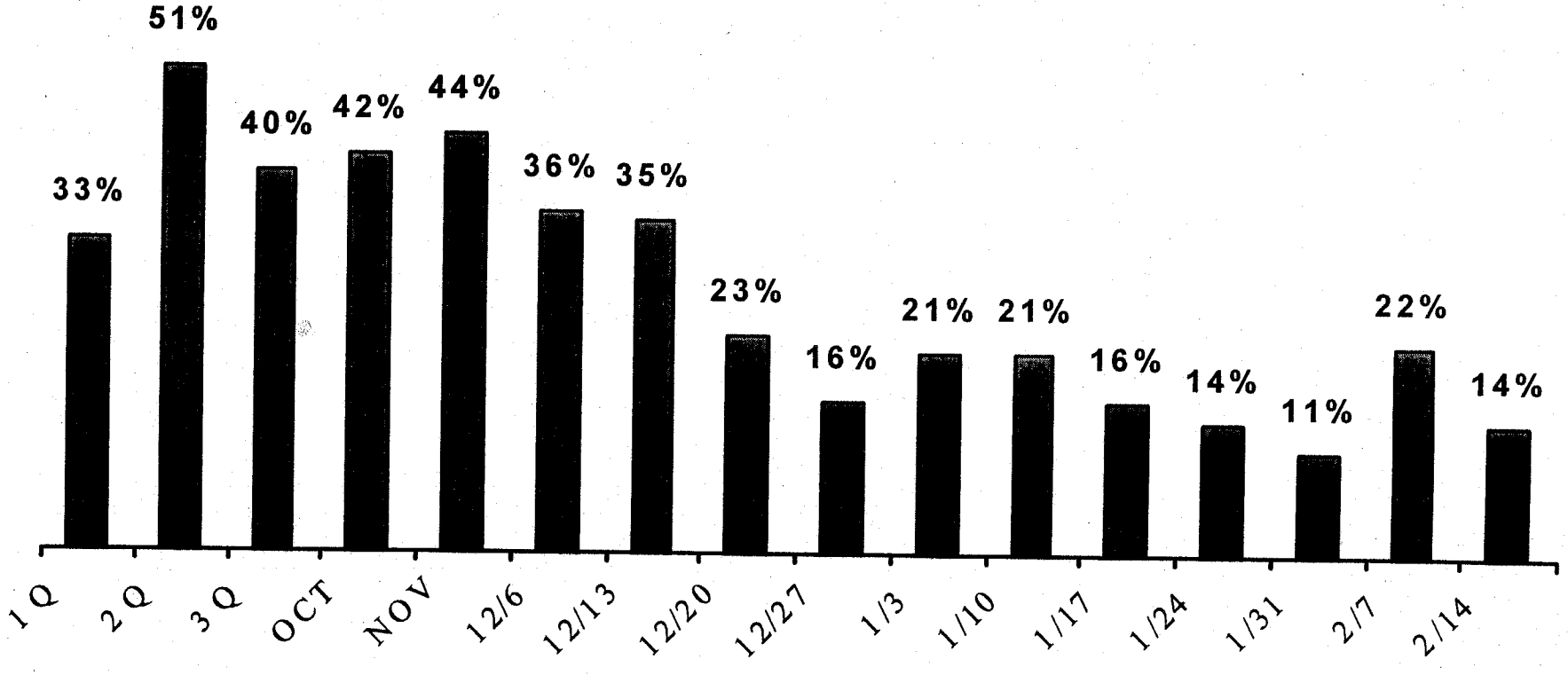
21	866	7900	3772	3809	774	436	470	342	328	512	527	521	525	550	532

Count Includes New, Migration and Other Orders

BellSouth Georgia and Florida Performance

New Orders Completions

% Of New Orders Not Completed On Due Date



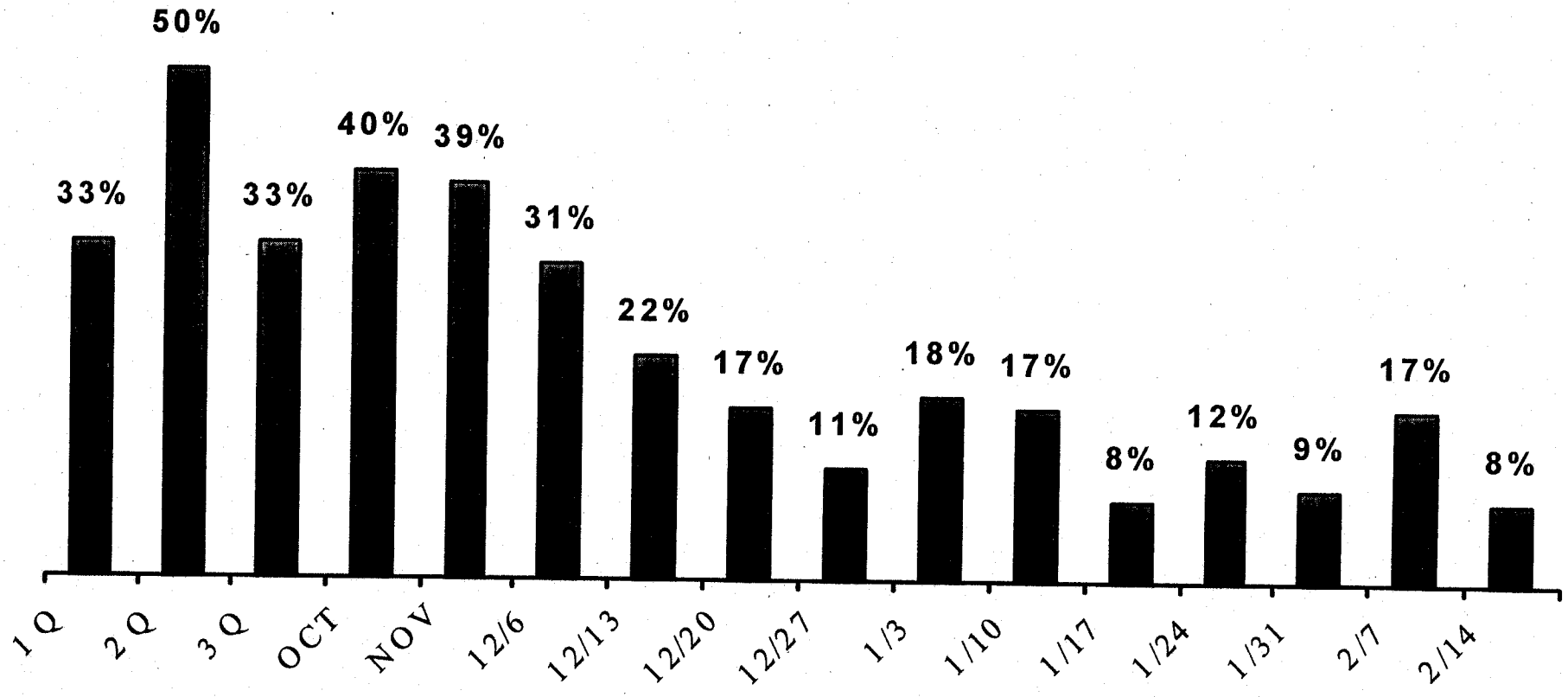
NUMBER OF NEW ORDERS COMPLETED EACH QTR / MONTH / WEEK:

6	136	563	382	523	144	113	120	98	103	122	148	213	193	134	121

BellSouth Georgia and Florida Performance

New Orders Completions

% New Orders Not Completed On Supplier Expected Due Date

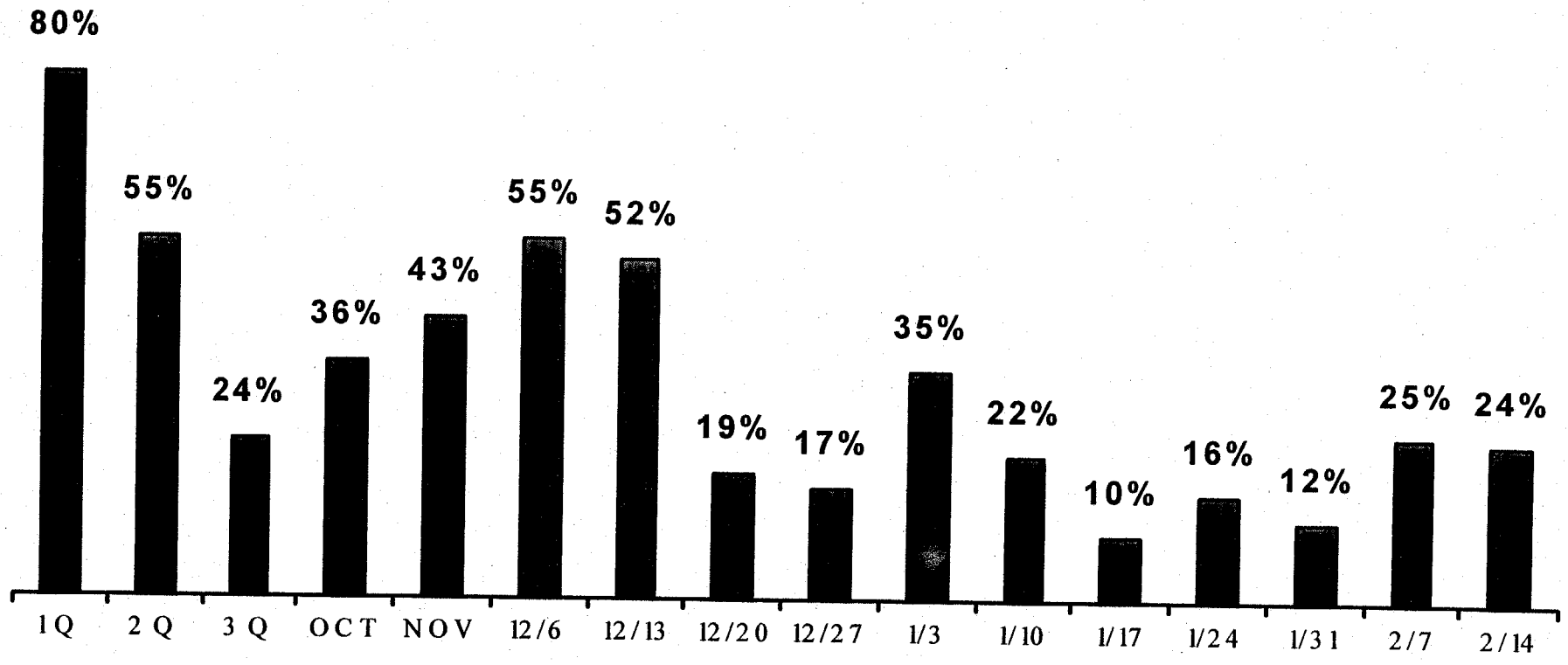


NUMBER OF NEW ORDERS COMPLETED EACH QTR / MONTH / WEEK:

6	136	563	382	523	144	113	120	98	103	122	148	213	193	134	121

BellSouth Georgia and Florida Performance

Migration Order Completions

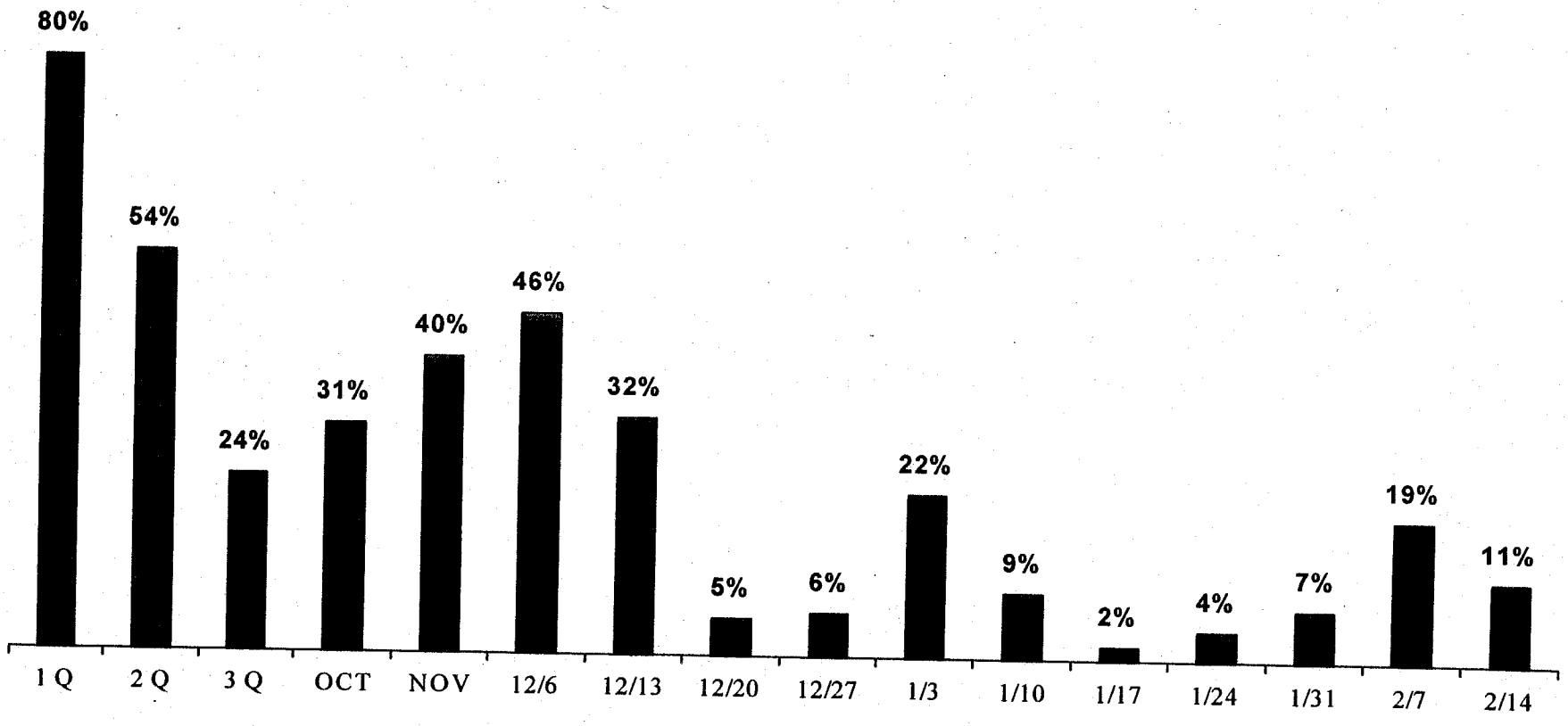


NUMBER OF MIGRATION ORDERS COMPLETED EACH QTR / MONTH / WEEK:

15	588	6681	2894	2235	367	117	104	66	51	90	105	80	67	52	70

BellSouth Georgia an.. Florida Performance Migration Orders Completions

% Of Migration Orders Not Completed On Supplier Expected Due Date



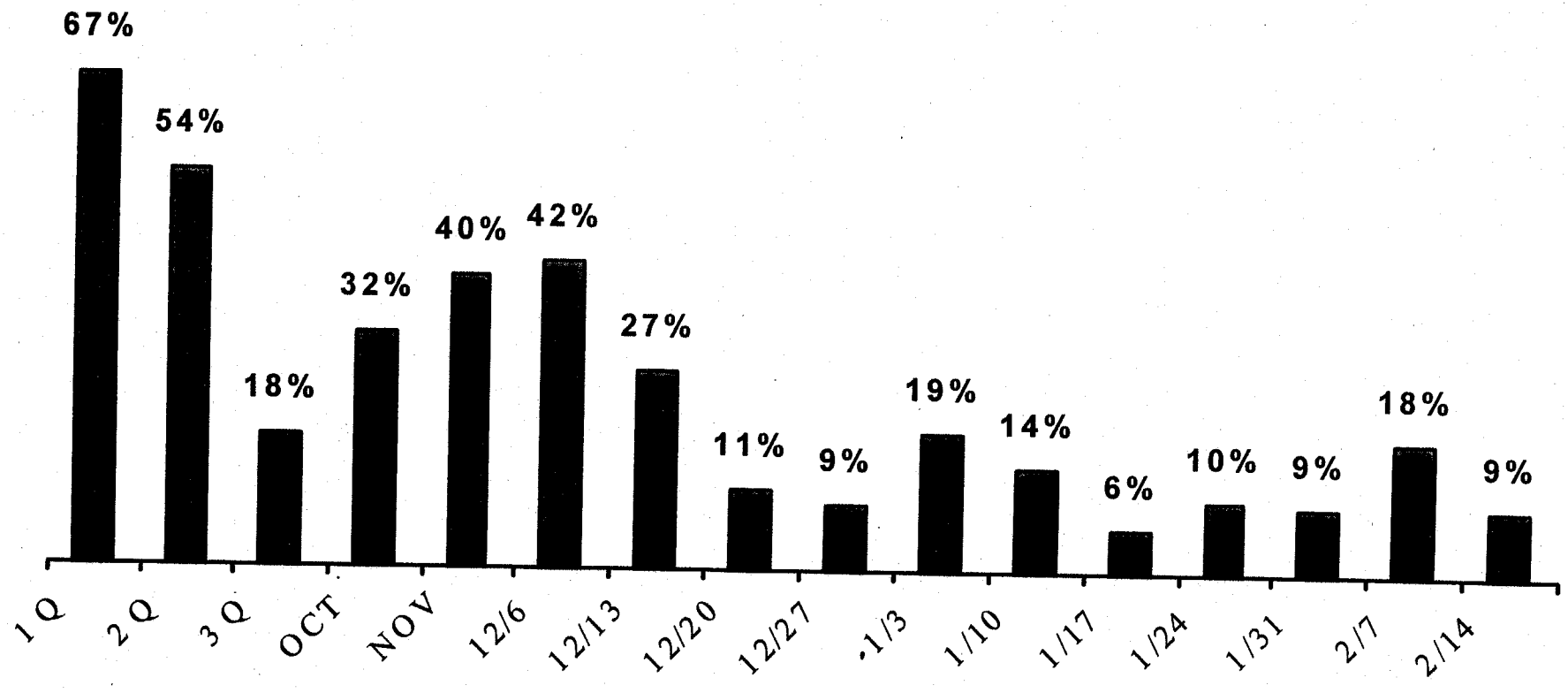
NUMBER OF MIGRATION ORDERS COMPLETED EACH QTR / MONTH / WEEK:

15	588	6681	2894	2235	367	117	104	66	51	90	105	80	67	52	70

BellSouth Georgia and Florida Performance

All Orders Completions

% ALL Orders Not Completed On Supplier Expected Due Date



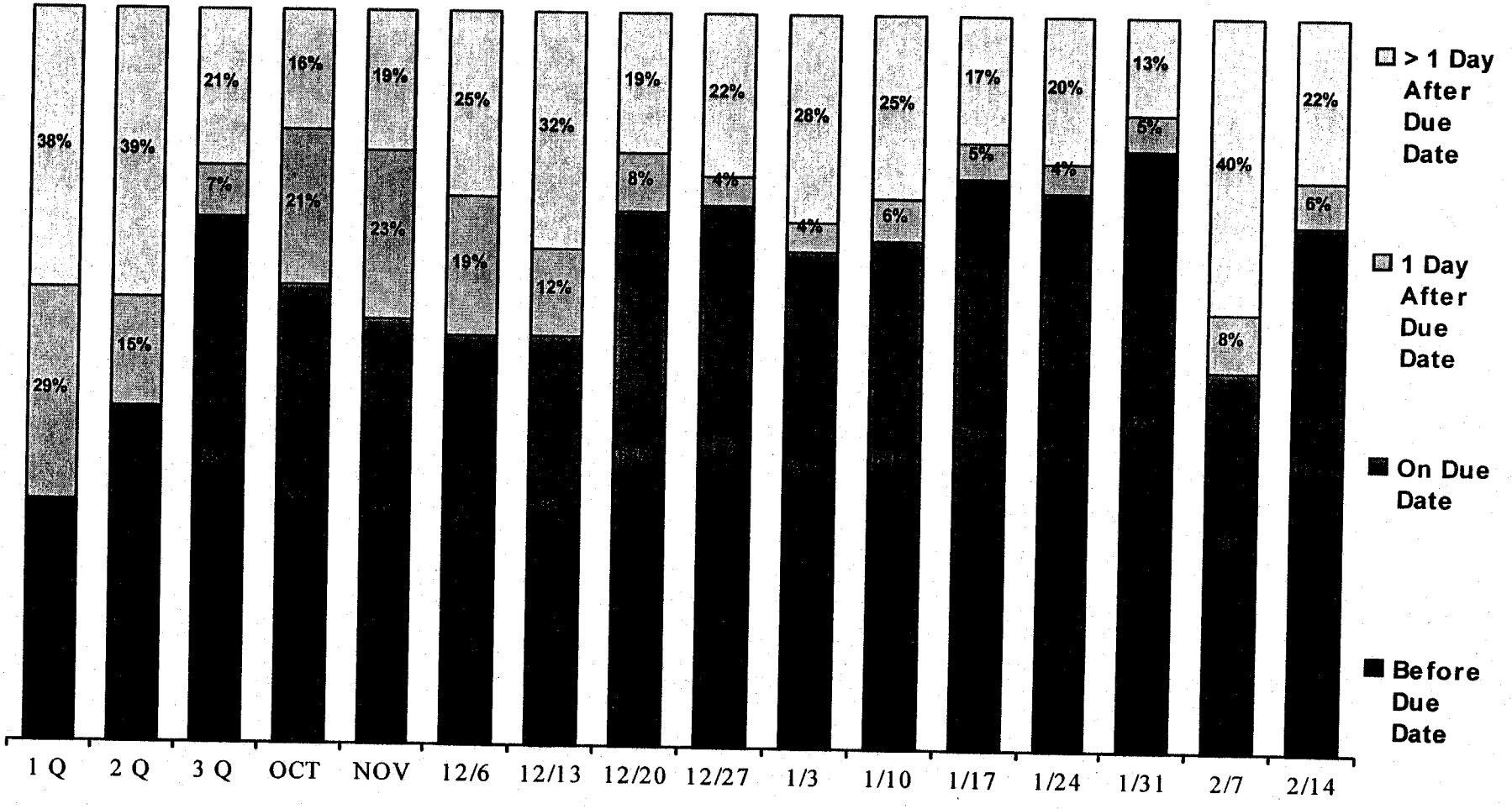
NUMBER OF ALL ORDERS COMPLETED EACH QTR / MONTH / WEEK:

21	724	7244	3276	2758	511	230	224	164	154	212	253	293	260	186	191

The precent of Completion notifications received for New and Migration Orders where the Actual Completion Date was after the Supplier Expected Due Date

BellSouth Georgia and Florida Performance

Completion Intervals

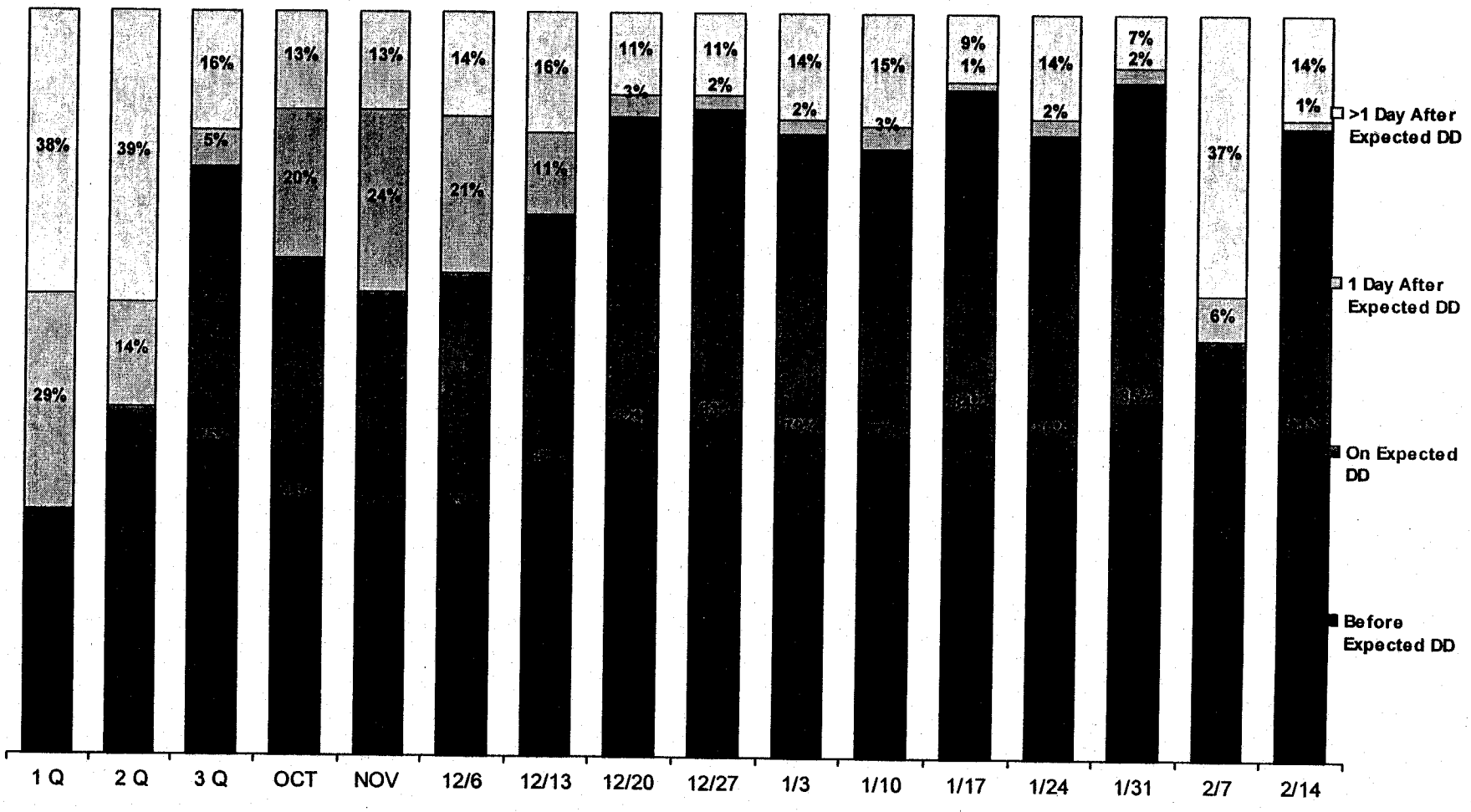


NUMBER OF TOTAL ORDERS COMPLETED EACH QTR / MONTH / WEEK:

1 Q	2 Q	3 Q	OCT	NOV	12/6	12/13	12/20	12/27	1/3	1/10	1/17	1/24	1/31	2/7	2/14
21	866	7900	3772	3809	774	436	470	342	328	512	527	521	525	550	532

Count Includes New, Migration and Other Orders

BellSouth Georgia and Florida Performance
Supplier Completion Intervals



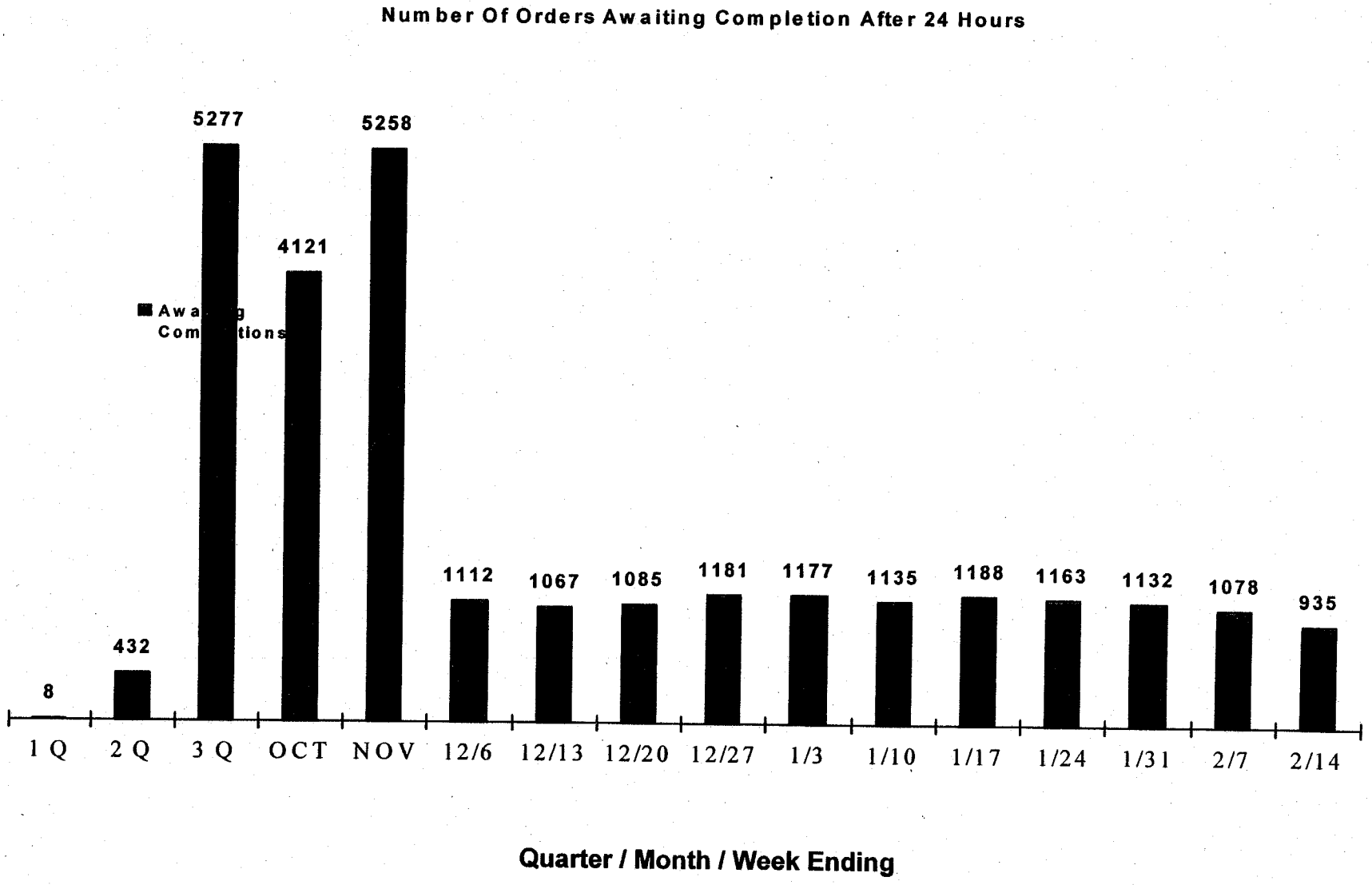
NUMBER OF TOTAL ORDERS COMPLETED EACH QTR / MONTH / WEEK:

21	866	7900	3772	3809	774	436	470	342	328	512	527	521	525	550	532

Count Includes New, Migration and Other Orders

BellSouth Georgia and Florida Performance

Back Log



The number of Work Orders that have received a FOC but have not received a Completion notice and the Customer Requested Due Date was over 24 hours

Stitt, Karen
From: Nelson, Pam
Sent: Saturday, February 14, 1998 1:21 PM
To: Stitt, Karen
Subject: FW: January 98 Performance Reports

Print and file please in library

From:
Gary.Romanick1@bridge.bellsouth.com[SMTP:Gary.Romanick1@bridge.bellsouth.com]
Sent: Friday, February 13, 1998 4:51 PM
To: Nelson, Pamela A, NLIAM
Subject: January 98 Performance Reports

Pam,

Attached is a copy of the January 1998 Performance Measurements Results.
Please call me if you have any questions.

Gary

ATT198~1.XLS

Reseller: AT&T Local
Firm Order Confirmation Report
For The Time Period: 010/1/98 to 01/31/98

Interval	1 to 4	4 to 8	8 to 12	12 to 16	16 to 20	20 to 24	>24	Total
Count By 4 Hours	969	172	72	185	104	103	307	1912
% By Interval	50.7%	9.0%	3.8%	9.7%	5.4%	5.4%	16.1%	
Cumulative %	50.7%	59.7%	63.4%	73.1%	78.6%	83.9%	100.0%	

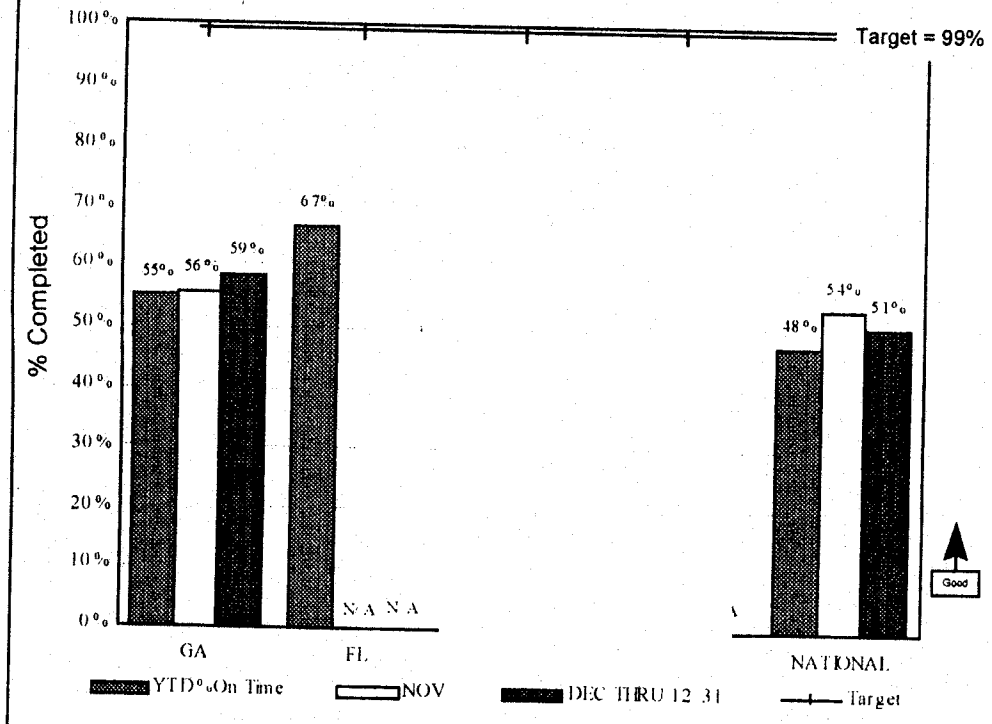
1. This is an interim FOC report that will be utilized until March of 1998.
2. This report represents the FOC intervals for all requests completed during the time period.
3. FOCs on versions other than those completed (requests submit but not completed, and canceled requests, etc.) are not included in this report.

AT&T / BellSouth Reject Cycle Time Measurements

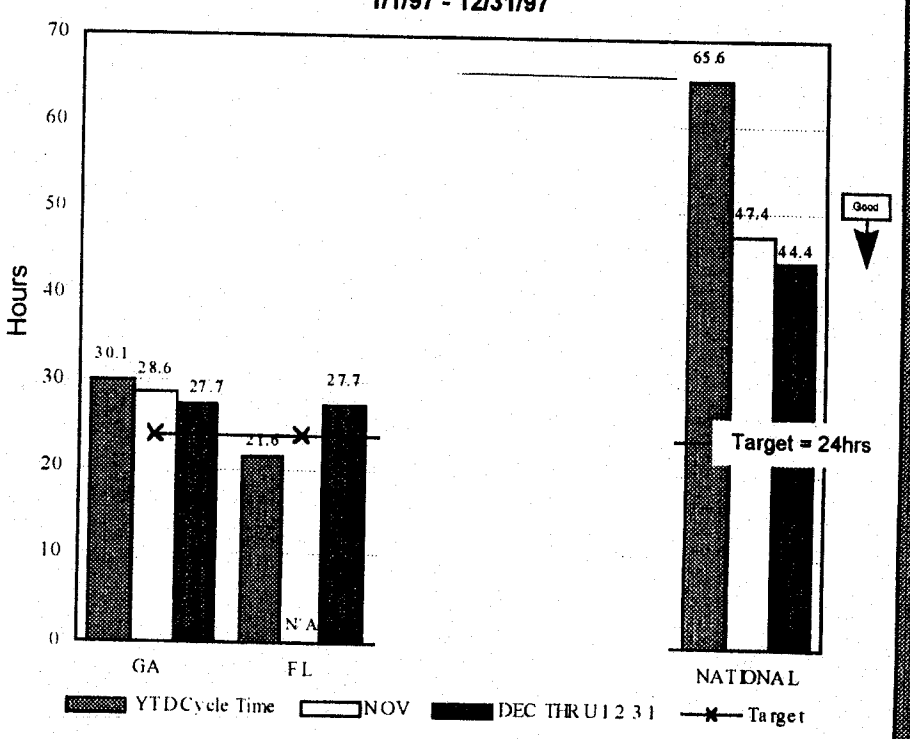
BellSouth reported results: Measurement– the % of rejection notices returned within one hour as required by the AT&T / BellSouth interconnection agreement.	Additional AT&T measurement– Average interval between submission of an order and return of rejection notice
November, 1997—16.10%	November Week 1 36.4 hours Week 2 65.8 hours Week 3 61 hours Week 4 151.9 hours
December, 1997--- 8.73%	December Week 1 214.2 hours Week 2 152.02 hours Week 3 28.30 hours Week 4 73.95 hours
January, 1998------ 28.89%	January Week 1 50.05 hours Week 2 75.72 hours Week 3 74.66 hours Week 4 84.98 hours
Not available	February Week 1 143.25 hours Week 2 62.45 hours Week 3 59.22 hours Week 4 87.08 hours

Supplier Maintenan) Performance
Southern Region - Consumer

Repair Timeliness
% Severity 1[1] Work Orders Completed Within 24 Hrs[2].
1/1/97 - 12/31/97



Mean Time to Restore
Average Time for Suppliers to Complete[3] Severity 1[1] Work Orders
1/1/97 - 12/31/97

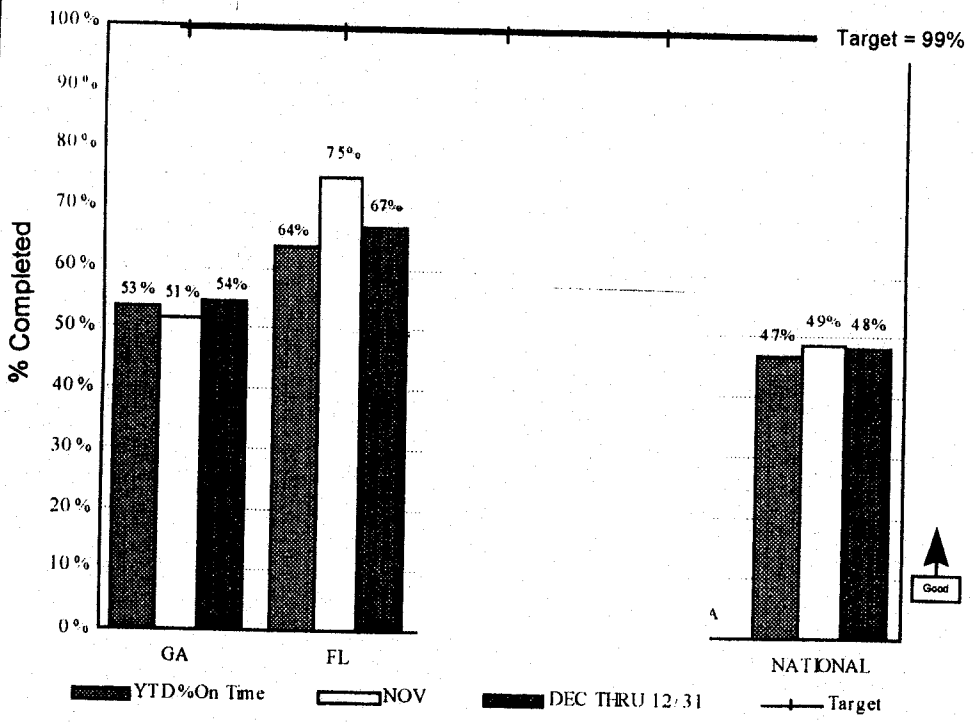


Notes: Source = Actiview IRA-MTC-010S

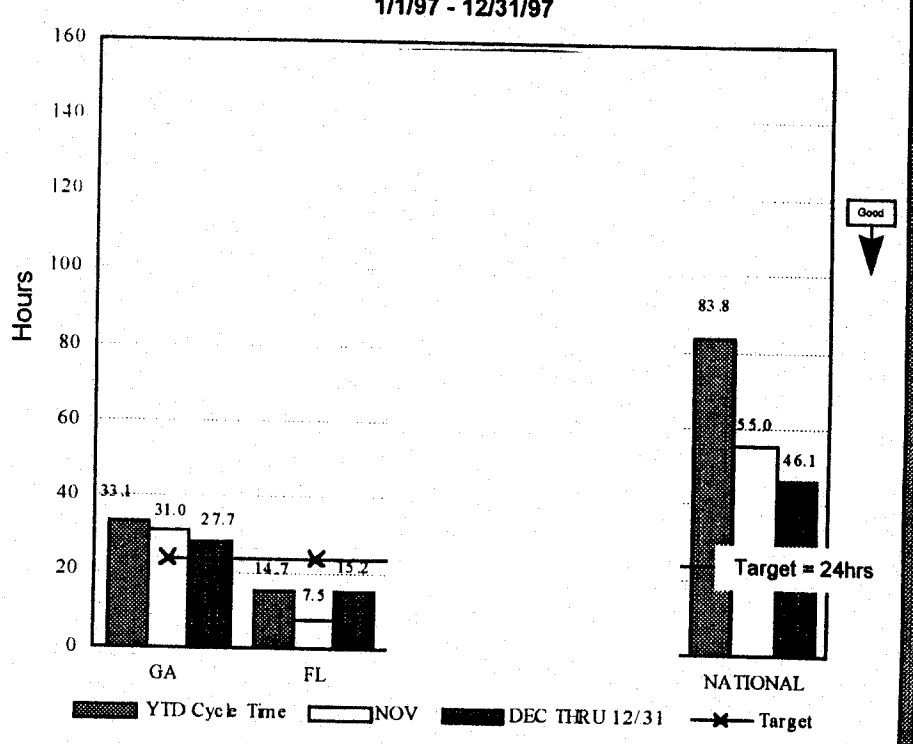
1. Severity 1 = Customer is out of service
2. This reflects Severity 1 work orders referred to LSP that are completed by LSP within 24 hours.
3. Reflects time from referral of work order to LSPs to completion of work order. Measures work orders only associated with closed customer trouble tickets. This measure is not an end to end cycle time, see end to end cycle time chart
4. Reflects through 12/31/97.

Supplier Maintenance Performance
Southern Region - Consumer

Repair Timeliness
% Severity 2-4[1] Work Orders
Completed Within 24 Hrs[2].
1/1/97 - 12/31/97



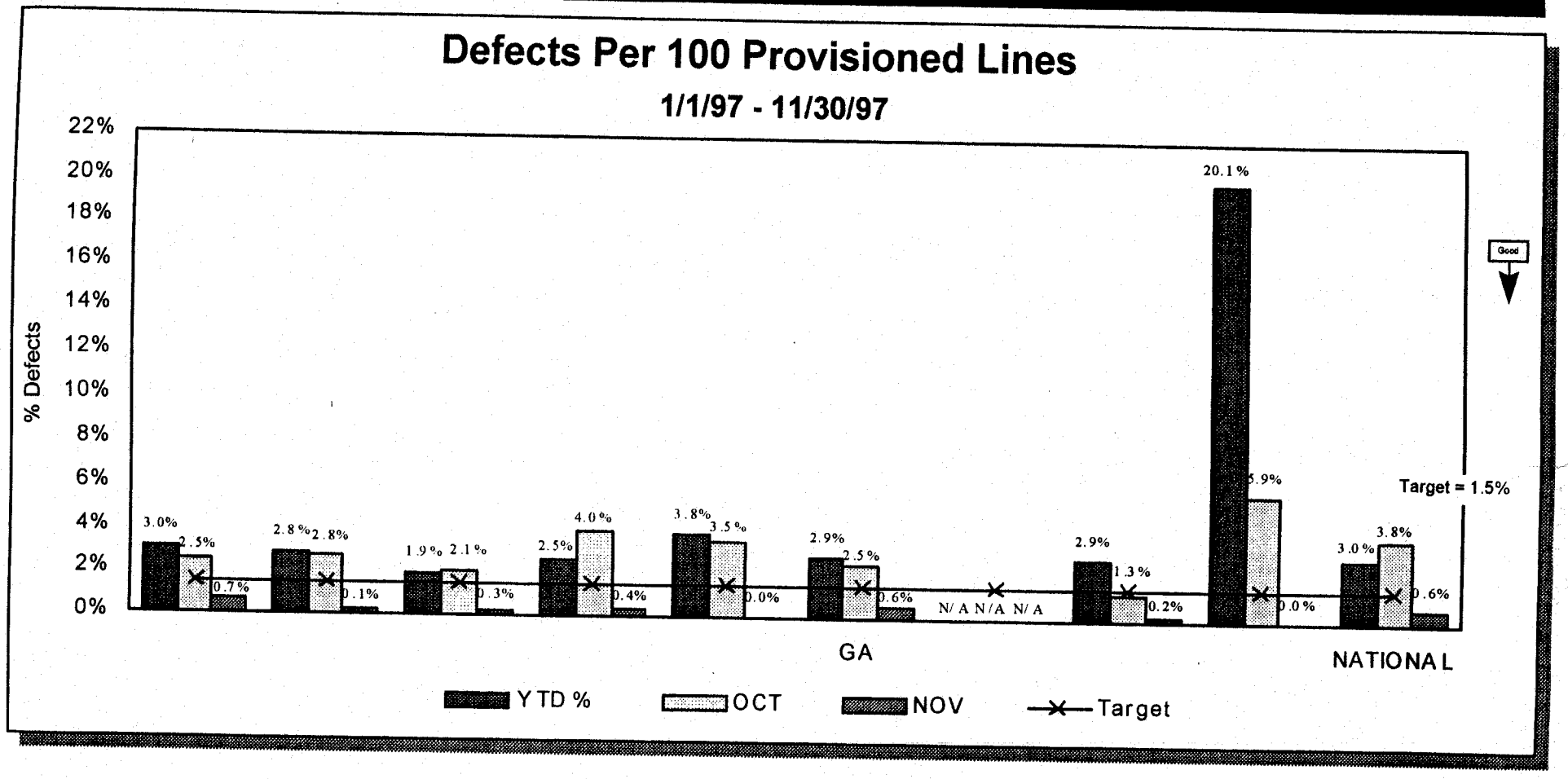
Mean Time to Restore
Average Time for Suppliers to Complete[3]
Severity 2-4[1] Work Orders
1/1/97 - 12/31/97



Notes: Source = Actiview IRA-MTC-010S

1. Severity 2-4 = transmission problems, partial loss of service or non-working feature
2. This reflects Severity 1 work orders referred to LSP that are completed by LSP within 24 hours.
3. Reflects time from referral of work order to LSPs to completion of work order. Measures work orders only associated with closed customer trouble tickets. This measure is not an end to end cycle time, see end to end cycle time chart
4. Reflects through 12/31/97.

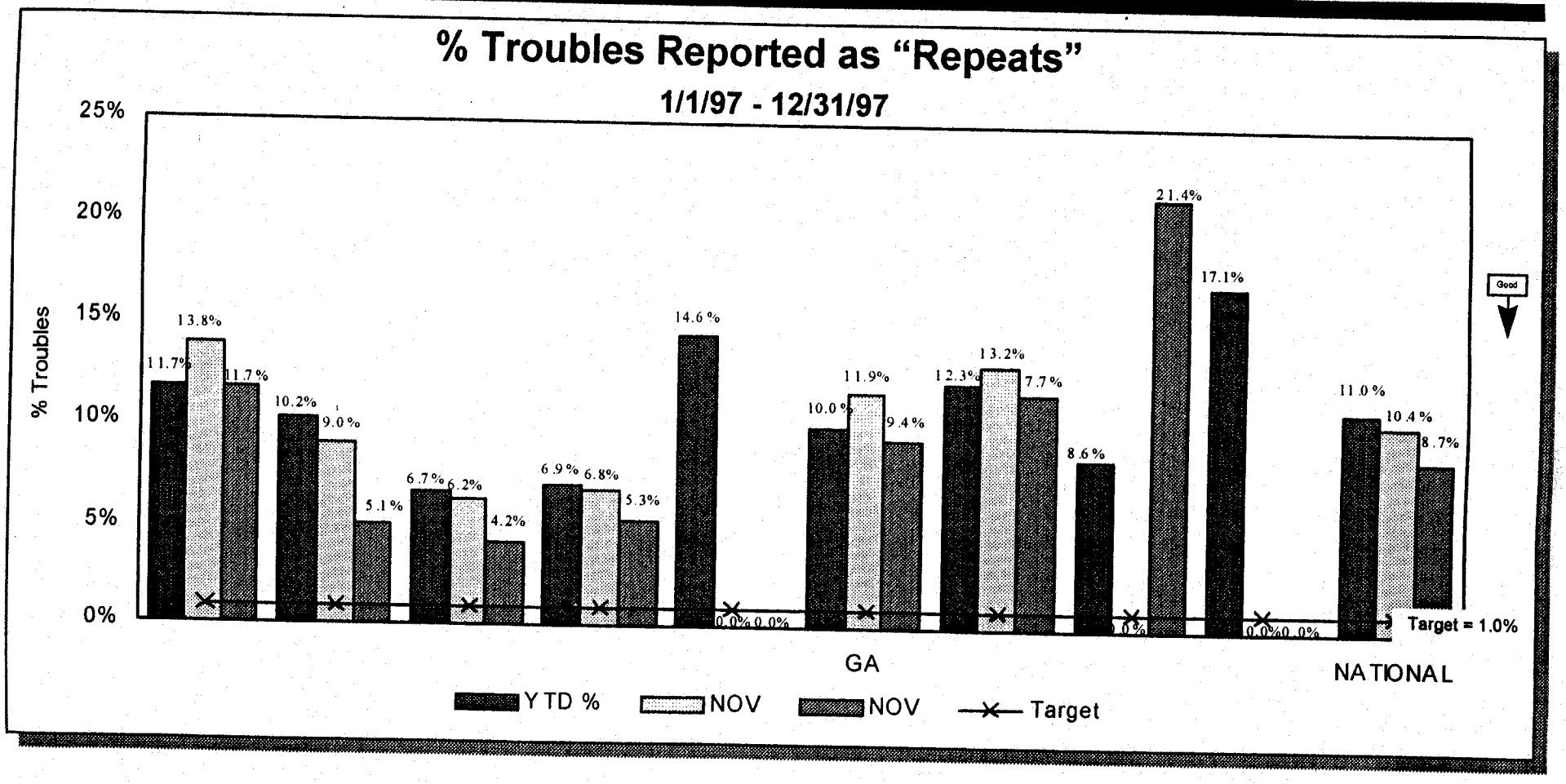
End to End Maintena ce Performance
Defects Per 100 Provisioned Lines - Consumer



Notes:

1. Source = Actiview IRA- MTC-006S
2. Sum of reported customer troubles, divided by total local subscriber access lines in service as of end of period being reported.

End to End Maintenance Performance
Repeat Troubles - Consumer



Notes:

1. Source = Actiview IRA- MTC-005S
2. Measures the % of customer troubles reported as 'repeats'. A repeat occurs when a customer has reported more than one trouble in the current and/or previous month for the same line.
3. Repeat troubles divided by total troubles in a month.

Alabama Docket 25835
Filed March 9, 1998

Exhibit JMB-5

Total Pages 2

Reseller : R7421 AT&T LOCAL
For Time Period: 02/01/1998 - 02/28/1998
Total Resale Services
Grand Totals

	AL	FL	GA	KY	LA	MS	NC	SC	TN	Region
Provisioning Appointments Met	0	0	1351	0	0	0	0	0	2	1353
Provisioning Orders Completed	0	0	1371	0	0	0	0	0	2	1373
% Provisioning Appointments Met			98.54						100	98.54
Provisioning Troubles within 30 days	0	0	90	0	0	0	0	0	0	90
Provisioning Orders Completed	0	0	1371	0	0	0	0	0	2	1373
% Provisioning Troubles within 30 days			6.56						0	6.55
Maintenance Appointments Met	0	1	350	0	0	0	0	0	0	351
Maintenance Trouble Reports	0	1	397	0	0	0	0	0	0	398
% Maintenance Appointments Met		100	88.16							88.19
Maintenance Avg Dur Rec to Clr Hours	0	29.08	7013.83	0	0	0	0	0	0	7042.92
Maintenance Avg Dur Rec to Clr Count	0	1	396	0	0	0	0	0	0	397
Maintenance Avg Dur Receipt to Clear		29.08	17.71							17.74
Maintenance Repeat Troubles within 30 days	0	0	74	0	0	0	0	0	0	74
Maintenance Trouble Reports	0	1	397	0	0	0	0	0	0	398
% Maintenance Repeat Troubles within 30 days		0	18.64							18.59
Maintenance Trouble Reports	0	1	397	0	0	0	0	0	0	398
Line Count (Total)	0	13	11507	0	0	0	0	0	5	11525
% Trouble Report Rate		7.69	3.45						0	3.45
Out of Service < 24 Hours	0	0	138	0	0	0	0	0	0	138
Out of Service	0	0	184	0	0	0	0	0	0	184
% Out of Service < 24 Hours			75							75

Note(s):
In Service Lines based on billing records on 03/03/98.

NA = Not Applicable
(NA indicates measurements that do not apply to the particular measure
Blank cells occur as a result of either No activity
or when a divide by zero error would result.

BELLSOUTH LOCAL SERVICES MECHANIZED BILLING

BILLING ACCOUNT	BILL DATE	TEST BILL RECEIVED	FORMAT / RECORD ERRORS	OUT OF BALANCE
770Q909090412	07/20/97	07/25/97 07/28/97	Yes	$50,034..65
912Q909090411	07/20/97	07/25/97 07/28/97	Yes	$760.90
770Q909090412	08/20/97	08/25/97	Yes	$1,303.81
912Q909090411	08/20/97	08/25/97	Yes	$518.53
770Q909090412	09/20/97	10/02/97	Yes	$3,932.10
912Q909090411	09/20/97	10/02/97	Yes	$2,009.47
770Q909090412	10/20/97	11/11/97	No	$3,024.69
912Q909090411	10/20/97	11/11/97	No	$7,537.84
770Q909090412	11/20/97	12/01/97	No	$2,492.65
912Q909090411	11/20/97	12/01/97	No	$9,622.62
770Q909090412	12/20/97	01/02/98	No	$3,142.07
912Q909090411	12/20/97	01/02/98	No	$9,803.37
770Q909090412	01/20/98	01/30/98	No	$3,245.12
912Q909090411	01/20/98	01/30/98	No	Yes Dollars Not Available

BELLSOUTH LOCAL SERVICES MECHANIZED BILLING

BILLING ACCOUNT	BILL DATE	TEST BILL RECEIVED	FORMAT / RECORD ERRORS	OUT OF BALANCE
770Q909090412	02/20/98	02/26/98	No	$3,168.54
912Q909090411	02/20/98	02/26/98	No	$8,829.08

BELLSOUTH BILLING
UNBUNDLED NETWORK ELEMENTS

BILLABLE ELEMENTS AND BILLING FORMAT						
UNBUNDLED NETWORK ELEMENT	ELEMENTS EXPECT ON TEST	BILLING	SYSTEM	BILLING RECEIVED	Usage Data	USAGE FILE
		CABS	CRIS	THRU 2/20/98		
Network Interface Device (NID)			X			
Unbundled Loops - Designed		X				
Unbundled Loops - Non-designed			X			
Loop Concentration - Designed		X				
Loop Concentration - Non-designed			X			
Sub-Loops - Designed		X				
Sub-Loops - Non-designed			X			
Loop and Port	X		Interim	Yes		
Interoffice Transport - Dedicated		X				
Interoffice Transport - Common	X		Interim	Yes	No Have not rec'd recording details	ADUF Org/Ter recording
Tandem Switching (element and recording details)	X		Interim	Yes	No Have not rec'd recording details	ADUF Org/Ter recording
Local Switching (element and detailed recording expected)	X		Interim	Yes	No Have not rec'd recording details	ADUF Org/Ter recording
SS7 Signaling	X	X		?		
Open AIN		X	X			
Collocation		X				
OSS			X			
CMDS - Resale			X			

BELLSOUTH BILLING
UNBUNDLED NETWORK ELEMENTS

CMDS - Facility Based		X				
Unbundled Packet Switching		X				
Digital Cross Connect		X				
800 Database	X	X		?		
LIDB		X		?		
Operator Call Processing	X		X	No - element unidentifed on wholesale bill - lumped under OCC	Yes	ODUF
Directory Access to DA Service	X	X		?		ODUF
Directory Assistance Access Service	X		X	No - element unidentified - lumped under OCC	Yes	ODUF
Directory Assistance Number Services Intercept	X		X	No element unidentified - lumped under OCC	Yes	ODUF
Directory Assistance Call Completion			X	No - element unidentified - lumped under OCC	Yes	ODUF
Directory Assistance Transport	X	X		?	Yes	ODUF
Directory Assistance Database Service	X	X		?	Yes	ODUF

Note: ? means we are not currently able to distinguish UNE charges from other local charges received on the CABS bill.
Note: Past recording data not recoverable.
Note: Charges under OCC must be broken out by defined USOC

BELLSOUTH BILLING
UNBUNDLED NETWORK ELEMENTS

BILLED USOCs AND BILLING FORMAT RECEIVED FOR 02/20/98 BAN 502Q909091091 - KENTUCKY			
BILLED USOC	DESCRIPTION	UNE ELEMENT	BILLING SYSTEM
			CRIS
ESM	Call Forwarding - Zero Rated - No Charge Billed	No	X
ESX	Call Waiting - Zero Rated - No Charge Billed	No	X
FCS	Flexible Call Forwarding - Zero Rated - No Charge Billed	No	X
SRG	Selective Class of Call Screening - Zero Rated - No Charge Billed	No	X
TTR	Touch Tone - Zero Rated - No Charge Billed	No	X
1LS12	Mileage Zone	No	X
UEPBL	Unbundled Exchange Port, Business Measured	Yes	X
UEPRL	Unbundled Exchange Port, Residence Measured	Yes	X
UEPLX	Unbundled Loop Voice Grade	Yes	X
	Unbundled Local Switching Usage - Switching Function	Yes	X

NOTES:

1. Unbundled Local Switching Usage - Switching Function was billed in the OC&C section of the CRIS bill at the BAN level. Charges were displayed but associated Minutes of Use (MOUs) were not displayed.
2. We are not currently able to distinguish UNE charges from other local charges received on the CABS bill.

BELLSOUTH BILLING
UNBUNDLED NETWORK ELEMENTS

BILLED USOCs AND BILLING FORMAT RECEIVED FOR 02/20/98 BAN 305Q909091091 - FLORIDA			
BILLED USOC	DESCRIPTION	UNE ELEMENT	BILLING SYSTEM
			CRIS
CREXN	Customized Code Restriction Blocking of 976 Calls - Zero Rated - No Charge Billed	No	X
CREX4	Custom Toll Restriction - Zero Rated - No Charge Billed	No	X
DRS	Ringmaster 1 One Ringmaster Number with Distinctive Ring - Zero Rated - No Charge Billed	No	X
ESC	Three-way Calling - Zero Rated - No Charge Billed	No	X
ESL	8 Code Speed Calling - Zero Rated - No Charge Billed	No	X
ESM	Call Forwarding - Zero Rated - No Charge Billed	No	X
ESX	Call Waiting - Zero Rated - No Charge Billed	No	X
HTG	Hunting Rollover Service - Zero Rated - No Charge Billed	No	X
NSD	Caller ID Number Delivery - Zero Rated - No Charge Billed	No	X
HTGUX	Unbundled Exchange Port Rotary Service	Yes	X
UEPBL	Unbundled Exchange Port, Business Measured	Yes	X
UEPRL	Unbundled Exchange Port, Residence Measured	Yes	X
UEPLX	Unbundled Loop Voice Grade	Yes	X
	Unbundled Local Switching Usage - Switching Function	Yes	X
	Unbundled Interoffice Transport Usage Fixed	Yes	X
	Unbundled Tandem Switching Usage - Switching Function	Yes	X

NOTES:

1. Unbundled Local Switching Usage - Switching Function, Unbundled Interoffice Transport Usage Fixed, and Unbundled Tandem Switching Usage - Switching Function were billed in the OC&C section of the CRIS bill at the BAN level. Charges were displayed but associated Minutes of Use (MOUs) were not displayed.
2. We are not currently able to distinguish UNE charges from other local charges received on the CABS bill.

BELLSOUTH BILLING
UNBUNDLED NETWORK ELEMENTS

BILLED USOCs AND BILLING FORMAT RECEIVED FOR 02/20/98 BAN 561Q909091091 - FLORIDA			
BILLED USOC	DESCRIPTION	UNE ELEMENT	BILLING SYSTEM
			CRIS
ESM	Call Forwarding - Zero Rated - No Charge Billed	No	X
UEPRL	Unbundled Exchange Port, Residence Measured	Yes	X
UEPLX	Unbundled Loop Voice Grade	Yes	X
	Unbundled Local Switching Usage - Switching Function	Yes	X
	Unbundled Interoffice Transport Usage Fixed	Yes	X

NOTES:

1. Unbundled Local Switching Usage - Switching Function and Unbundled Interoffice Transport Usage Fixed were billed in the OC&C section of the CRIS bill at the BAN level. Charges were displayed but associated Minutes of Use (MOUs) were not displayed.
2. We are not currently able to distinguish UNE charges from other local charges received on the CABS bill.

BELLSOUTH BILLING
UNBUNDLED NETWORK ELEMENTS

BILLED USOCs AND BILLING FORMAT RECEIVED FOR 02/20/98 BAN 904Q909091091 - FLORIDA			
BILLED USOC	DESCRIPTION	UNE ELEMENT	BILLING SYSTEM
			CRIS
ESC	Three-way Calling - Zero Rated - No Charge Billed	No	X
ESX	Call Waiting - Zero Rated - No Charge Billed	No	X
MFD3X	Multiple Feature Credit for Three Features	No	X
NXMCR	Caller ID Name and Number Delivery with Anonymous Call Rejection - Zero Rated - No Charge Billed	No	X
UEPRL	Unbundled Exchange Port, Residence Measured	Yes	X
UEPLX	Unbundled Loop Voice Grade	Yes	X
	Unbundled Local Switching Usage - Switching Function	Yes	X
	Unbundled Interoffice Transport Usage Fixed	Yes	X
	Unbundled Interoffice Transport Usage Mileage	Yes	X
	Unbundled Tandem Switching Usage - Switching Function	Yes	X

NOTES:

1. Unbundled Local Switching Usage - Switching Function, Unbundled Interoffice Transport Usage Fixed, Unbundled Interoffice Transport Usage Mileage, and Unbundled Tandem Switching Usage - Switching Function were billed in the OC&C section of the CRIS bill at the BAN level. Charges were displayed but associated Minutes of Use (MOUs) were not displayed.
2. We are not currently able to distinguish UNE charges from other local charges received on the CABS bill.

BELLSOUTH BILLING
UNBUNDLED NETWORK ELEMENTS

BILLED USOCs AND BILLING FORMAT RECEIVED FOR 02/20/98 BAN 615Q909090288 - TENNESSEE			
BILLED USOC	DESCRIPTION	UNE ELEMENT	BILLING SYSTEM
			CRIS
	All charges billed as Resale/TSR		

BILLED USOCs AND BILLING FORMAT RECEIVED FOR 02/20/98 BAN 770Q909091091 - GEORGIA			
BILLED USOC	DESCRIPTION	UNE ELEMENT	BILLING SYSTEM
			CRIS
	No UNE charges received		

BEFORE THE
TENNESSEE REGULATORY AUTHORITY

TESTIMONY OF
KATHERINE M. DAILEY
ON BEHALF OF
AT&T COMMUNICATIONS OF THE SOUTH
CENTRAL STATES, INC.

IN RE: BELLSOUTH'S ENTRY INTO LONG DISTANCE UNDER SECTION 271

DOCKET NO. 97-00309

March 27, 1998

AT&T COMMUNICATIONS OF THE SOUTH CENTRAL STATES, INC.

TESTIMONY OF KATHERINE M. DAILEY

BEFORE THE TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 97-00309

MARCH 27, 1998

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Katherine M. Dailey. My business address is 295 North Maple Avenue, Basking Ridge, New Jersey 07920.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by AT&T Corp., and I serve as Staff Manager, Local Services Division Negotiations Support. My responsibilities include helping to develop and communicate the business requirements to the regional teams negotiating with the Incumbent Local Exchange Carriers (ILECs).

Q. WHAT IS YOUR PROFESSIONAL EXPERIENCE?

A. I have held a variety of management positions at AT&T over the last seven years, including positions in center operations, network fraud management, and finance.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

A. I have a Bachelor of Arts Degree from the University of Notre Dame and a Master of Science Degree in Management from Stevens Institute of Technology.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In order to demonstrate compliance with §§ 251 and 271 of the Telecommunications Act of 1996, BellSouth must establish that it offers nondiscriminatory access and interconnection to its network and that it provides nondiscriminatory support for total services resale, use of Unbundled Network Elements ("UNEs"), and access to operations support systems ("OSS"). The purpose of my testimony is to demonstrate that BellSouth has not met this burden because it does not have adequate performance measures in place to generate data for the Tennessee Regulatory Authority to determine whether access is nondiscriminatory. Accordingly, a finding that BellSouth meets all the requirements of the Section 271 checklist is precluded.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. First, I will describe BellSouth's obligation to provide nondiscriminatory access and interconnection to its network and nondiscriminatory support. Second, I will describe the importance of a well-developed and properly operating set of performance measures to determining BellSouth's compliance with the requirements of nondiscriminatory access and support. Third, I will set forth and support a comprehensive but reasonable set of performance measurements that AT&T supports as the foundation for a plan designed to monitor for discrimination on the part of BellSouth. Fourth, I will demonstrate that much work remains to be done before BellSouth's measurement plan conforms to the criterion that will adequately monitor for non-discrimination. Finally, I will demonstrate that the results of even the minimal testing BellSouth has performed demonstrates that CLECs do not receive parity service.

I. BELLSOUTH'S OBLIGATION TO PROVIDE NONDISCRIMINATORY ACCESS AND INTERCONNECTION TO ITS NETWORK AND NONDISCRIMINATORY SUPPORT

Q. WHERE IS THE NONDISCRIMINATION MANDATE FOUND?

A. Sections 251 and 271 of the Act establish BellSouth's obligation to provide nondiscriminatory access and interconnection to its network and nondiscriminatory support. Early in the process of implementing the Act, the Federal Communications Commission (FCC) emphasized that ILECs' nondiscriminatory support for CLECs is critical to the ultimate development of local competition. (See First Report and Order, *Implementation of Local Competition Provisions in the Telecommunications Act of 1996,* FCC Docket No. 96-98 (released August 8, 1996) ("Local Competition Order) ¶315. This Authority, likewise, expressed its commitment to assuring that CLECs are not competitively disadvantaged by the quality and timeliness of support delivered by BellSouth. (Docket 96-01152, Second and Final Order of Arbitration Awards, January 23, 1997, page 26).

Q. WHO HAS THE BURDEN OF DEMONSTRATING NONDISCRIMINATORY ACCESS AND SUPPORT?

A. BellSouth must demonstrate nondiscriminatory access and support through empirical evidence of sufficient quality and quantity. Memorandum and Opinion, FCC Docket No. 97-298 (Aug. 19, 1997) ("Ameritech Michigan Order") ¶¶ 161, 211. It is not the CLEC's burden to establish a lack of parity. Id. at 158.

Q. WHAT DATA IS NECESSARY TO DETERMINE WHETHER BELLSOUTH IS PROVIDING NONDISCRIMINATORY ACCESS AND INTERCONNECTION?

A. BellSouth must produce actual measurement results demonstrating that it provides the same access and interconnection to its competitors that BellSouth provides to itself.

Promises to deliver measurement results at some future time are not sufficient. As the FCC noted "a BOCs promise of *future* performance to address particular concerns raised by commentors have no probative value in demonstrating its *present* compliance with the requirements of section 271. Paper promises do not, and cannot, satisfy a BOC's burden of proof." Ameritech Michigan Order ¶55. The FCC emphasized that "it is essential for [the FCC], as both fact-finder and decision-maker, to have the empirical evidence necessary to make a reasoned and informed decision." Ameritech Michigan Order ¶ 212. The Authority, like the FCC, needs actual data to make a determination.

Q. IN WHAT AREAS MUST AN ILEC DEMONSTRATE DELIVERY OF NONDISCRIMINATORY SUPPORT TO CLECS?

A. In the Ameritech Michigan Order, the FCC summarized the operational aspects where nondiscriminatory performance must be demonstrated: "The Commission [has] concluded that, in order to meet the nondiscriminatory standard for OSS, an incumbent LEC must provide to competing carriers access to OSS functions for pre-ordering, ordering, provisioning, maintenance and repair, and billing that is equivalent to what it provides itself, its customers or other carriers. Additionally, the Commission [has] concluded that incumbent LECs must generally provide network elements, including OSS functions, on terms and conditions that 'provide an efficient competitor with a meaningful opportunity to compete.'" Ameritech Michigan Order, ¶130. The FCC went on to say: "In determining whether a BOC has met it OSS obligation under section 271, the Commission generally must determine whether access to OSS functions provided by the BOC to competing carriers sufficiently supports each of the three modes of competitive entry strategies established by the Act: interconnection, unbundled network elements, and services offered for resale." Id. ¶131.

II. THE IMPORTANCE OF PERFORMANCE MEASUREMENTS

Q. HOW IS THIS REQUIREMENT FOR NONDISCRIMINATION RELATED TO PERFORMANCE MEASUREMENTS?

A. In this docket, BellSouth has the obligation to demonstrate that it is providing nondiscriminatory access to its network. A factual showing is required to establish that BellSouth's support of CLECs is at least equivalent to the quality of support provided to its own retail operation. (See Second Order on Reconsideration, *Implementation of Local Competition Provisions in the Telecommunications Act of 1996,* FCC Docket No. 96-98 (released December 13, 1996) ("Second Order on Reconsideration") ¶9. The only way to make that factual showing is to measure the performance BellSouth provides to competitors and compare it to the performance BellSouth provides itself.

Q. WHY IS A DIVERSE SET OF MEASUREMENTS REQUIRED AND WHY MUST PARITY BE ASSURED FOR EACH AREA MEASURED?

A. If a CLEC fails to service its customers in a manner comparable to the service delivered by the ILEC, the CLEC quickly will acquire an unjustified reputation for poor or inferior customer service. Such a reputation is difficult to overcome in a competitive marketplace, and the customer repercussions will be swift and long lasting. The quality of service provided to CLEC customers is not however completely within the CLEC's control. The functional support provided to a CLEC by BellSouth directly affects the CLEC's ability to provide commercially viable services. For example, AT&T's ability to switch a customer's service at the appointed time without taking the customer out of service for an extended period is not within AT&T's control. It depends upon whether BellSouth has in place adequate methods and procedures to cutover service and implements those procedures properly. If BellSouth does not, AT&T's new customer

may not have their service switched at the appointed time and may be out of service for an extended period. Although the negative experience was caused by BellSouth, it will reflect upon AT&T. Thus, performance measurements monitoring the parity of functional support are crucial to the full development of competition.

Q. WHY MUST PARITY BE ASSURED REGARDLESS OF THE CLEC MARKET ENTRY STRATEGY?

A. The Act guarantees multiple entry modes and requires support for each of them; it does not promote any one entry strategy over another. Accordingly, BellSouth may not be permitted to influence the attractiveness of a particular market entry strategy to CLECs by withholding support or providing inadequate attention to support for other modes of entry. For example, CLEC's may chose to compete using unbundled network elements because that mode of market entry allows the CLEC to distinguish itself in the market by offering different mixes of service features, feature packages, and more attractive pricing options. If BellSouth does not support the delivery of service through UNEs, in a manner at parity with support of it own operations, then BellSouth is using its monopoly power to affect the CLEC's ability to compete using UNEs through an exercise of monopoly power. By that I mean, if it takes substantially longer to deliver service through UNEs, or if services based on UNEs are inherently less reliable, CLEC's cannot effectively compete using UNEs. Any performance measurement plan directed at monitoring for discrimination must, therefore, be capable of making separate determinations that services resale, use of unbundled network elements and interconnection are each supported in a nondiscriminatory manner. The FCC has made this requirement clear in its implementation of the Act (e.g., Ameritech Michigan Order, ¶159). To date, however, BellSouth has elected to virtually ignore most performance measurements except as they relate to services resale – the mode of market entry to which BellSouth apparently seeks to steer the CLECs.

Q. WHY IS PARITY NECESSARY WITH RESPECT TO ACCESS TO OSS FUNCTIONALITY?

A. Nondiscriminatory access to OSS functionality is one of the most basic requirements to successful development of competition. Ordering services for resale or unbundled elements, such as a loop, require CLEC interaction with BellSouth's OSS. The capability to discuss service and telephone number availability while a customer is on the line is delivered through interaction with BellSouth's OSS. The ability to request customer maintenance or to monitor customer order progress is supported through BellSouth's OSS. The ability to bill customers in a timely and accurate manner is heavily influenced by the ILEC's OSS. The list could go on. The point is that absent nondiscriminatory access to OSS functionality, there is little likelihood that CLEC performance at the retail service level will be at parity either.

Q. WHY ARE INTERCONNECTION AGREEMENT PERFORMANCE MEASUREMENTS GENERALLY INADEQUATE TO MONITOR WHETHER OR NOT PARITY IS DELIVERED?

A. As a general proposition, contractual performance standards serve a different purpose than monitoring for discrimination. Contractual performance standards or requirements are designed to aid in the enforcement of private agreements between parties. They are the product of negotiations between adverse parties, one of which has an incentive to impose rigorous standards (the CLECs), while the other (the ILEC) has the opposite incentive to establish standards that can be met with little or no difficulty. Where the final contractual performance standards end up along that spectrum is entirely dependent upon the relative strength and bargaining power of the respective parties. Furthermore, at the time of contract negotiations, the CLECs had relatively little information about what

level of performance under the contract would represent parity with the ILEC's performance for its own retail operations.

Q. ARE YOUR COMMENTS TRUE FOR THE NEGOTIATED PERFORMANCE MEASUREMENTS SPECIFIC TO AT&T AND BELLSOUTH HERE IN TENNESSEE?

A. Yes. Beyond the fact that the interconnection agreements were a "negotiated/arbitrated" settlement, three other considerations must be kept in mind:

1. The interconnection agreement performance measurements were designed to measure contract compliance. As such, the use of "% exceed target" types of measures are employed. Although these measurements are adequate for contract enforcement, they have been found inadequate for the purposes of monitoring and demonstrating nondiscrimination. (see Ameritech Michigan Order footnote 542 to ¶211)

2. The interconnection agreement performance measurements were established, in great part, in advance of much of the guidance provided by the FCC with respect to performance results necessary to satisfy 271 application requirements. Many of the essential performance measurements required by the FCC are not present in the performance measurements incorporated in AT&T's interconnection agreement. Beyond that, although measurements addressing the appropriate operational area (e.g., service installation interval) may be reflected in the interconnection agreement, the form of the measurement (e.g., % of orders completed within 6 days) has been found unsatisfactory. The FCC will look closely at any 271 application that is substantially based upon interconnection agreement measurements in order to assure that the measurements have sufficient scope and are properly designed. (Ameritech Michigan Order ¶142)

3. BellSouth, as reflected in its Attachment 1 to its SGAT, is proposing an entirely revised basis for monitoring its performance so as to demonstrate compliance with the nondiscrimination requirements of the Act. The Authority should, therefore, consider the adequacy of the current BellSouth proposal for it is what BellSouth apparently intends to rely upon in its ultimate 271 application to the FCC.

III. AT&T'S PROPOSED PERFORMANCE MEASURES

Q. WHAT CHARACTERISTICS SHOULD BE PRESENT IN A MEASUREMENT PLAN DESIGNED TO MONITOR DELIVERY OF NONDISCRIMINATORY SUPPORT OF SERVICES RESALE, UNBUNDLED NETWORK ELEMENTS, AND OSS ACCESS?

A. Five key characteristics must be part of any measurement plan designed to monitor nondiscrimination. The characteristics constitute the "ground rules" that should be applied to determine whether the overall measurement plan is functional and capable of monitoring on-going delivery of the nondiscriminatory support necessary for CLECs to have a meaningful opportunity to compete.

First, a comprehensive set of comparative (CLEC versus the ILEC) measures of performance must exist to monitor nondiscriminatory support for services resale, the use of UNEs and access to OSS functionality. In its decision rejecting Ameritech's application to provide in-region, interLATA service in Michigan, the FCC found that comparative measurements must exist for all modes of entry. Ameritech Michigan Order ¶¶ 211, 159. The order further stated that the measurements must allow comparison of

performance for CLECs against a retail analog of the ILEC or, when an analog does not exist, against an objective performance standard. Id. at ¶ 139-141.

Second, performance monitoring measures must be defined and any necessary calculations must be set forth clearly. In addition, all conditions that will be excluded from computation of the performance measure must be completely disclosed. Without a clear understanding of the "meaning and scope" of the performance measurements, the Authority cannot "properly evaluate whether the empirical data substantiate [the ILEC's] claim." Ameritech Michigan Order ¶ 209.

Third, 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 the ILEC and CLEC performance are simply insufficient for the purposes of demonstrating that such a fundamental requirement of the Act – nondiscrimination – is discharged by BellSouth.

Fourth, the data collection and reporting of performance measures must permit disaggregation of results according to key factors that may influence the overall results, such as product mix, geographic differences, activity variation, or differences in the extent of manual intervention. The FCC has stated the RBOC "can and should disaggregate its data." Ameritech Michigan Order ¶ 170. The DOJ Affiant discussing performance measurements very clearly stated in the very first RBOC 271 application, that results should be separately stated by geographic market and by product. (Evaluation of the United States Department of Justice, FCC Docket 97-121, May 16, 1997, Tab D: Affidavit of Michael J Friduss ¶¶38-41).

Finally, the performance measurement system must capture and produce results on a regular basis. The results produced must be stable and able to be subjected to independent validation through an auditing procedure.

Q. WHAT DOES AT&T ADVOCATE AS THE MINIMAL SET OF PERFORMANCE MEASURES THAT WILL ASSIST THIS AUTHORITY IN ITS CONSIDERATION OF WHETHER OR NOT BELLSOUTH CURRENTLY PROVIDES NONDISCRIMINATORY SUPPORT AND ACCESS TO CLECS?

A. AT&T supports the use of the Local Competition Users Group ("LCUG") metrics as a starting point for monitoring parity and nondiscrimination. The measurements are documented in the "Local Competition Users Group, Service Quality Measurements, Version 6.1" supplied to the Authority by AT&T. They represent the "critical few" measures upon which a truly effective measurement plan can be constructed.

Q. WHAT IS THE LOCAL COMPETITION USERS GROUP?

A. 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.

Q. HAVE THE FCC AND THE DOJ PROVIDED GUIDANCE REGARDING THE MEASUREMENTS APPROPRIATE TO EVALUATING THE QUALITY OF SUPPORT THAT THE ILEC'S DELIVER TO THE CLEC?

A. Yes, cumulatively the orders of the FCC and the input of the DOJ provide substantial guidance regarding the types of measurements that BellSouth should be reporting. These measurements are similar, in many respects, to the key performance measurements advocated by the Local Competition Users Group (LCUG) as documented in Version 6.1 of the group's Service Quality Measurements publication which AT&T submitted in this docket. Exhibit KMD-1 to this testimony summarizes the LCUG measurements and references, for each measurement, the FCC Orders and the DOJ guidance identifying the importance of the same or equivalent measurement.

Q. WILL THE LCUG MEASUREMENTS THAT AT&T SUPPORTS PROVIDE AN APPROPRIATE FOUNDATION FOR MONITORING PARITY AND NONDISCRIMINATION?

A. Yes. The FCC has determined that nondiscrimnatory performance must be demonstrated in various functional categories. Exhibit KMD-2 provides a synopsis of the LCUG measurements divided into the following functional categories: pre-ordering, ordering and provisioning, maintenance and repair, general support, billing, and unbundled network elements. Within each of these functional categories, a limited number of measurements are identified to monitor the quality of support delivered by the ILEC to the CLECs. When equivalent measurements are generated and reported for the ILEC operations, direct comparison of results can be made, and fact-based conclusions can be drawn regarding whether or not the ILEC has satisfied its nondiscrimination obligation.

Q. HAVE THE MEASUREMENTS AT&T PROPOSES, OR A CLOSE EQUIVALENT, BEEN AGREED TO ELSEWHERE?

A. Yes. Exhibit KMD-3 summarizes the LCUG measurements ILECs have agreed to monitor. The Authority should note, however, that agreeing to monitor the measurement is only the first step in the journey to establishing a performance monitoring plan. All five of the attributes of a performance measurement plan previously must be satisfied.

Q. MAY ADDITIONAL MEASUREMENTS, BEYOND THOSE LISTED IN THE LCUG DOCUMENTATION, BE APPROPRIATE TO MONITOR NONDISCRIMINATION?

A. Yes. Expansion beyond the minimal set of measurements should be encouraged.

Q. WHY MUST A COMPARATIVE STANDARD FOR EACH MEASUREMENT RESULT BE IDENTIFIED?

A. Nondiscrimination requires a demonstration that the performance delivered to a CLEC is at least equal to the quality of performance an ILEC delivers to its own operations for reasonably and broadly defined analogous functions. For example, when CLECs resell residential local exchange service, the comparative analog for the service delivery interval is the time it takes the ILEC to deliver residential local service to its own retail customers. Direct comparison of performance results is clearly the means that both this Authority (Docket 96-01152, Second and Final Order of Arbitration Awards, January 23, 1997, page 22) and the FCC believe will best accomplish a demonstration of nondiscriminatory support (See Ameritech Michigan Order, ¶139)

In cases where a reasonably equivalent ILEC analog does not exist, then the ILEC must afford an efficient CLEC with a reasonable opportunity to compete. This demonstration is accomplished by showing that the support delivered meets or exceeds a competitively

viable benchmark (or minimum target) level of performance. The FCC indicated it would rely heavily upon state commissions when setting the appropriate performance level. See Ameritech Michigan Order, ¶ 141. Thus, in order to evaluate performance results, clarity must exist as to whether the comparative standard is analogous performance for the ILEC or a performance benchmark.

Q. SHOULD COMPARISON TO ANALOGOUS ILEC PERFORMANCE BE THE RULE OR THE EXCEPTION?

A. As the FCC recognized, many retail analogs exist in the ILEC operations for key OSS functions utilized by the CLECs. Ameritech-Michigan Order, ¶140. Direct comparison to actual ILEC performance should, therefore, be the expected norm. The ILEC should bear a heavy burden of proof before a minimum performance level or benchmark is adopted in lieu of a direct performance comparison.

Q. HOW IS A PERFORMANCE BENCHMARK ESTABLISHED IF NO COMPARATIVE ANALOG IS IDENTIFIED?

A. The preferred methodology is for the ILEC to conduct a special study to establish the benchmark performance level. When the ILEC undertakes such a benchmarking study, it should rely heavily upon experiences drawn from its own operations. Furthermore, the study should conform to the following minimum requirements: (1) a benchmark result should be provided for each reporting dimension established for the measurement; (2) the mean, standard error, and number of sample points should be disclosed whenever a sample methodology is employed; (3) the study methodology and benchmark results must be fully disclosed with independent audit permitted; and, (4) benchmark updates should occur every six months or whenever operational changes reasonably may be expected to have an impact on the study results, whichever occurs earlier.

Q. WHAT BASIS OF COMPARISON SHOULD BE USED IF NEITHER AN ANALOG IS IDENTIFIED IN THE ILEC OPERATIONS NOR A SATISFACTORY BENCHMARKING STUDY IS PRODUCED?

A. The LCUG Service Quality Measurements document includes default levels of performance that can be used in such cases. These default levels are reflected in the "Performance Standard In Absence of ILEC Results" section of the documentation for each performance measurement. The levels are based upon LCUG members' experience in the long distance market combined with their expectations for the provision of local services. I must emphasize that the Authority need *only* apply LCUG benchmark comparisons if (1) BellSouth cannot identify an analogous retail functions for comparison within its own operations, or (2) BellSouth refuses to or cannot quantify an alternative benchmark level through a verifiable study using the ILEC's actual experiences as input.

A. BEYOND IDENTIFYING THE APPROPRIATE AREAS TO MONITOR, WHAT IS NECESSARY TO PERMIT IMPLEMENTATION OF THE MEASUREMENTS?

A. Beyond what I already addressed, an effective measurement plan must also reflect provisions to collect and mark data used to calculate the measurement so that direct and meaningful comparisons of results between the ILEC and CLECs is possible. In other words, sufficient results disaggregation must be accommodated.

Q. DOES RESULTS DISAGGREGATION IMPOSE AN UNNECESSARY BURDEN UPON THE ILEC?

A. No. Appropriate marking and categorization of the data, as it is collected, is all that is at issue. The associated measurement is still computed in the same manner it would be without the reporting requirements. Disaggregation of the data before result computation, on the other hand, is extremely valuable. It allows better comparison of the ILEC and

CLEC experiences – an apples-to-apples comparison – and thereby minimizes the likelihood of subsequent arguments regarding the comparability of results.

For example, an order involving only software work often can be completed in less than a day. Installation of a new line, where a new drop wire must be established, likely will take longer, perhaps four days. In both cases the proposed provisioning metric is calculated in precisely the same manner: The time to provide service is measured from the time the order is accepted by the ILEC to the time the CLEC is notified (by the ILEC) that the order is "completed." Retaining data elements that indicate some orders involved only software work while others required a dispatch does not change the basic measure. It does, however, allow the average provisioning interval to be computed separately for the cases in which software-only work occurred and where dispatch work was required. If classification data was not captured and retained, these two very different situations would, by necessity, be combined into one average result. Combining such different situations would frustrate comparison of experiences between companies.

Q. ONCE THE DATA IS COLLECTED, WHAT PROCESS MUST BE ESTABLISHED TO REVIEW THE DATA TO ASSESS WHETHER OR NOT BELLSOUTH IS DELIVERING NONDISCRIMINATORY SUPPORT?

A. Regardless of the measure under consideration, there must be a pre-established comparison process to assure that the level of performance for an individual CLEC, and the CLECs as a group, are no less than equal in quality to that delivered by BellSouth to its own retail local service operation. This comparative process should incorporate well-recognized and documented statistical testing procedures.

Q. WHEN CLEC PERFORMANCE IS REVIEWED, SHOULD THE ILEC'S PERFORMANCE BE JUDGED NONDISCRIMINATORY ONLY IF THE CLEC RESULTS ARE BETTER FOR EACH COMPARATIVE STANDARD?

A. Such an approach could be used and would be very simple to apply. In the alternative, comparative procedures could be employed, based upon generally accepted statistical procedures. Statistical procedures accommodate measurement variability, allow monthly performance comparisons, and permit a determination whether the CLEC performance is no worse than the comparative standard. This approach allows for measurement variability while controlling the risk of drawing an inappropriate conclusion (e.g., discriminatory performance exists when it does not).

Q. WHAT DOES AT&T ADVOCATE AS THE METHODOLOGY FOR COMPARING RESULTS AND DETERMINING IF NONDISCRIMINATION EXISTS?

A. AT&T supports the use of the statistical comparison methodologies described in the LCUG document titled Statistical Tests for Local Service Parity Version 1.0. The document provides a quantitative approach for determining whether a measurement result for a CLEC is "worse" than the comparative standard, and whether that standard is either equivalent ILEC performance or a performance benchmark. The referenced LCUG document was provided to the Authority as part of AT&T's initial comments preceding the performance measurements workshop of the Authority.

Q. WHY IS IT IMPORTANT FOR A COMPARISON METHODOLOGY TO ACCOUNT FOR DIFFERENCES IN BOTH AVERAGE PERFORMANCE AND PERFORMANCE VARIABILITY?

A. The mean performance gives an indication of the performance result that is mathematically the "least different" from all of the other measured results. In other

terms, if the results were arranged by value on a horizontal measurement yardstick, the average is the point along the measurement yardstick where the yardstick would balance. The average result, however, is only one way to characterize a group of data. Variance is another statistic for characterizing data and, in the context of this docket, is as important a characteristic as the mean when comparing ILEC and CLEC results. Variance monitors how consistent individual results are to each other. A process that has wide swings in results from measurement to measurement has wide variance. Returning to the measurement "yardstick," variance describes how long the yardstick must be to accommodate placement of all the result upon the yardstick. The important thing is that two different sets of data could have the same mean while having very, very different variability.

Q. IN PRACTICAL TERMS WHAT ARE THE IMPLICATIONS OF WIDER VARIANCE?

A. Wider variance is indicative of process performance that is less stable and more unpredictable. In a competitive marketplace it is essential that performance be predictable because predictability determines the reliability of commitments made to customers.

For example, if the delivery interval for services, provided by the ILEC to CLECs, averages five days but experience shows actual delivery regularly occurs anywhere in the range of one to eight days, then the CLEC will likely not establish a customer due date of five days. Rather, the CLEC is more likely to establish a retail delivery commitment closer to seven or eight days in order to minimize the likelihood of having to subsequently call the customer and change the due date. As undesirable as an extended delivery interval may be, it reduces the risk of the even less desirable outcome of changing the customer's due date.

The ILEC internal processes could have the same average of five days but be more stable if, for example, operational results showed that actual delivery to ILEC customers occurred anywhere from four to six days. The ILEC would be more willing to commit to a five-day retail service delivery interval. If only mean performance is compared, the service appears to be at parity. Parity, however, does not exist in practical terms because performance variability precludes the CLEC from committing to the same customer service delivery interval with equivalent confidence.

Q. HOW DOES THE METHODOLOGY ADVOCATED BY AT&T TAKE PERFORMANCE VARIABILITY INTO CONSIDERATION?

A. The comparative methodology proposed by AT&T employs what statisticians refer to as a "z-score". The z-score, in simple terms, expresses the difference between two averages of measurement results as a multiple of an estimate of the variability of that difference. For example, a z-score of 1.5 means that the difference between the means of two sets of observations is one-and-one-half times as great as the estimated standard error of that difference.

Statisticians can demonstrate, for samples taken from a normally distributed population, a unique probability exists that the difference in the average result of two specific samples exceeds any particular multiple of the variability. This knowledge can be applied to assessing whether or not delivered performance of BellSouth can be judged to be nondiscriminatory. For example, a statistician can state, in advance, that there is only a 5% probability that the difference of two sets of measured performance will exceed 1.645 times the standard error of that difference.

Suppose that the value 1.645 is produced when the mean result for BellSouth performance in a particular area is subtracted from the mean result for a CLEC (assume

larger values are worse performance) with the resulting difference divided by the standard error of that difference, as estimated from the variations within the two samples. Such a value of the z-score will arise only 5% of the time due to random sampling variability. Thus, such a value would give evidence that BellSouth is delivering performance to the CLEC that is no worse than the performance BellSouth provides to itself.

The z-statistic score can easily be computed provided the measurement results for individual transactions of both the CLEC and the ILEC are retained (e.g., repair time for each maintenance ticket, service delivery interval for each order, and etc.). The formulae are listed in the LCUG document "Statistical Tests for Local Parity". Thus, variability of results can be taken into account, differing sample sizes can be accommodated and risk of erroneous conclusions can be controlled through adoption of the proposed LCUG comparative methodologies.

Q. HOW SHOULD PERFORMANCE METRICS BE REPORTED?

A. Because the primary purpose of such reporting is to demonstrate the existence (or detect the lack of) parity, the reports submitted should clearly show an individual CLEC experience in comparison to the analogous BellSouth performance experience. Likewise, a comparison should be provided of aggregate CLEC experience to the experience of BellSouth. As part of the display of such comparisons, the report should indicate clearly whether or not a statistically significant difference exists in performance results being compared. Finally, the display should make it simple to determine whether or not there are wide month-to-month variations in performance as well as performance trends.

Q. IF A SINGLE CLEC MEASUREMENT RESULT REFLECTED WORSE PERFORMANCE THAN THE COMPARATIVE STANDARD, DOES THAT INDICATE THAT THE ILEC IS OPERATING IN A DISCRIMINATORY MANNER?

A. It may, but it is not absolutely certain. The Authority should therefore seek frequent enough surveillance data to permit the Authority to consider the number of ILEC measurements that indicate potential discrimination, the extent of difference between the CLEC result and the comparative standard, and the extent of repeated indications of ILEC unsatisfactory performance from period-to-period.

Q. WHAT TYPE OF INFORMATION WOULD THE AUTHORITY REQUIRE IN ORDER TO MONITOR PERFORMANCE AND, IF NECESSARY, TAKE ADDITIONAL STEPS TO RE-ESTABLISH PARITY?

A. The Authority would require surveillance data, including at the very least reporting of exceptions, for all measurements where a potential discriminatory condition is indicated (or flagged). In its simplest form, the report would list all measurements flagged as potentially discriminatory whether for any individual CLEC or the aggregation of all CLECs. For each measurement flagged, the report also would need to make clear if the measurement was flagged in the prior report and whether the current month difference (between the CLEC result and the comparative standard) exceeded a pre-established permissible level.

A surveillance report, such as I described, would permit the Authority to draw conclusions regarding the following:

1. Whether or not a particular measurement result or group of measurements is consistently flagged across a large number of CLECs, potentially indicating a specific operational problem with a broad impact.

2. Whether greater than an expected threshold number of measurements are flagged, indicating rather conclusively that discrimination is broadly indicated for either one CLEC or a number of CLECs.
3. Whether a particular measurement or a group of measurements has repeatedly been flagged, indicating that the potential discrimination reflects a fundamental operational problem or, in the worst case, that the discrimination is focused and possibly intentional.
4. Whether a particular measurement or a group of measurements is flagged for widely disparate performance, indicating not only potential discrimination, but also a high likelihood of retail customer impact.

Q. WHY IS AN AUDIT MECHANISM IMPORTANT TO THIS AUTHORITY'S CONSIDERATION OF PARITY AND NONDISCRIMINATORY SUPPORT AND ACCESS BY BELLSOUTH?

A. The competitive marketplace must have the protection of independent auditing to ensure that BellSouth's reported measures are based upon properly designed data collection processes, that results are computed based upon precisely defined and agreed upon methodologies, and that the results can be independently corroborated. The discipline of auditing will help ensure that data is retained according to specific guidelines and structured to allow an interested and authorized party to verify independently that a CLEC is receiving nondiscriminatory access and support from BellSouth. Without such mechanisms, the CLECs, this Authority and Tennessee consumers will be entirely dependent upon BellSouth for the production, accuracy and conclusions related to performance measures crucial to assessing the development of competition in Tennessee.

IV. BELLSOUTH'S PROPOSAL IN ITS SGAT DOES NOT CONTAIN ADEQUATE PERFORMANCE MEASUREMENTS TO DEMONSTRATE NONDISCRIMINATION

Q. WHAT DEFICIENCIES EXIST IN BELLSOUTH'S PERFORMANCE MEASURE PROPOSAL?

A. First, BellSouth's proposal omits critical measurements. Second, BellSouth does not adequately define the measurements it has because the proposal does not (a) provide adequate detail; (b) identify excluded situations; or (c) identify which measurement results will be compared to BellSouth's performance and which to a benchmark. Third, BellSouth does not disaggregate the data to the appropriate level. Fourth, BellSouth's proposal for performance measurements does not include auditing rights. As a result of these deficiencies, BellSouth's proposed performance measures will not allow the Authority to assess whether BellSouth is providing nondiscriminatory access, interconnection and support.

A. BELLSOUTH'S PROPOSAL DOES NOT CONTAIN CRITICAL MEASUREMENTS

Q. DO BELLSOUTH'S PROPOSED MEASUREMENTS ALIGN WITH THE LCUG MEASUREMENT?

A. Many measurements that BellSouth lists are similar, at least in name, to the measurements that LCUG advocates. However, despite the apparent similarities, BellSouth does not propose to monitor the following measurements advocated by LCUG:

1. Jeopardy Interval
2. Completion Notice Interval
3. Center Responsiveness - Call Abandonment
4. Network Performance
5. UNE timeliness

6. UNE availability

Furthermore, it is unclear whether or not BellSouth will monitor the following three LCUG measurements:

7. Mean Time to Provide Usage Records
8. Percent Usage Accuracy
9. % Jeopardies

"Mean Time to Provide Usage Records" and "Percent Usage Accuracy" are not listed in Attachment I of the Tennessee SGAT. However, BellSouth witness Moore states that BellSouth provides such measurements (page 21, lines 1-9) and the necessary data is set forth in Exhibit JWM-8. It is therefore unclear whether BellSouth is taking the position, as it did in prior FCC 271 filings, that some results will be provided only in the initial 271 submission and will not be provided as part of on-going monitoring of performance. The measurement, without exception, should be reported on a monthly basis.

In the case of the measurement "% Jeopardies", BellSouth touts the usefulness of the measurement when it says: "the '% jeopardies returned' measure for the CLEC, when reported in comparison to BST result, will gauge whether initial commitments to the CLEC for order processing are as reliable as the commitments BST makes to its own operations." (BellSouth Attachment 1, page 5, Measurement Overview). Despite this glowing support for the measurement, it is neither listed in the table of contents nor is the measurement defined in the ensuing "Measurement Methodology".

Q. IN PRIOR ORDERS RELATING TO RBOC 271 APPLICATIONS, HAS THE FCC REQUIRED SUBMISSION OF ANY OF THE MEASUREMENTS THAT BELLSOUTH HAS FAILED TO SUBMIT TO THE AUTHORITY?

A. Yes. The FCC has explicitly required the RBOC to provide performance measurement results data related to six of the nine performance measurements BellSouth omits. Those

measurements that BellSouth omits but for which data is sought by the FCC are the following:

1. Jeopardy Interval (BellSouth South Carolina Order ¶131, BellSouth Louisiana Order ¶39)
2. Completion Notice Interval (BellSouth South Carolina Order ¶139, Ameritech Michigan Order ¶¶186-187)
3. UNE timeliness (BellSouth South Carolina Order ¶206)
4. UNE performance (BellSouth South Carolina Order ¶206)
5. Mean Time to Provide Usage Records (Ameritech Michigan Order ¶221)
6. Percent Usage Accuracy (Ameritech Michigan Order ¶221)

Q. ARE THESE THE ONLY SHORTCOMINGS WITH RESPECT TO THE MEASUREMENTS THAT BELLSOUTH PROPOSES?

A. No. In at least eight instances BellSouth acknowledges that it does not currently have the capability to produce a measurement result that it promises. Those eight measurements are listed below along with a reference to the direct testimony of BellSouth witness Moore where he states the measurement is not yet available:

1. FOC Timeliness (JWM, page 13, lines 5-6)
2. Reject Interval (JWM, page 13, lines 10-11)
3. Total Service Request Cycle Time (JWM, page 14, lines 6-7)
4. Service Request Submissions per Request (JWM, page 14, lines 11-12)
5. Held Order Interval (JWM, page 16, lines 2-3)
6. Percent Provisioning Accuracy (JWM, page 17, lines 8-9)
7. E911 Database Update Accuracy (JWM, page 22, lines 4-5)
8. E911 Database Update Timeliness (JWM, page 22, lines 4-5)

B. BELLSOUTH DOES NOT ADEQUATELY DEFINE THE SPECIFIED MEASURES

Q. DO THE MEASURES, AS PROPOSED BY BELLSOUTH, CLEARLY DEFINE HOW THE MEASURES ARE COMPUTED AND WHAT IS INCLUDED IN THE REPORTED RESULTS?

A. No, not consistently. BellSouth must clearly document the data elements and computation method for each measure and identify what, if any, operational situations will cause exclusion of data from the reporting process.

The FCC noted clarity of performance measurements as an area of deficiency in its Ameritech Michigan Order (¶209):

> As an initial matter, we agree with the Department of Justice and the Michigan Commission that many of the performance measurements that Ameritech has submitted in its application are not clearly explained in order to make them meaningful to us and commenting parties. . . Clear and precise performance measurements are critical to ensuring that competing carriers are receiving the quality of access to which they are entitled.

One should not have to guess what document contains the real definition of the measurement or where the business rules applicable to the measurement are actually described. Such information needs to be clearly stated in advance, documented in a single source and made available to the industry. To permit otherwise would create incentives to manipulate or unilaterally change definitions and thereby produce not only very different reported results but also cause interminable and irresolvable arguments.

Q. WOULD YOU PLEASE PROVIDE SOME EXAMPLES REGARDING ADDITIONAL DETAIL THAT MUST BE ADDRESSED BY BELLSOUTH?

A. BellSouth, in its Attachment I to the SGAT, provides details regarding how the pre-ordering query cycle time will be measured for CLECs (see page 2). At the same time,

BellSouth provides no information regarding how this same measurement will be made for its own operation. This detail is essential because the FCC (BellSouth South Carolina Order ¶148) requires direct comparison of the two situations.

For the "Percent Missed Appointments" measurement (Attachment 1, page 14), the formula and the description of the computation are inconsistent. The formula correctly states that the measurement result is the quotient of "orders missing their due date" and "orders completed in the period". For some inexplicable reason, the subsequent BellSouth narrative states that the measurement is the quotient of "the count of misses BST issues to the CLEC" and "the count of FOCs returned by BST". Perhaps this is an attempt by BellSouth to artificially reduce the percentage of apparent "missed appointments" as there is only one completion per order, but there may be multiple order confirmations (due to supplements).

Pages 21 and 24 of Attachment 1 of the SGAT, provides a third example of a lack of critical detail. In both these instances, a measurement addressing speed of answer is documented. However, the documentation does not specify when the measurement of time for call attempts starts and when it stops. This information is basic to an adequate definition.

Finally, virtually no measurements are provided or even promised with respect to timeliness and accuracy of OSS access and support processes for UNEs. Only vague categories labels, such as "UNE" or UNE Specials", are reflected as a reporting dimension on some measurements.

Q. HAS BELLSOUTH CLEARLY IDENTIFIED WHICH CLEC PERFORMANCE MEASUREMENT RESULTS WILL BE COMPARED TO ANALOGOUS MEASUREMENT RESULTS FOR BELLSOUTH AND WHICH CLEC MEASUREMENT RESULT WILL BE COMPARED TO A SPECIFIC LEVEL OF MINIMUM PERFORMANCE?

A. No. For this reason alone, the Authority lacks the ability to determine whether or not BellSouth satisfies the nondiscrimination standard.

Q. HAS BELLSOUTH PROVIDED ANY SUPPORTING MATERIAL THAT IT ASSERTS SUPPORTS A MINIMUM STANDARD OR BENCHMARK LEVEL OF PERFORMANCE FOR ANY OF THE PROPOSED MEASUREMENTS?

A. No.

Q. PLEASE PROVIDE EXAMPLES WHERE BELLSOUTH'S FILING LACKS CLARITY REGARDING WHAT SHOULD OR WILL BE EXCLUDED FROM MEASUREMENT REPORTING.

A. BellSouth, on page 3 of Attachment 1, states that there are no exclusions from reporting for the Average Response Interval. However, it is not at all clear whether rejected queries will be excluded from or included in the Average Response Intervals for pre-ordering. In the LCUG documentation, a clear statement is made that pre-ordering queries are to be measured for each major query type with reject response intervals stated as a separate category. BellSouth has removed this language.

For the Held Order Measurement (Attachment 1, page 13), BellSouth proposes that "Orders held for CLEC end user reasons" and "Orders held for BST end user reasons" are excluded situations. BellSouth, however, does not take any steps to clarify how it will determine whether the reason for the "hold" is a CLEC or BST "end user reason".

Q. **WHY MUST THE SITUATIONS CAUSING EXCLUSION OF OPERATIONAL RESULTS BE CLEARLY STATED?**

A. At some point parties must agree how a metric is defined. Such agreements must be documented. Without specific mutual agreement as to what situations are "hidden" from the reporting process, there can be no certainty regarding the validity of results. I urge this Authority to establish, as a guiding principle, that no results are excluded from reporting unless a party demonstrates clearly by a factual showing that unique and restricted operational conditions exist.

C. BELLSOUTH WILL NOT AGREE TO DISAGGREGATE RESULTS

Q. **HAS BELLSOUTH COMMITTED TO PROVIDE THE NECESSARY LEVEL OF PERFORMANCE DISAGGREGATION?**

A. No. BellSouth's only statement regarding reporting is "BellSouth will provide CLEC-specific, aggregate CLEC and aggregate BST retail performance reports at a state level on a monthly basis for the measurements described herein." (WJM, Page 5, Lines 9-12) BellSouth has committed to only a minimal level of performance result disaggregation. Additional detail is required. In addition, a mechanism should be in place to permit expansion of the detail as new elements and services are employed by the CLECs and gain "critical measurement mass."

Q. **WHAT ARE SOME EXAMPLES WHERE THE CURRENTLY PROPOSED DISAGGREGATION OF RESULTS ARE INADEQUATE?**

A. BellSouth only commits to reporting results on either a regional or a state basis. However, competitors who are in the early stages of market entry will likely operate in

much more focused geographic areas. Comparing BellSouth performance on a statewide basis, where there may be a greater proportion of non-metropolitan areas (where for instance travel times on dispatch activities are longer or loop plant technology may be less modern) to a CLEC largely operating in a relatively few large cities, would likely result in less than meaningful comparisons. This concern is shared by the United States Department of Justice (DOJ) in filings with the FCC: "Geographic market parity means comparing CLEC results to BOC results within the geography the CLEC has chosen to offer service. For example, if a CLEC offers resale service in only city A, a meaningful comparison may require the BOC to provide their retail results only for city A." (Friduss, ¶39)

In addition, BellSouth has generally offered insufficient product disaggregations. For example, BellSouth combines all categories of private line services into the category Resale – Specials. There is no question that substantial differences in provisioning and maintenance performance can and do exist for voice grade private line services, 1.5 megabit service and 45 megabit service. Nevertheless, BellSouth aggregates this as a single category. Likewise, Centrex (or Centrex-like), ISDN and traditional business local services are likely reflected in the category "Resale-Business". Here too, past experience indicates a reasonable likelihood that differing experiences will exist. Allowing BellSouth to aggregate such dissimilar services before comparison to the CLEC result, where small business POTS lines may predominate, will result in a comparison of questionable value. Again the DOJ acknowledges the importance of adequate product detail: "if a CLEC offers service to small business end users only, for purposes of comparison a BOC would have to provide it retail results for small business users." (Friduss ¶40)

D. BELLSOUTH HAS NOT AGREED TO AUDITS OF REPORTED DATA

Q. HAS BELLSOUTH AGREED TO THE NECESSARY AUDITING?

A. No. BellSouth does not address this crucial consideration in sufficient detail. That is, BellSouth does not address how frequently auditing of the performance measurement data collection and results production processes will be permitted. Likewise, BellSouth does not discuss the conditions that might surround such an audit. Beyond these unaddressed considerations, BellSouth's documentation is not currently of a quality that would permit an independent audit without substantial clarifications on the part of BellSouth. BellSouth only says, "BellSouth also agrees to audit provisions which allow the CLEC to have access to and review additional data as applicable utilized in BellSouth's production of its performance reports." The referenced "audit provisions" are not provided, nor is a definition of "data as applicable".

Q. THE BELLSOUTH WITNESS DISCUSSES A "DATA WAREHOUSE." WHAT RELEVANCE DOES IT HAVE TO THIS PROCEEDING?

A. The data warehouse may provide the future basis for delivering the performance results that are necessary to monitor BellSouth's compliance with the Act. On the other hand it provides no insight regarding compliance today. Indeed, AT&T's experience has been that the data warehouse has been more promise than reality. Despite repeated requests for more information regarding the details, dating back as early as November of last year, little meaningful information has been forthcoming that indicates either the data warehouse is operationally ready or that the CLECs could make the use of it that BellSouth promises. I am surprised by the BellSouth witness' statement: "CLECs have access to their data and Aggregate CLEC Data through the Data Warehouse." (JWM, page 27, lines 3-4). I am not aware that such access has been provided to AT&T or that

any training in its use has been provided by BellSouth. In addition, I note that BellSouth does not say that the CLEC has access to the equivalent results for BellSouth. Therefore, I question what meaningful use the CLECs can make of the data warehouse if no capability exists for comparative analysis.

V. THE TEST RESULTS BELLSOUTH SUPPLIED DEMONSTRATE A LACK OF PARITY

Q DOES THE LIMITED DATA SUBMITTED BY BELLSOUTH SUPPORT A FINDING THAT PARITY EXISTS?

A. No. In many instances even the inadequate information supplied by BellSouth demonstrates that parity does not currently exist.

Q. WHAT DATA SUPPLIED BY BELLSOUTH INDICATES THAT PARITY DOES NOT EXIST?

A. While other examples may exist, I will highlight a few performance results that are indicative of non-parity performance.

The first table illustrates, using data in BellSouth Exhibit JWM-5A, that it takes longer (on average) for BST to deliver service for the CLECs for more than 85% of the base of residential orders processed, whether in Tennessee or the BellSouth operating territory:

Average Provisioning Interval	TN-CLEC	TN-BST	Region-CLEC	Region-BST
Residence-Change-No Dispatch				
Average Interval	1.8 days	1.6 days	2.2 days	1.7 days
Percent of Orders in Category	22%	83%	32%	85%
Residence-New-No Dispatch				
Average Interval	4.2 days	2.4 days	5.2 days	2.8 days
Percent of Orders in Category	64%	7.2%	53%	6.1%

Less than parity also exists with respect to trouble experienced in the first thirty days following provisioning activity. In this instance the Percent Missed Appointments data are drawn from JWM-6 and the Percentage of Orders in category are drawn from JWM-5A. The grim picture that becomes apparent is that over 85% of the CLEC orders are "Residential-No Dispatch" and for that category BellSouth misses the appointment in excess of 29% of the time. On the other hand, for its own customers in the same category BellSouth misses the appointment less than 1% of the time.

% Provisioning Missed Appointments	TN-CLEC	TN-BST	Region-CLEC	Region-BST
Residence- No Dispatch				
% Missed	39.21%	0.06%	29.78%	0.04%
Percent of Orders in Category	88%	94%	86%	94%

Although BellSouth does not provide comparative statistics for its own speed of answer, the following results (from BellSouth Exhibit JMW-4) are at least indicative of less than satisfactory performance. The results are averages and are based upon a minimum call volume of 839 calls for the three weeks shown:

Support Center Speed of Answer	12/7/97	12/14/97	12/21/97
Ordering Centers for CLECs			
Atlanta - Resale	2.2 minutes	3.2 minutes	1.8 minutes
Birmingham- Residential Resale	6.7 minutes	4.8 minutes	5.2 minutes

Finally, in the area of usage processing, the CLECs are also at an apparent disadvantage. Comparing the data relating to the ODUF (customer usage data) timeliness for the CLEC to the intra-company messages for BellSouth, as presented the BellSouth Exhibits (JWM-8), demonstrates that it takes 70% longer (3.4 days for CLECs versus 2.0 days for BellSouth):

Mean Time to Deliver Customer Usage	CLEC	BST
Western States	Not Available	2.5 days
Eastern States	Not Available	1.8 days
Combined	3.4 days	2.0 days

Q. WOULD YOU SUMMARIZE YOUR TESTIMONY?

A. I urge this Authority to reject BellSouth's assertions that it provides nondiscriminatory access, interconnection and support. The inadequacies of BellSouth's performance measurements alone are sufficient to demonstrate that BellSouth's request for this Authority's validation of nondiscriminatory support is premature whether considered from the perspective of UNEs or services available for resale. BellSouth has produced incomplete, inadequate, and potentially misleading information to this Authority and, thereby, has denied the Authority the ability to confirm, based on empirical data, that BellSouth is now delivering comprehensive and nondiscriminatory support to CLECs.

The Act and the FCC place the burden of proof to demonstrate compliance with the Act on the ILEC: "Section 271 place on the applicant the burden of proving that all of the requirements for authorization to provide in-region, interLATA service are satisfied." (*Ameritech Michigan Order,* ¶43). Nondiscriminatory support of access to OSS functionality, support of services resale and the support of UNEs cannot be proven solely by BellSouth's assertions that it is providing such support. Nondiscrimination is demonstrated by showing actual results that, when subjected to generally accepted statistical procedures for testing of differences in results, confirm that BellSouth's support of CLEC operations are no less in quality than the support BellSouth delivers in its own local operations. BellSouth has not made such a showing.

I urge this Authority to find that BellSouth has failed to demonstrate that it provides nondiscriminatory access, interconnection or support.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

LCUG Measurement	Citations to FCC Order Paragraphs Addressing Measurement				DOJ Friduss Affidavits
	BA/NYNEX Merger (Appx D)	Ameritech MI - 271	BellSouth SC - 271	BellSouth LA - 271	
Preordering Response Interval (PO-1)	Meas #1		176		61
Avg. Order Completion Interval (OP-1)	Meas #9	212(1),(2)	102,132,137	41,44	46,51,63
% Orders Completed on Time (OP-2)	Meas #11				52,54,57
% Order (Provisioning) Accuracy (OP-3)	Meas #5	212(5)	116		52,54,63
Order Reject Interval (OP-4)	Meas #4	187	106,107	27,32	62
Firm Order Confirmation Interval (OP-5)	Meas #3	187	116,123,125	35,38	54,57,62
Mean Jeopardy Interval (OP-6)			115,116,131	30,39	62
Completion Notice Interval (OP-7)	Meas #6		139		62
Percent Jeopardies Returned (OP-8)					
Held Order Interval (OP-9)	Meas #12	212(5)			63
% Held Orders > 90 Days (OP-10)					63
% Held Orders > 15 Days (OP-10)					46,63
Time To Restore (MR-1)	Meas #16&17				54,57,64
Repeat Trouble Rate (MR-2)	Meas #18				54,64
Frequency of Troubles (MR-3)	Meas #14				54,64
Estimated Time to Restore (MR-4)	Meas #15				54
Systems Availability (GE-1)	Meas #2				61
Center Speed of Answer (GE-2)					52,61,64
Call Abandonment Rate (GE-3)					
Mean Time to Deliver Usage Records (BI-1)	Meas #21	221			
Mean time to Deliver Invoices (BI-2)	Meas #22	221			66
Percent Invoice Accuracy (BI-3)		212(6)&221			66
Percent Usage Accuracy (BI-4)		140&221			
OS/DA Speed of Answer (OS/DA-1)					67
Network Performance (NP-1)	Meas #19&20	255			46,54&65
Availability of Network Elements (IUE-1)	Meas #7-9&16	159-161,212(3)	206		
Performance of Network Elements (IUE-2)	Meas #11-14,17&18	159-161,212(3)	206		
Out of Service > 24 Hours					54,64
Percentage Order Flow Through		214(4)	107	28	62
E911 Update Accuracy			225		63
E911 Update Timeliness			225		63

Bell Atlantic/NYNEX Merger Order issued 8/14/97 in FCC File No. NSD-L-96-10

Ameritech Michigan Order Issued 8/19/97 in FCC CC Docket No. 97-137

BellSouth South Carolina Order Released 12/24/97, FCC CC Docket No. 97-208

BellSouth Louisiana Order Released 2/4/98, FCC CC Docket 97-231

Affidavit of Michael J Friduss, Tab D, Evaluation of the United States Department of Justice, CC Docket 97-121

Pre-ordering Measurements

Average Response Interval

Goal: Monitor the ILEC speed of response to real time informational queries submitted by the CLEC. 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 to the CLEC. Elapsed time is accumulated for each major query (separately by pre-ordering/ maintenance) type and by subtype (e.g., telephone number selection) and then divided by the associated total number of query received by the ILEC during the reporting period.

Ordering and Provisioning Measurements

Average Completion Interval

Goal: To track the actual completion interval 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 then divided by the associated total number of orders completed within the reporting period.

Percent Orders Completed on Time

Goal: To report on the proportion of orders completed by the committed due date. 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). 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.

Percent Order Accuracy

Goal: *To assess the accuracy work performed by the ILEC in response to CLEC orders.* The original account profile and the CLEC order (and any supplements) sent to the ILEC are compared to the services and features reflected upon the account profile following completion of the order by the ILEC. An order is "completed without error" if all service attributes and account detail changes completely and accurately reflects the activity specified on the original and supplemental CLEC orders. The count of orders completed without errors is divided by the total number of orders completed in the reporting period.

Reject Interval

Goal: *To monitor that the ILECs promptly returns notices to CLECs, whenever transactions submitted to the ILEC fail to pass agreed upon edits.* For ordering, the reject interval 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 accepts (acknowledges) the order from the CLEC and stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated and then divided by the count of rejected CLEC orders during the reporting period.

FOC Interval

Goal: *To report on the promptness with which the ILEC either confirms that a CLEC's order will be worked as specified or identifies the changes necessary in order to work the order submitted by the CLEC.* The Firm Order Confirmation (FOC) Interval 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 and stops when the ILEC returns a valid firm order confirmation to the CLEC. The elapsed time is accumulated and then divided by the count of CLEC orders confirmed in the reporting period.

Jeopardy Interval

Goal: To monitor how far in advance of due dates that the ILEC provides notices that the due date commitment will be missed. The 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 jeopardy interval is accumulated and then divided by the count of CLEC orders placed in "jeopardy" by the ILEC during the report period.

% Jeopardies

Goal: To monitor the frequency with which the ILEC cannot fulfill CLEC orders as originally committed by the ILEC. This measurement result is the total number of jeopardy notices (the ILEC issues to the CLEC) divided by the total number of order confirmations (FOCs) returned by the ILEC during the identical period.

Completion Interval

Goal: To report the average delay between the completion of physical work and the notice given to the CLEC that service is ready for use. The 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. The elapsed time is accumulated and then divided by the count of CLEC orders for which the ILEC returned completion notices in the reporting period.

Held Order Interval

Goal: To report the delay for orders that are uncompleted and past the due date at the end of the report period. The held order interval is established by first identifying all orders, at the close of the reporting interval, that both have not been reported as "completed" via a valid completion notice and have passed the currently "committed completion date" for the order. The number of calendar days between the committed completion date and the close of the reporting period is established for each order, accumulated then divided by the total number of held (pending and past due) orders.

Percentage of Orders Held

Goal: To monitor the relative size of the inventory of backlogged orders that have remained in a backlog state for an extended period of time. This measurement utilizes a subset of the data accumulated for the "held order interval" measurement. All orders, for which the "held order interval" equals or exceeds 90 (or 15) days, are counted and divided by the total number of pending and past due orders.

Maintenance and Repair Measures

Mean Time To Restore

Goal: To monitor the actual restoral interval for customer requested maintenance. The restoral interval is the elapsed time from the CLEC logging a trouble ticket with 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 and divided by the count of maintenance tickets reported as resolved by the ILEC during the report period.

Repeat Trouble Rate

Goal: To monitor the effectiveness and accuracy of ILEC repair activities. The repeat trouble rate measure is computed by accumulating the number of trouble ticket submitted by a CLEC (to the ILEC) for a service arrangement that had at least one prior trouble ticket within the 30 calendar days preceding the creation of the current trouble ticket. The count of repeat troubles is divided by the count of initial trouble reports received by the ILEC from the CLEC during the report period.

Trouble Rate

Goal: To report on the overall quality of the service capabilities delivered by the ILEC to the CLEC. The trouble rate metric is computed by accumulating the total number of maintenance tickets logged by a CLEC (with the ILEC) during the reporting period and then dividing the total number of tickets by the total number of "service access lines" in service for the CLEC at the end of the report period.

Percentage of Customer Troubles Resolved Within Estimate

Goal: *To report on the reliability of repair time estimates provided by the ILEC.* The initial ILEC estimate for repair completion date and time is compared to the actual repair date and time (ticket closure as defined in Time to Restore metric). When the actual repair date and time is on or before the initially provided estimate, the count of "troubles resolved within estimate" is incremented by one. The resulting total is divided by the total number of troubles resolved for the report period and expressed as a percentage.

Billing Measurements

Mean Time to Provide Recorded Usage Records

Goal: *To report on the average amount of time between the recording of a usage record and its delivery to the CLEC.* This measure captures the elapsed time between the AMA recording of usage data, generated either by CLEC retail customers or by CLEC access customers, 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 transmission of the data set to the CLEC. The elapsed delivery time is accumulated for each usage record with the resulting total being divided by the number of complete usage records in all the data sets transmitted.

Mean Time to Deliver Invoices

Goal: *To monitors 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 is accumulated and then the accumulated result is divided by the number of complete invoices sent in the reporting period.

Invoice Accuracy
Usage Accuracy

Goal: *To report on the quality and completeness of usage records and invoices that the ILEC delivers to the CLEC.* The completeness of content, accuracy of information and conformance of formatting is determined based upon the terms of the individual CLEC interconnection agreements with the ILECs. The ILEC will establish a quality control process (disclosed to CLEC) that is no less rigorous than the most rigorous quality monitoring established in the ILEC billing service contracts for long distance service providers. 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 (percentage) of accurate records (or invoices) to the total records (or invoices) delivered.

General and Support Center Measurements

% System Availability

Goal: *To monitor that individual CLEC-ILEC interfaces are available and operable according to pre-established schedules.* The cumulative actual hours OSS functionality is available to a CLEC is compared to the cumulative number of that the ILEC planned to offer and support CLEC access to ILEC OSS functionality during the reporting period.

Mean Time to Answer Calls

Goal: *To establish that CLECs' calls for assistance are promptly answered by ILEC support center personnel.* 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 accumulated time is divided by the number of calls answered by the ILEC personnel in the support center being monitored.

Call Abandonment Rate

Goal: To monitor the proportion of CLEC calls for assistance (from the support center of the ILEC) that are terminated before an ILEC support person answers the call. The number of calls received by the call distribution system of the ILEC center is accumulated 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 all call received at the center being monitored.

Operator Service and Directory Assistance Measures

Mean Time To Answer

Goal: To report on the promptness with which OS and DA calls are answered by the ILEC when the ILEC provides such services on behalf of the CLEC. Speed of answer is monitored through the call management technology used to distribute calls to ILEC agents (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 accumulated answering time is divided by the total number of calls transferred to the ILEC OS or DA service agent.

Network Performance Measurements

Network Performance Parity

Goal: To monitor the key performance parameters (i.e., engineered characteristics) to assure the quality of the network infrastructure delivered to CLECs. Based upon a random and statistically reliable (at a preset level) sample of network configurations employed by the CLEC, the network performance is monitored, for generally accepted parameters (e.g., loss, blocking, etc.) 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.

Unbundled Network Element Measures

Function Availability

Goal: *To monitor the availability of UNE functionality requested by a CLEC.* Availability is measured for each unique UNE functionality (or combination of UNEs). The number of times that the functionality executes properly is shown divided by the number of times that the execution of the functionality was requested or initiated and expressed as a percentage.

Timeliness of Element Performance

Goal: *To monitor the frequency that UNE functionality operates in a timely manner. Timeliness will be measured for each unique UNE (or combination of UNEs).* The number of times that the functionality executes properly within the established standard time frame is accumulated, divided by the number of times that the execution of the functionality was requested or initiated with the result expressed as a percentage.

LCUG Version 6.1	SBC[1]	Ameritech[2]	BellSouth[3]
PO-1 Preordering Response Interval	**Pre-order System Response Times.** (Att A. Sec I. Item 2.)	**Average Pre-Ordering Customer Service Record Request Cycle Time** (OSS Resale Rpt, pg 1, item 1) **Average Tel Number Selection Cycle Time** (OSS Resale Rpt, pg 1, item 2) **Average Due Date Selection Cycle Time** (OSS Resale Rpt, pg 1, item 3)	**Average Response Interval** –(page 2, item 1)
OP-1 Average Order Completion Interval	**Average Service Provisioning Interval** (Att A., Sec III., Item A.1)	**Average Installation Interval-** (Resale Network Rpt pg 1, item 1) **Installation Interval for Standard Loops -** (Unbundled Network Element Rpt, pg 1, item 1)	**Average Completion Interval:** (pg. 9, item 1)
OP-2 Percentage of Orders Completed On Time	**Percent Service Provisioned Out of Interval** (Att A, Section III, Item A.2) **Percent Interconnection Facilities Provisioned Out of Interval** – (Att A. Section III, Item B.1)	**Confirmed Due Dates Not Met** – (Resale Network Rpt pg. 1, item 2) (Unbundled Network Report, pg 1, item 2) (Unbundled Network Report, pg 1, item 12) (Unbundled Network Report, pg 2, item 21)	**Percent Missed Installation Appointments**: (pg 14, item 1)
OP-3 Percentage of Order Accuracy	**Completed Service Order Accuracy** – (Att A, Sec III, Item B.4)		**Percent Order Accuracy** – (pg 14, item 3)
OP-4 Order Reject Interval	**Rejected Order Cycle Time** – (Att A., Sec II, Item 2)	**Firm Order Confirmation Cycle Time – Electronically Rejected Orders Within Interval** (OSS Resale Rpt, pg 2, item 11	**Reject Interval** –(pg. 5, item 2)

LCUG Version 6.1	SBC[1]	Ameritech[2]	BellSouth[3]
OP-5 Firm Order Confirmation Interval	**Firm Order Commitment (FOC) Cycle Time** (Att. A, Sec II, Item 1)	**Firm Order Confirmation Cycle Time – Electronically Received Orders Within Interval** (OSS Resale Rpt, pg 1, item 9) **Firm Order Confirmation Cycle Time – Non-Electronically Received Orders Within Interval** (OSS Resale Rpt, pg 1, item 10)	**Firm Order Confirmation Timeliness:** (pg. 5, item 1)
OP-6 Jeopardy Interval			
OP-7 Completion Notice Interval	**Average Completion Notice Interval** - (Att A, Sec III, B.6)	**Completion Notification Cycle Time Electronically Received (865) - (non-stop clock).** (OSS Resale Rpt, pg 1, item 7) **Completion Notification Cycle Time Non-Electronically Received (865) - (non-stop clock).** (OSS Resale Rpt, pg 1, item 8)	
OP-8 Percentage of Jeopardies			
OP-9 Held Order Interval	**Orders Held For Facilities** (Att A, Sec III, B.5)	**Held Orders** - (Resale Network Rpt, pg 1, item 5) *Note: this is a percentage not an interval.*	**Mean Held Order Interval** (pg 12, item 1)
OP-10 Percentage of Orders Held ≥ 15 Days			**# of orders held for ≥ 15 days:** (pg 12)
OP-11 Percentage of Orders Held ≥ 90 Days			**# of orders held for ≥ 90 days:** (pg 12)

LCUG Version 6.1	SBC[1]	Ameritech[2]	BellSouth[3]
MR-1 Time To Restore	**Mean Time To Repair** – (Att A, Sec IV, A.5)	**Mean Time To Repair (in hours)** – " (Resale Network Rpt, pg 1, item 10) **Receipt to Restore** – (Unbundled Network Rpt, pg 1, item 5)	**Maintenance Average Duration:** (pg. 19, item 5)
MR-2 Repeat Trouble Rate	**Percent Repeat Reports** – (Att A, Sec. IV, A.2)	**Percentage of Repeats – Maintenance** – (Resale Network Rpt, pg 1, item 8) **Percentage Repeats – Maintenance** - (Unbundled Network Rpt, pg 1, item 6)	**Percent Repeat Troubles within 30 Days:** (pg. 19, item 4)
MR-3 Frequency of Troubles (Trouble Rate)	**Trouble Report Rate** – (Att A, Sec IV, A.1)	**Trouble Report Rate** – (Resale Network Rpt, pg 1, item 8) (Unbundled Network Rpt, pg 1, item 3)	**Customer Trouble Report Rate:** (pg. 16, item 1)
MR-4 Estimated Time To Restore	**Percent Missed Appointments** – (Att A, Sec. IV, A.4) **Interconnection Facilities Restored Out of Interval** – (Att. A, Sec IV, A.6)		**Missed Repair Appointments:** (pg. 18, item 2)
GE-1 System Availability	**Pre-Order OSS Availability** - (Att. A, Sec I, 1) **Ordering OSS Availability** - (Att. A, Sec II, B.4) **Maintenance OSS Availability** – (Att. A, Sec IV, A.7)	**EBTA – Availability** - (OSS Resale Rpt, pg 2, item 16) (OSS Unbundled Network Rpt, pg 1, item 5) **Overall Pre-Ordering Interface Availability** - (OSS Resale Rpt, pg 2, item 18) **EDI Availability** – (OSS Resale Rpt, pg 2, item 19) **Ordering Access Service Request Availability** – (OSS Unbundled Network Rpt, pg 1, item 6)	**OSS Interface Availability:** (pg. 2, item 2)

LCUG Version 6.1	SBC[1]	Ameritech[2]	BellSouth[3]
GE-2 Center Responsiveness - Speed of Answer	**Speed of Answer - Ordering Center** (Att. A, Sec II, 6) **Maintenance Center Speed of Answer** - (Att. A, Sec IV, 8)	**Average Speed of Answer – Ordering (in seconds) –** (Resale Network Rpt, pg 2, item 12) (Unbundled Network Rpt, pg 1, item 8) **Average Speed Answer – Repair (in seconds) -** (Resale Network Rpt, pg 2, item 14) (Unbundled Network Rpt, pg 1, item 10)	**Speed of Answer in Ordering Center:** (pg. 6, item 7) **Average Answer time for UNE Center, RRC, and BRC:** (pg. 21, item 6)
GE-3 Center Responsiveness - Call Abandonment			
BI-1 Mean Time to Provide Recorded Usage Records	**Bill Timeliness - Daily Usage File (DUF) -** (Att. A, Sec V, 1.a)	**Timeliness of Daily Usage Files - Percentage Not Provided on Time -** (Resale Network Rpt, pg 2, item 15)	
BI-2 Mean Time to Deliver Invoices	**Bill Timeliness - Wholesale Bill** – (Att A, Sec V, 1.b)	**Resale Bill Timeliness - AEBS Billing** – (Resale Network Rpt, pg 2, item 16) **Unbundled Loops - Bill Timeliness** – (Unbundled Network Rpt, pg 1, item 11)	**Mean Time to Deliver Invoices** (pg. 22, item 2)
BI-3 Percent Invoice Accuracy	**Bill Completeness - Usage** - (Att. A, Sec V, 2.a) **Bill Completeness - Recurring Charges** (Att. A, Sec V, 2.b) **Bill Completeness - Non-recurring charges** - (Att. A, Sec V, 2.c) **Bill Accuracy** - (Att. A, Sec V, 2.c)		**Invoice Accuracy:** (pg. 22, item 1)

LCUG Version 6.1	SBC[1]	Ameritech[2]	BellSouth[3]
BI-4 Percent Usage Accuracy	**Bill Completeness - Usage** - (Att. A, Sec V, 2.a)		
OS/DA-1 OS/DA Speed of Answer	**Operator Services Toll Speed of Answer** - (Att A. Sec. VI, 1) **Directory Assistance Speed of Answer** - (Att A. Sec. VI, 2)	**Average Speed Answer – Operator Services** (Unbundled Network Rpt, pg 2, item 16) **Average Speed Answer – Directory Assistance** (Unbundled Network Rpt, pg 2, item 17)	**Mean Time to Answer (DA)** (pg 24, item 2) **Mean Time to Answer (OS)** (pg. 24, item 4)
NP-1 Network Performance	**Percent Blocked Calls –** **a) ILEC tandem to CLEC end office trunks** **b) ILEC tandem to and from ILEC end office trunk groups."** (Att A, Sec IV, B.1.a-c)	**Trunking Grade of Service – Interlata –** (Unbundled Network Rpt, pg 1, item 13) **Trunking Grade of Service – Intralata** - (Unbundled Network Rpt, pg 1, item 14)	**CLEC Trunk Group Service Report:** (pg. 26, item 1) **Bell South CTTG Blocking Report:** (pg. 26, item 2) **Local Network Trunk Group Service Report:** (pg. 26, item 3) **Local Network Blocking Report:** (pg. 26, item 4)
IUE-1 Availability of Network Elements	**911 Database Update Timeliness and Accuracy** (Att. A, Sec VI, 3)	**Mean Time To Process Customer Record Update Files [for 911/E911] - Received Electronically –** (Unbundled Network Rpt, pg 1, item 18) **Percentage of Customer Record Update Files [for 911/E911]Not (sic) Processed by the Next Business Day – Received Electronically –** (Unbundled Network Rpt, pg 1, item 19) **Percentage of Erred Customer Records – Received Electronically –** (Unbundled Network Rpt, pg 1, item 20)	**E911 Timeliness:** (pg. 25, item 1) **E911 Accuracy:** (pg. 25, item 2)

Notes:

1. Attachment A, to letter dated March 6, 1998 from Donald J Russell, Chief – Telecommunications Task Force, U.S. Department of Justice to Liam S. Connan, Esq., Senior Vice President and Assistant General Counsel, SBC Corporation, Inc.

2. **Attachment to letter dated March 11, 1998 from Sue West, General Manager Network Performance, Ameritech Information Industry Services to Mike Pfau, Division Manager , AT&T**

3. **Attachment to FCC Ex Parte notice dated January 23, 1998 to Magalie Roman Salas, Secretary, Federal Communications Commission from Kathleen B. Levitz, Vice President – Federal Regulatory Affairs, BellSouth**

CERTIFICATE OF SERVICE

I, James P. Lamoureux, hereby certify that on this 27th day of March, 1998, a true and correct copy of the foregoing has been delivered via U. S. Mail, postage prepaid to the following counsel of record:

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