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July 17, 1997

Ms. Blanca Bayo, Director
Division of Records and Reporting
Room 110, Easley Building
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Re: Docket No. 960786-TL

Dear Ms. Bayo:

Enclosed for filing on behalf of WorldCom, Inc. are an original and 15 copies of the Direct Testimony of Robert W. McCausland on behalf of WorldCom, Inc. in the above-referenced docket.

Please indicate receipt of this document by stamping the enclosed extra copy of this letter.

Thank you for your assistance in this matter.

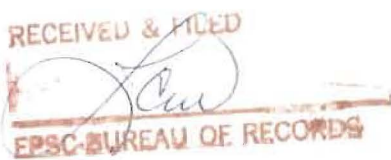
Sincerely,



Norman H. Horton, Jr.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that true and correct copies of the Direct Testimony of Robert W. McCausland on behalf of WorldCom, Inc. in Docket No. 960786-TL have been served upon the following parties by Hand Delivery (*) and/or Overnight Delivery (**) this 17th day of July, 1997:

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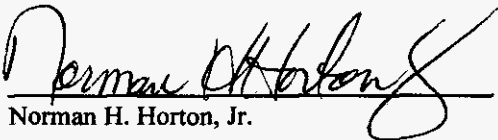
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Norman H. Horton, Jr.

**BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION**

In Re:)
)
Consideration of BellSouth)
Telecommunications, Inc.'s) Docket No. 960786-TL
Entry Into InterLATA Services)
Pursuant to Section 271 of the)
Telecommunications Act of 1996)
_____)

**TESTIMONY OF ROBERT W. MCCAUSLAND
ON BEHALF OF
WORLD COM, INC.**

July 17, 1997

DOCUMENT NUMBER-DATE

07212 JUL 17 97

FLORIDA PUBLIC SERVICE COMMISSION

1 **Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**

2 **A. My name is Robert W. McCausland. My title is Senior Director, Industry**
3 **Interface Management of WorldCom, Inc. My business address is 999**
4 **Oakmont Plaza Drive, Suite 400, Westmont, Illinois 60559.**

5 **Q. PLEASE DESCRIBE YOUR PREVIOUS PROFESSIONAL**
6 **EXPERIENCE AND EDUCATIONAL BACKGROUND.**

7 **A. I have worked for affiliates of MFS Communications Company, Inc., now**
8 **WorldCom, Inc., since October 24, 1994. My primary responsibilities at**
9 **WorldCom have included the negotiation, implementation and management**
10 **of physical and virtual collocation interconnection arrangements with each**
11 **of the Regional Bell Operating Companies ("RBOCs"), as well as Rochester**
12 **Telephone, Southern New England Telephone, GTE and the Sprint ILECs.**
13 **Additionally, I have been one of the most active industry participants in the**
14 **FCC's collocation proceedings and have coordinated the rollout of many of**
15 **the Company's initial unbundled loop interconnection arrangements.**

16 **From March 12, 1984 to October 21, 1994, I held a number of**
17 **management positions at Bell Atlantic Corporation including Regional**
18 **Product Manager of Collocation, Product Manager of Switched and Special**
19 **Access and Regional Product Manager of Wireless Interconnection. Also**
20 **while at Bell Atlantic Corporation I held management positions within**
21 **Service Costs, the Custom Design (bidding) Team, the FTS 2000 Bid**
22 **Development Team and the C&P Telephone State Regulatory headquarters**

1 organization. I served for several years on the Budget and Finance
2 Committee of a Washington, D.C. area chapter of the American Red Cross.
3 My background (prior to 1984) also includes retail store management, retail
4 sales and wholesale sales. I am a 1981 graduate of Marshall University in
5 Huntington, West Virginia, from which I received a degree of Bachelor of
6 Business Administration in Business Management.

7 **Q. PLEASE DESCRIBE WORLDCOM AND ITS INTEREST IN THIS**
8 **PROCEEDING.**

9 **A.** WorldCom, Inc. is the ultimate parent company of Metropolitan Fiber
10 Systems of Florida, Inc. and MFS Intelenet of Florida, Inc., providers of
11 telecommunications services in Florida. WorldCom and its affiliates are
12 certified to provide local exchange service in 23 states, including Florida. As
13 a new entrant to the Florida local exchange marketplace, WorldCom has a
14 very real interest in ensuring that BellSouth Telecommunications, Inc.
15 ("BellSouth") meets all of the checklist elements that it must meet as a
16 precondition of Section 271 authority. WorldCom recognizes the issuance
17 of Section 271 approval as a one-time event. Once BellSouth receives
18 Section 271 authority under that one-time event, BellSouth will no longer
19 have an incentive to ensure that local competition is implemented and may
20 use its substantial market position and its position of almost total control over
21 local access to customers to limit and slow the development of additional
22 local competition.

1 **Q. PLEASE DESCRIBE BRIEFLY YOUR CURRENT ROLE AND**
2 **PRIMARY RESPONSIBILITIES AT WORLDCOM.**

3 **A.** My current assignment is to ensure the availability and establishment of
4 reasonable and efficient interfaces to incumbent local exchange carrier
5 ("ILEC") Operations Support Service ("OSS") capabilities within each of the
6 ILEC territories in which WorldCom has begun or plans to begin to provide
7 local dialtone services. I also continue to provide considerable support to
8 those WorldCom personnel now charged with the rollout and management
9 of ILEC collocation interconnection arrangements and am currently
10 negotiating with another RBOC to invoke our Most Favored Nation provision
11 of WorldCom's agreement with that carrier with respect to physical
12 collocation.

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

15 **A.** WorldCom is here to demonstrate to the Commission that it takes more than
16 just the signing of an interconnection agreement to enter the local exchange
17 market. As the first company to enter the competitive local exchange market
18 in a number of other states (through MFS) and as one of the nation's largest
19 providers of competitive local exchange service, WorldCom is well aware
20 that entering the local exchange market is a difficult undertaking that
21 involves countless steps, any and all of which can affect the new entrant's
22 ability to provide competitive local exchange service. Such difficulties are

1 clearly affecting new entrants here in Florida, as is evident from the
2 minuscule number of local exchange customers currently receiving their
3 service from the new competitors.

4 I am here to provide the Commission with the benefit of WorldCom's
5 real-world experiences in attempting to implement local exchange
6 competition. I am here to explain to the Commission the difficulties in
7 entering the local exchange service business in general, and to some extent,
8 the problems that we continue to experience in trying to implement local
9 exchange competition in Florida. My goal is to provide the Commission with
10 these experiences so that you are properly informed about the current pace of
11 local competition and the possible timeframe for future developments. I will
12 also address some of the legal and policy issues related to BellSouth's entry
13 into the in-region interLATA long distance business.

14 In addition to discussing the steps necessary before a new entrant can
15 compete against BellSouth and the specific interconnection difficulties
16 WorldCom is experiencing in Florida, I will discuss several other issues. I
17 will highlight the fact that WorldCom cannot be certain that BellSouth fulfills
18 its Section 271 obligations until we are farther along in developing our
19 commercially available local service. Beyond simple loops, WorldCom
20 cannot be certain that BellSouth is capable of providing their unbundled
21 network elements ("UNEs") including the platforms. I also will discuss that
22 BellSouth has not yet provided access to OSS under the same terms and

1 conditions that it provides access to itself and its customers as it is required
2 to do as a precondition of Section 271 authority. Such a demonstration by
3 BellSouth is crucial to ensure that the new entrants are not placed in a
4 position of "perpetual inferiority" to BellSouth. Finally, I will describe the
5 need for objective measurement data demonstrating BellSouth provides
6 nondiscriminatory OSS access to competitors at parity with that access it
7 provides itself.

8 **I. INTRODUCTION.**

9 **Q. IS FLORIDA EXPERIENCING MUCH LOCAL EXCHANGE**
10 **COMPETITION SINCE PASSAGE OF THE**
11 **TELECOMMUNICATIONS ACT OF 1996?**

12 **A.** The Telecommunications Act of 1996 ("1996 Act") was enacted nearly one
13 and one-half years ago, yet Florida is seeing only a minimal amount of local
14 exchange competition, despite the best efforts of WorldCom and other
15 aspiring new entrants. Local exchange competitors have learned that the
16 complexities of entering that market are far more extensive than those that
17 BellSouth will encounter if it is granted in-region interLATA long distance
18 authority. For one thing, BellSouth has a ubiquitous infrastructure in place,
19 and it's one that BellSouth controls. Unlike new entrants, BellSouth has a
20 choice as to whom it can go to in order to obtain any facilities that it does not
21 already have in order to begin to provide in-region interLATA long distance.
22 Further, BellSouth will utilize an established and proven process to obtain

1 any interexchange access services that it cannot provide using its in-place
2 network. This is very, very different from the situation faced by each of the
3 new competitive entrants as they attempt to interconnect with the single
4 incumbent local exchange provider, BellSouth, in order to begin to serve
5 local exchange customers. And one of the biggest differences is the
6 substantial magnitude of control that BellSouth maintains (and will continue
7 to maintain) over the very facilities and processes on which the new entrants
8 must rely in order for them to serve the vast majority of local exchange
9 customers.

10 The comparison doesn't stop here. BellSouth local exchange service
11 in Florida is the result of a 100 year old monopoly that is supported by a
12 ubiquitous local network, well-established relationships with those who
13 control rights-of-way when BellSouth does not itself control those rights-of-
14 way, and fully-developed back-office systems such as those that support its
15 customer service, billing and data exchange, trouble reporting, emergency
16 and directory services and the like. At the same time, new entrants such as
17 WorldCom are starting from scratch in a market currently fully served only
18 by BellSouth and must use BellSouth in order to serve most customers. In
19 these circumstances, it is impossible for a new entrant to be competitive
20 overnight and the need for substantial scrutiny on BellSouth's compliance
21 with the Section 271 checklist and other ILEC obligations is crystal clear.

1 **Q. HOW DOES A NEW ENTRANT SUCH AS WORLDCOM GO ABOUT**
2 **ENTERING THE FLORIDA LOCAL EXCHANGE MARKET IN**
3 **COMPETITION WITH BELLSOUTH?**

4 **A. Like most others in the industry, WorldCom uses the term “co-carrier” to**
5 describe the relationship of new entrants to the ILECs, such as BellSouth.
6 The term co-carrier denotes both the rights of alternative local exchange
7 carriers (“ALECs”), such as WorldCom, to obtain nondiscriminatory “carrier-
8 to-carrier” interconnection and access to the ILECs’ networks as well as
9 certain obligations that ALECs owe to other carriers and to customers. This
10 *carrier-to-carrier relationship* involves needs, tasks and responsibilities that
11 go beyond those associated with the *access customer relationship* created at
12 the time of Divestiture. Within this testimony I will address some of the
13 major kinds of arrangements that every ALEC must put in place in order to
14 be able to begin to compete in the local exchange market. I also intend to
15 help show the significant magnitude of the effort that each ALEC must exert
16 in order to begin to build up even the smallest market share.

17 Each activity that I address will include numerous detailed steps to
18 implement, and each may entail physical or industry-imposed lead times for
19 its completion. Many of the numerous steps require the use of multiple
20 subject-matter experts and others who are mobilized to perform the specific
21 function within each of the implementation areas. Because so much of the
22 ALEC’s ability to compete depends on the ILEC’s fulfillment of its part of

1 the implementation, an ALEC and its customers can be dramatically affected
2 if the ILEC has not committed adequate numbers of trained personnel or
3 adequate system support and interfaces to the ALEC's effort. The failure to
4 implement even one of the steps can preclude the ALEC from beginning to
5 compete; hence, delays in the deployment of new local service networks can
6 and have become frequent and extensive.

7 **Q. MAY BELLSOUTH RELY ON A STATEMENT OF GENERALLY**
8 **AVAILABLE TERMS AND CONDITIONS ("SGAT") IN ORDER TO**
9 **OBTAIN SECTION 271 AUTHORITY?**

10 **A.** No. In its June 26, 1997, decision rejecting the SBC Communications
11 Section 271 application for authority to provide in-region long distance
12 service in Oklahoma, the FCC addressed the usefulness of an SGAT in
13 qualifying for Section 271 authority. Under Section 271, ILECs may qualify
14 for interLATA authority through their compliance with the 1996 Act's
15 Competitive Checklist when there are facilities-based competitors (Section
16 271(c)(1)(A), known as "Track A"), or by Commission approval of an SGAT
17 when there are not facilities-based competitors (Section 271(c)(1)(B), known
18 as "Track B"). The FCC ruled that SBC is foreclosed from reliance on Track
19 B because SBC has had "qualifying requests" for interconnection which, if
20 implemented, would satisfy the requirements of Track A. BellSouth has
21 clearly received "qualifying requests" from Florida competitors. The focus

1 of this Commission's inquiry then is whether or not BellSouth has met the
2 requirements of Track A. BellSouth is clearly not eligible for Track B.

3 **II. STEPS NECESSARY TO ENTER THE LOCAL EXCHANGE**
4 **MARKET.**

5 **Q. PLEASE DESCRIBE THE APPLICATION, CERTIFICATION AND**
6 **CONSTRUCTION PROCESS.**

7 **A.** The process begins with the application to a state commission for authority
8 to operate as a telecommunications provider. Depending on the state, this
9 process can take from a few months to a year to complete. Once a carrier is
10 certified, it often must seek and achieve a license and/or permit, sometimes
11 called a "franchise," to enter the public rights-of-way in order to lay cable.
12 It often will also have to enter into multiple negotiations with various
13 municipalities and property owners in its efforts to achieve non-public rights-
14 of-way. This can include the establishment of individual pole attachment and
15 conduit agreements as well as various construction permits and even
16 individual building access agreements.

17 With a franchise and appropriate permits and property-owner
18 agreements, a carrier may then construct a fiber-optic cable backbone
19 network and a local fiber-optic cable network in as many areas as it can
20 afford. In the case of WorldCom, we initially connect main WorldCom node
21 points to ILEC central offices ("COs"), interexchange carrier ("IXC") points
22 of presence ("POPs") and the like. WorldCom then extends its network by

1 collocating electronic equipment within certain ILEC COs and purchasing
2 components from the ILEC that WorldCom cannot provide to itself.

3 In Florida, WorldCom (through MFS) had obtained certification as
4 an Alternative Access Vendor ("AAV") and had constructed several fiber-
5 optic backbones prior to the authorization of local dialtone service
6 competition. WorldCom had become operational as an AAV in late 1994,
7 and now has limited networks in and near Tampa, Orlando and Miami and
8 with a key part of its network connectivity provided through the use of
9 BellSouth's SmartRing service in Miami. One example of some of the
10 problems we face is that it took nearly two years to reach an agreement with
11 Dade County regarding use of rights of way, and that was only an interim
12 agreement.

13 The fiber-optic cables, electronic equipment and other AAV network
14 arrangements are not enough to become a facilities-based co-carrier,
15 however. In addition, unlike the special access, private line transport
16 networks established for AAV services, the introduction of competitive local
17 dialtone services required an extensive investment and deployment of local
18 dialtone switches and associated integrated digital loop carrier equipment.
19 An investment in switch generics (i.e., programming) and specialized
20 technical personnel is also required. Concurrently with the installation and
21 programming of each new dialtone switch, and on an on-going basis
22 thereafter, extensive testing must be performed. Ultimately that testing must

1 be extended to the interfaces between the new dialtone switches and the
2 ILEC's network. At that latter stage, the ILEC's participation and
3 cooperation must again be achieved. Also, the ALEC must create an
4 extensive data-exchange and billing infrastructure that conforms with
5 revenue-accounting related industry processes and that helps to ensure that
6 consumers receive timely and accurate bills. And this is just the tip of the
7 iceberg. For before actual traffic exchange can occur, an interconnection
8 agreement must be negotiated with the ILEC.

9 **Q. PLEASE DESCRIBE THE INTERCONNECTION AGREEMENT**
10 **NEGOTIATION PROCESS.**

11 **A.** An interconnection agreement is a contract governing the universe of
12 complex relationships between an ILEC and an ALEC. One of the key
13 functions of such an agreement is to ensure seamless service to the customers
14 served by both carriers' networks. As this Commission knows from the
15 various arbitrations that it has overseen, an interconnection agreement
16 typically includes such items as:

- 17 • **Physical Interconnection Terms:** The number and location of points
18 of interconnection, the type(s) of interface, standards, intervals and
19 measurements related to deployment and upgrades of interconnection
20 equipment;
- 21 • **Transport and Termination of Telephone Exchange Service Traffic:**
22 The determination of specific trunk groups for various types of traffic

1 (e.g., local, intraLATA toll, operator/directory assistance and
2 information services);

- 3 • Reciprocal Compensation;
- 4 • Transport and Termination of Exchange Access Traffic: The
5 determination of specific trunk groups for traffic from WorldCom's
6 end users to IXCs via ILEC tandem switches;
- 7 • Access to ILEC E-911 Infrastructure;
- 8 • Access to ILEC Directory Assistance;
- 9 • Access to White and Yellow Pages Listings;
- 10 • Access to and Pricing of Unbundled Local Loops and Other
11 Unbundled Network Elements ("UNEs"): Including provisioning
12 intervals, ordering processes, cutover procedures, loops with that
13 meet different technical parameters, etc.;
- 14 • Central Office Collocation;
- 15 • Telephone Number Portability: Implementation of Interim Number
16 Portability ("INP") via Remote Call Forwarding ("RCF"), Direct
17 Inward Dial ("DID"), pass-through of terminating compensation of
18 INP traffic;
- 19 • Access to, and Billing of, Third-Party Traffic;

20 Pursuant to the 1996 Act, areas of dispute can be arbitrated before the
21 state Commission. Ultimately, the agreement is filed with the state
22 Commission and approved.

1 MFS, prior to its merger with WorldCom, had initiated negotiations
2 with BellSouth in advance of enactment of the 1996 Act. It took a full year
3 from the initiation of the negotiations until an interconnection agreement
4 covering a number of issues was signed. Even then, a critical pricing issue
5 remained for the Commission to decide through the arbitration process. In
6 particular, the rate for unbundled loops was arbitrated before this
7 Commission.

8 **Q. PLEASE DESCRIBE BRIEFLY THE CO-CARRIER**
9 **IMPLEMENTATION PROCESS.**

10 **A.** The implementation of co-carrier arrangements with the ILEC generally
11 involves many, many details and individual activities. Following is a
12 synopsis of a few of the areas that a co-carrier must fully address:

- 13 • Establish joint procedures for interconnection, monitoring, testing,
14 ordering, data exchange and billing;
- 15 • Test all interconnection arrangements, as well as the procedures and
16 interfaces;
- 17 • Ensure full 911 integration through meetings with each municipal and
18 county 911 authority;
- 19 • Install and test unbundled loops and other UNEs as well as their
20 respective provisioning procedures;
- 21 • Coordinate joint ILEC/ALEC trials for items such as UNEs and INP
22 using "live" customer accounts within a specified cutover window;

- 1 • Secure NXX codes and file details in the Local Exchange Routing
2 Guide (“LERG”).

3 Each of these areas may take days to many months to complete and
4 many can be accomplished only following the completion of others. It is
5 absolutely essential to the new entrant that everything is in place, fully-tested
6 and operational when the ALEC begins to provide service to its first
7 customer in each service area. If the ALEC’s dialtone service is perceived
8 to be in any way deficient, then the enormous market advantage possessed by
9 the ILEC will prevail and the ALEC’s reputation may be so permanently
10 blemished as to inhibit its ability to capture more than a modest market share.

11 **Q. PLEASE DESCRIBE WHAT IS INVOLVED IN DEVELOPING AND**
12 **IMPLEMENTING THE CO-CARRIER BILLING PROCESS.**

13 **A.** Billing is an essential element of a co-carrier operation. Unless it works, it
14 can be the Achilles heel of competitive local service. To institute a co-carrier
15 billing process, WorldCom and the ILEC must take a number of steps such
16 as:

- 17 • Mutual determination of data exchange processes, methods,
18 procedures, transmission media, frequency, etc.
19 • Exchange of test tapes to validate completeness, timeliness and
20 accuracy.

- 1 • Mutual determination of billing percentages (“BIPs”), by route, to
2 ensure accurate meet-point billing (“MPB”) for IXC traffic (and the
3 filing of the BIPs in NECA’s wire center information tariff).
- 4 • Implementation of processes to render access bills to IXCs for their
5 traffic that originates from or terminates to the ALEC’s customers’
6 telephone numbers.
- 7 • Notification of the billing name and address information associated
8 with each IXC to enable the ALEC to notify each such IXC of the
9 ALEC’s presence in order to initiate the process to create procedures
10 for billing of the IXC’s traffic to and from the ALEC’s customers.
- 11 • Establishment of various billing factors/percentages such as the
12 percent local usage (“PLU”) that are needed when actual call records
13 are not available.
- 14 • Implement processes to render bills to each other for reciprocal
15 compensation.
- 16 • Establish and implement processes and procedures for INP to ensure
17 that the ALEC is properly compensated for calls that terminate to its
18 customers which retain the ILEC telephone numbers.
- 19 • Share, properly record and correctly apply tax exemption information
20 (certificates) in order to collect tax only where appropriate.

21 The ALEC must perform such activities concurrently with the
22 development and deployment of its end-user billing system(s). This

1 significant step includes full system testing once the data feeds are
2 established. While the establishment of billing systems, procedures and
3 processes is obviously complex, the decisions and agreements on who gets
4 billed for what and who pays for what must be individually addressed for a
5 large number of different call types.

6 As is evident here, an enormous effort takes place before the very first
7 ALEC dialtone customer can be served, and the process does not stop there.
8 Not to overstate this point, but it requires emphasis, unless WorldCom and
9 the ILEC get the processes working correctly, WorldCom will be out of the
10 marketplace before we can even start.

11 **Q. ARE THE STEPS NECESSARY TO ENTER THE LOCAL**
12 **EXCHANGE MARKET SIMILAR TO THE STEPS NECESSARY TO**
13 **ENTER THE LONG DISTANCE MARKET?**

14 **A.** No. The ALEC-implementation effort to enter the local exchange market is
15 very different from the industry-wide process to enter the long distance
16 market. For long-distance entry, ILECs such as BellSouth need only to
17 follow the pre-existing steps to purchase and implement components that are
18 often already available through multiple long-distance suppliers. This
19 relative ease of entry in the long-distance market is highlighted by GTE's
20 well-publicized success in serving more than one million long distance
21 customers in its initial year in the long distance business. My experience in
22 implementing local exchange service convinces me that it is impossible for

1 anywhere near the same number of local service customers to be served by
2 any one ALEC, or even all ALECs combined, in the same amount of time.
3 The complexity of entering the local exchange market, and the reliance that
4 all ALECs have on the ILECs' networks, processes and systems, creates a
5 much bigger challenge for the ALECs than that faced by BellSouth in
6 entering the already-competitive long distance market. Hence, a pivotal
7 component of effective ALEC entry includes the ILECs' performance, not
8 just the performance of the ALEC. Therefore, the availability of meaningful
9 competitive local-service choices for consumers also depends on the
10 performance of BellSouth and the other ILECs.

11 **III. FLORIDA INTERCONNECTION DIFFICULTIES (ISSUE**

12 **8(a)).**

13 **Q. HAS WORLDCOM EXPERIENCED ANY PROBLEMS IN ITS**
14 **EFFORTS TO IMPLEMENT LOCAL COMPETITION IN FLORIDA?**

15 **A.** Yes. A year ago, WorldCom was before the Commission arbitrating
16 interconnection issues with BellSouth. A year seems an appropriate measure.
17 It took WorldCom a year to get an interconnection agreement with BellSouth,
18 now we have approximately a year's experience under that interconnection
19 agreement. Although, WorldCom's experience in Florida is limited because
20 it has not yet provided service using BellSouth unbundled loops in Florida,
21 WorldCom has already experienced difficulty in implementing local
22 competition in Florida. A recent example involves WorldCom's efforts to

1 implement 911 call completion arrangements in and near Miami. Despite the
2 precedents established in other market areas, whereby single sets of facilities
3 are established from the ALEC for 911 traffic, WorldCom has been forced
4 to re-design and overbuild its trunking from WorldCom's switch site to
5 BellSouth's tandem office due to BellSouth's 911 system design. Needless
6 to say, WorldCom has incurred significant expense to interconnect to
7 BellSouth's 911 network to ensure the safety of WorldCom's customers.
8 While the intent of those who established the pre-existing 911 network seems
9 to be good, the design that was employed is simply not conducive to
10 interconnection to ALECs. The need for WorldCom to redesign its network
11 demonstrates the additional network costs ALECs incur, as they enter the
12 local market.

13 **IV. INTERCONNECTION DIFFICULTIES IN OTHER BELLSOUTH**
14 **STATES.**

15 **Q. HAS MFS EXPERIENCED INTERCONNECTION DIFFICULTIES IN**
16 **OTHER BELLSOUTH STATES IN WHICH IT HAS MORE**
17 **EXPERIENCE?**

18 **A.** Yes, in Georgia, MFS has had difficulty obtaining coordinated cutovers of
19 customers.

20 **Q. WHAT IS THE COMPETITIVE IMPACT IF BELLSOUTH DOES**
21 **NOT PROVIDE MFS WITH SMOOTH COORDINATED**
22 **CUTOVERS?**

1 A. The unbundled loop conversion process requires careful coordination by the
2 ILEC and the ALEC technicians in order to meet customers' due dates and
3 avoid service down times. When such problematic conversions are
4 encountered, there is a significant risk that WorldCom's new customer will
5 lose confidence in WorldCom and switch back to the ILEC's service.

6 One such type of coordination problem that has serious implications
7 to WorldCom involves the pre-arranged dispatch of ILEC technicians to
8 customers' premises. Customers typically request that service conversions
9 take place after business hours. In its efforts to accommodate such a
10 customer request and win a new customer, WorldCom frequently schedules
11 appointments with the ILEC for which it must pay premium or overtime
12 labor rates to the ILEC. When the ILEC technician for any reason other than
13 a customer-initiated change does not show up as originally scheduled, the
14 whole point of the early scheduling procedure - to ensure that WorldCom's
15 customer does not lose service during business hours - is lost. Unfortunately,
16 our experience has been that it is not an unusual occurrence for the scheduled
17 conversion to be missed or delayed.

18 Obviously, WorldCom and BellSouth will have to work together to
19 accomplish the task of converting a customer from BellSouth's local
20 exchange service to WorldCom's service and eventually vice versa. When
21 an ILEC performs poorly in this conversion effort, however, it is WorldCom
22 that suffers the consequences in the competitive marketplace. Following are

1 some of the repercussions to a ALEC when the ILEC's conversion
2 performance is poor:

- 3 • WorldCom is forced to incur additional costs for rework.
- 4 • WorldCom is forced to pay its own employees and subcontractors for
5 time spent waiting for ILEC technicians when those technicians do
6 not honor scheduled conversion dates and times.
- 7 • WorldCom's credibility with its new base of customers is damaged,
8 and that, in turn, affects WorldCom's overall reputation in the
9 marketplace that it is trying to enter.
- 10 • WorldCom is forced to incur additional costs in the form of billing
11 adjustments to customers in order to attract customers or, when
12 something goes wrong, to preserve WorldCom's goodwill.

13 **Q. DOES WORLDCOM EXPERIENCE PROBLEMS BEING**
14 **COMPENSATED FOR REMOTE CALL FORWARDED ("RCF")**
15 **CALLS?**

16 **A.** Yes. Under the current RCF technology, WorldCom would be under-
17 compensated for calls other than true local calls, e.g., under-compensated for
18 toll calls. This is because the call record that WorldCom ultimately receives
19 on any call to an INP number is that associated with the forwarded local call
20 from the ILEC end office rather than the record that reflects the actual
21 origination point of the call - a record that is lost when the remote call
22 forwarding occurs.

- 1 **V. NONDISCRIMINATORY OSS ACCESS (ISSUES 3 & 15).**
- 2 **Q. HAS BELLSOUTH ACHIEVED PARITY IN THE ACCESS THAT IT**
3 **HAS BEGUN TO PROVIDE TO ALECS FOR EACH OF ITS**
4 **OPERATIONS SUPPORT SYSTEMS?**
- 5 **A.** Clearly it has not. WorldCom, like most if not all other ALECs, is still in the
6 very early stages of establishing its local service operation here in Florida.
7 Experience with BellSouth's current OSS interface arrangements has, to date,
8 been minimal. In order for BellSouth to prove that it has provided access to
9 OSS that is at least equal to that which it provides to itself, it must produce
10 empirical measurement data that are independently verifiable and that reflect
11 results indicating parity. Such a demonstration by BellSouth is crucial to
12 ensure that the new entrants are not placed in a position of "perpetual
13 inferiority" to BellSouth. Further, such a demonstration cannot be limited to
14 just OSS access, but must also include certain other quality measures.
- 15 **Q. PLEASE DESCRIBE THE LIMITATIONS IN BELLSOUTH'S**
16 **ELECTRONIC ORDERING INTERFACE.**
- 17 **A.** BellSouth's electronic interface Local Exchange Navigation System
18 ("LENS"), appears to be designed only for preordering functions for resold
19 BellSouth services, although BellSouth erroneously claims that it can support
20 unbundled network element and interim number portability ordering. In
21 addition, the functions that LENS appears to be able to perform are virtually
22 useless for MFS' business customers.

1 **Q. CAN LENS BE USED FOR ORDERING ALL RESOLD SERVICES**
2 **AND UNBUNDLED NETWORK ELEMENTS?**

3 **A.** No. For example, as shown in the e-mail message from BellSouth to MFS
4 dated May 5, 1997 and included as Exhibit RWM-1, BellSouth's LENS
5 training is limited to resale services until late 1997. Even if it could,
6 BellSouth apparently has no plans to train ALECs how to use LENS for this
7 functions related to unbundled elements. The unavailability of LENS for
8 unbundled network element ordering coupled with the fact that LENS is a
9 non-standard interface to begin with, shows that there definitely cannot be
10 parity as BellSouth may allege. Also, the EDI interface that BellSouth is now
11 emphasizing does not meet our needs due to the fact it is not mechanized.

12 **Q. WHY DO YOU BELIEVE THAT BELLSOUTH CANNOT**
13 **DEMONSTRATE THAT IT PROVIDES ALECS WITH OSS ACCESS**
14 **AT PARITY WITH THAT ACCESS IT PROVIDES ITSELF?**

15 **A.** I believe this for the simple reason that BellSouth cannot produce any
16 measurement data demonstrating parity.

17 **Q. WHAT ARE THE MEASUREMENT DATA TO WHICH YOU**
18 **REFER?**

19 **A.** I am referring to statistically-valid measurement data that are necessary for
20 BellSouth to demonstrate that the performance levels of the OSS access and
21 unbundled network elements ("UNEs") that it provides to ALECs are
22 nondiscriminatory and at parity with the OSS access and service that

1 BellSouth provides to itself and its customers. Several very obvious
2 examples of such measurement data would be: 1) the average time for
3 BellSouth to install unbundled loops for an ALEC compared to the average
4 time that it provides loops to itself for its own customers, 2) the Mean Time
5 to Repair (MTTR) for ALEC-purchased resale arrangements compared to the
6 MTTR for BellSouth's own retail customer services, 3) the cycle (i.e.,
7 interval) time for each type of ALEC transaction compared to BellSouth's
8 own and 4) the system availability time for ALECs compared to that which
9 BellSouth provides to itself.

10 **Q. IS IT APPROPRIATE FOR BELLSOUTH TO PROVIDE SERVICE**
11 **QUALITY AND PARITY MEASUREMENT DATA THAT ARE NOT**
12 **SET FORTH IN THE INTERCONNECTION AGREEMENTS THAT**
13 **BELLSOUTH HAS ENTERED INTO WITH WORLDCOM AND THE**
14 **OTHER ALECS?**

15 **A.** It is not only appropriate, it is crucial that BellSouth provide statistically-
16 valid empirical measurement data that actually demonstrates its compliance
17 with the nondiscrimination and parity requirements.

18 **Q. WHY ARE SUCH MEASUREMENT DATA CRITICALLY**
19 **IMPORTANT IN THIS PROCEEDING?**

20 **A.** Statistically-valid empirical measurement data such as those that I describe
21 are necessary for BellSouth to demonstrate compliance with the requirement
22 that it provide nondiscriminatory access to competing carriers. It is simply

1 not possible for BellSouth or any other ILEC to demonstrate compliance
2 without such empirical data. Further, the permanent elimination of the
3 incentive that Section 271 provides to BellSouth prior to a demonstration by
4 BellSouth, based on such empirical data, of parity and nondiscrimination in
5 its provision of OSS access and UNEs dramatically increases the likelihood
6 that telephone service competition will be inhibited in Florida.

7 **Q. HAS BELLSOUTH PROVIDED SERVICE QUALITY AND PARITY**
8 **MEASUREMENT DATA SUFFICIENT TO ACTUALLY**
9 **DETERMINE NONDISCRIMINATORY ACCESS AND PARITY IN**
10 **THIS PROCEEDING?**

11 **A.** No.

12 **Q. IS THERE A LIST OF PERFORMANCE MEASUREMENTS FROM**
13 **WHICH THIS COMMISSION SHOULD DRAW IN ORDER TO**
14 **ENSURE THAT BELLSOUTH PROVIDES NONDISCRIMINATORY**
15 **OSS ACCESS AT PARITY?**

16 **A.** Yes. The Local Competition Users Group ("LCUG") has devised a proposed
17 list of Service Quality Measurements ("SQM") that should be used by this
18 Commission for this purpose. The most recent SQM document is attached
19 as Exhibit RWM-2. These are the same measures that LCI and Comptel have
20 proposed that the FCC use as the basis for a rulemaking proceeding regarding
21 nationwide OSS performance standards. The FCC currently is considering
22 the proposal.

1 **Q. ARE YOU SUGGESTING THAT ALL INDIVIDUAL**
2 **MEASUREMENTS INCLUDED IN THE LCUG SQM DOCUMENT**
3 **BE USED IN ASSESSING BELL SOUTH'S COMPLIANCE WITH**
4 **THE NONDISCRIMINATION AND PARITY REQUIREMENTS?**

5 **A.** No, however I am suggesting that BellSouth provide sufficient empirical data
6 comparisons associated with all of the categories included in the LCUG SQM
7 document, as well as any other data deemed necessary by this Commission,
8 for BellSouth to demonstrate its compliance and I emphasize that such data
9 must be demonstrably statistically valid and verifiable.

10 **VI. CONCLUSION.**

11 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

12 **A.** New competitive entrants are in many significant ways dependent on
13 BellSouth in order to succeed. Until BellSouth can demonstrate that it has
14 met each element of the Section 271 checklist, it cannot qualify for long
15 distance authority. This includes the provisioning of all lines and the
16 platform. Moreover, the Commission can have no comfort that BellSouth
17 actually provides nondiscriminatory OSS access until BellSouth
18 demonstrates through the use of empirical measurement data that such access
19 is truly available at parity with that access that BellSouth provides to itself.
20 If Section 271 authority is granted before BellSouth makes such a satisfactory
21 demonstration, there is a far greater chance that telephone service competition
22 in Florida will be inhibited. BellSouth cannot yet satisfy all the preconditions

1 to Section 271 authority. Therefore, the Commission should recommend to
2 the FCC that the BellSouth 271 application be denied.

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A. Yes.**

Gavalas, Andrea

From: Brenda O. Douglas[SMTP:Brenda.Douglas2@bridge.bst.bls.com]
Sent: Monday, May 05, 1997 12:52 PM
To: Gavalas@bridge.bellsouth.com; Andrea
Cc: Van Cooper; David L. Jones
Subject: RE: Clarification -LENS Training

The current LENS training pertains to Resale services: non-complex, 1FB, 1FR, measured business and residence type orders. Complex services training will be available toward the end of '97.

If you feel anyone in your organization will benefit from this training, please have them contact the coordinator. I have already sent the training notice to Nancy Molay and Jerry McKenzie for their review.

Thank you,
Brenda Douglas

***LOCAL COMPETITION USERS G
(LCUG)***

SERVICE QUALITY MEASUREMENT

Version 4
May 22, 1997

Membership: AT&T, Sprint, MCI, LCI, WorldCom

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LCUG Service Quality Measurements (SQMs)

Introduction

Background:

On August 8, 1996, the Commission released its First Report and Order (the Order) in CC Docket No. 96-98 (Implementation of the Local Competition Provisions of the Telecommunications Act of 1996). The Order established regulations to implement the requirements of the Telecommunications Act of 1996. Those regulations are intended to enable potential competitive local exchange carriers (CLECs) to enter and compete in local telecommunications markets. The Commission found that nondiscriminatory access to operations support systems ("OSS") of incumbent local exchange carriers ("ILECs") was essential to successful market entry by CLECs. Access to operational support systems was to occur by January 1, 1997. Many variations of interim OSS graphic user interfaces ("GUIs") and electronic gateways have been or are being installed by the ILECs. These interim systems have not provided the capability for the CLECs to provide the same customer experience for their customers as the ILECs do for theirs. The timeliness and accuracy of information processed by the ILEC for pre-ordering, ordering and provisioning, maintenance and repair, unbundled elements, and billing have been less than the expected levels of service. This lack of service delivery does not differ between provisioning method, whether it is simply buying existing services on a wholesale basis to be resold or interconnection utilizing unbundled elements. Final solutions for application-to-application real time system interfaces are evasive because of the complexity, the diversity of commitment schedules to implement them and the lack of industry guidelines.

On February 12, 1997, the Local Competition Users Group (LCUG) issued their "Foundation For Local Competition: Operations Support Systems Requirements For Network Platform and Total Services Resale." The core principles are: Service Parity, Performance Measurement, Electronic Interfaces, Systems Integrity Notification of Change, and Standards Adherence. Each of these are significant to ensure that CLEC customers receive equal levels of service to those of ILEC customers. The LCUG group indicated that it was essential that a plan be developed to measure ILECs performance for all the essential OSS categories, e.g., pre-ordering, ordering and provisioning, maintenance and repair, network performance, unbundled elements, operator services and directory assistance, system performance, service center availability and billing. To that end, an LCUG sub-committee was formed to address measurements and metrics. The following document is the result of that activity. A comprehensive list of all measurements was initially developed and distributed to the team members for review. Each committee member was then assigned a section to investigate and propose recommendations back to the group. The group discussed each measurement and used present measurements criteria contained in regulatory requirements or good business practices to determine the final item and classes of service to be measured. The service quality measurement (SQM) goal was difficult to set because the group lacked historical trended data from the ILECs. The ILECs have been reluctant to share current performance over the past 12-18 months. The goals were drawn from best of class and/or good business practices. The SQM goal may change as the ILECs start sharing historical as well as actually self-reporting data benchmark by the ILEC, the CLEC, and the CLEC industry on a going forward basis.

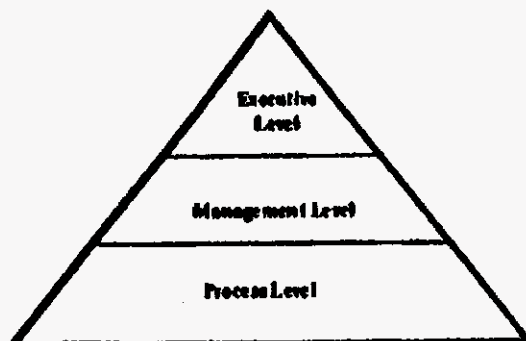
LCUG Service Quality Measurements (SQMs)

Measurement Plans:

A measurement plan must incorporate at least the following characteristics: 1) provide statistically valid and independently verifiable comparisons of the CLEC and CLEC industry experience to that of the ILEC; 2) account for potential performance variations due to differences in service and activity mix; 3) measure not only service measurements but also measures directed at UNBs in general and OSS interfaces; and 4) produce results which demonstrate the nondiscriminatory access to OSS functionality is being delivered across all interfaces and a broad range of resold services and unbundled elements. The measures must address interface availability, timeliness of execution, and accuracy of execution.

It is essential that the CLECs be able to determine that they are receiving equal treatment to that provided to the ILEC and its affiliates. Benchmarks and performance standards that are adopted by the CLECs and ILECs or ordered by commissions and reported will determine whether new service providers are receiving nondiscriminatory treatment. Benchmark comparisons should be self reported by the ILEC and reflect CLEC performance, ILEC performance and CLEC industry performance.

The measurements contained within this document addresses metrics at the executive level. There are several other levels of measurements that are used for the day-to-day activities as illustrated by the following simple diagram.



Process Improvement:

In addition to the actual reporting of measurements there must be a commitment to take corrective action when poor performance or non-parity situations are identified. The ILECs need to self-report all measurements and analyze the results. Root cause analysis must be conducted and corrective actions taken to improve results or resolve issues. Corrective action steps, schedules and milestones should be developed by the ILEC and CLEC as appropriate to ensure timely implementation of corrective steps.

PRE-ORDER (PO)

Function	Measurement Objective	Proposed Service Quality Measurement
<p>Timeliness of Providing Pre-Ordering Information</p>	<p>Measures the ILEC response time to a query for appointment scheduling, service & feature availability, address verification, request for Telephone Numbers (TNs) and Customer Service Records (CSRs). The query interval starts with the request message leaving the CLEC and ends with the response message arriving at the CLEC.</p>	<p>≤2 seconds from the time the query is launched until the following data is received back (98% ≤ 2 sec & 100% ≤ 5 sec):</p> <ul style="list-style-type: none"> • Due Date Reservation • Feature Function Availability • Facility Availability • Street Address Validation • Service Availability Information • Appointment Scheduling • Customer Service Records • Telephone Number Assignments: <ol style="list-style-type: none"> 1. ≤30 TNs ret'd in ≤ 2 sec 98% of time & ≤ 5 sec 100% of time, 2. > 30 TNs ret'd < 2 hours 100% of time <p>PO-1 $\frac{\# \text{ of Responses Received on time}}{\text{Total \# of Queries Sent}} \times 100$</p> <p>PO-2 Mean Cycle Time</p>

ORDERING AND PROVISIONING (OP)

Function	Measurement Objective	Proposed Service Quality Measurement
Orders completed within specified intervals	Measures the percentage and mean completion interval of orders (installation, feature change, service disconnect) completed with a requested due date that is equal or less than the interval specified in the Service Quality Measurements column.*	<p>Unless specified below, orders with no Premises Visit or no physical work involved completed within 1 day of service order receipt *; orders that require Premises Visit or physical work: completed within 3 days of service order receipt *; 99% orders completed on due date *.</p> <p>Installation:</p> <ul style="list-style-type: none"> • UNE Platform (at least DS0 loop + local switch + all common elements) always within 24 hours, regardless of dispatch • UNE Channelized DS1 (DS1 loop + multiplexing) always within 48 hours • Unbundled DS0 loop always within 24 hours • Unbundled DS1 loop (unchannelized) always within 24 hours • Other Unbundled Loops always within 24 hours • Unbundled Switch always within 48 hours • Dedicated Transport - DS0/DS1 always within 3 business days • Dedicated Transport - DS3 always within 5 bus days <p>Feature Changes:</p> <ul style="list-style-type: none"> • All orders completed within 5 business hours of receipt <p>Disconnects:</p> <ul style="list-style-type: none"> • Resale Product or Svc Disconnects always within 24 hrs • UNE switching within 24 hours • UNE (other) within 24 hours <p>OP - 1 $\frac{\text{\# of Orders Completed on Time}}{\text{Total \# of Orders Completed}} \times 100$</p> <p>OP - 2 Mean Completion Time</p>

* Reported for the following types of service or facility: Resold POTS, Resold ISDN, Resold Centrex/Centrex-like, Resold PBX trunks, Resold Channelized T1.5 Service, Other Resold Services, UNE Platform (at least DS0 loop + local switch + transport elements), UNE Channelized DS1 (DS1 loop + multiplexing), Unbundled DS0 loop, Unbundled DS1 loop, Other Unbundled loops, Unbundled Switch, Other UNES

ORDERING AND PROVISIONING (OP) (con'd)

Function	Measurement Objective	Proposed Service Quality Measurement
Order Accuracy	Measures the accuracy and completeness of the ILEC provisioning or disconnecting service by comparing what was ordered & what was completed	<p>≥ 99% are completed without error</p> <p>OP-3 <u># of Orders Completed w/o error</u> x 100 <u>Total # of Orders Sent</u></p>
Order Status	<p>Measures the response time (by percentage and mean time) for: Firm Order Confirmations (C-FOCs and D-FOCS *), Jeopardize / revised due date, Rejects, and Completions from the time an order is sent to the ILEC until a status is received</p> <p>*C-FOC: accepted, no change D-FOC: does not match due date</p>	<ul style="list-style-type: none"> • FOC: 100% ≤ 4 hrs • Jeopardies/revised due date: 100% ≤ 4 hours • Rejects: ≥ 97% in ≤ 15 seconds • Order Completions: ≥ 97% received within 30 min of order completion <p>OP-4 <u>{# of FOCs returned ÷ (Total # of Orders Sent) - Rejects Returned}</u> x 100</p> <p>OP-5 <u>Mean Time to Return FOC</u></p> <p>OP-6 <u>{# of D_FOCs returned in ≤ 4 hours ÷ (Total # of Orders sent - Rejects Returned)}</u> x 100</p> <p>OP-7 <u>Mean Time to Return D-FOCS</u></p> <p>OP-8 <u>{# of Rejects returned in ≤ 15 seconds} ÷ (Total # of Rejects Returned)</u> x 100</p>

ORDERING AND PROVISIONING (OP) (con'd)

Function	Measurement Objective	Proposed Service Quality Measurement
		<p>OP-9 <u>Mean Time to Return Rejects</u></p> <p>OP-10 Jeopardies returned w/i 70% of allotted order time ÷ Total # Jeopardies Returned</p> <p>OP-11 (# of Completions returned in ≤ 30 minutes) ÷ (Total # Completed Orders) x 100</p> <p>OP-12 Mean Time to Return Completion</p> <p>OP-13 Jeopardies (Total C-FOCS - Total Rejects)</p>
<p># of Held Orders</p>	<p>Tracks the percentage and number of held orders within specified intervals</p>	<p>Report for: ≥ 15 days, ≤ 0.1% ≥ 90 days, = 0%</p> <p>OP-14 (# of Orders Held for ≥ "x" days) ÷ (Total # of Orders Sent to ILEC in the past "x" days) x 100 <i>where "x" = 15 or 90 days</i></p> <p>OP-15</p>

		Mean Time of Orders Held Prior to Completion
--	--	---

MAINTENANCE / REPAIR (MR)

Function	Measurement Objective	Proposed Service Quality Measurement
Time to Restore (TTR)	<p>Measures the percent of restorals made by product and service within 24 hours or less*</p> <p><i>Measures the mean time that it takes for the ILEC to resolve customer troubles*</i></p>	<p>Out of Service No Dispatch</p> <p>≥ 85% in 2 hrs</p> <p>≥ 95% in 3 hrs</p> <p>≥ 99% in 4 hrs</p> <p>All other Troubles</p> <p>≥ 95% in 24 hrs Dispatch Required</p> <p>≥ 90% in 4 hrs</p> <p>≥ 95% in 8 hrs</p> <p>≥ 99% in 16 hrs</p> <p>MR-1*</p> <p>(# of Troubles Restored Within "x" hours ÷ Total # Troubles) x 100</p> <p>where "x" = 2,3,4,8,16, or 24 "running clock" hours</p> <p><u>Mean Time to Restore reported for ILEC and CLEC, for dispatch required and no dispatch required</u></p> <p>MR-2</p> <p>Total # of Trouble Minutes ÷ Total # of Trouble Reports</p>
Repeat Troubles	Measures the frequency of recurring customer trouble on the same line, circuit or service*	<p>< 1% within 30 days*</p> <p>MR-3</p>

* Reported for the following types of service or facility: Resold POTS, Resold ISDN, Resold Centrex/Centrex-like, Resold PBX trunks, Resold Channelized T1.5 Service, Other Resold Services, UNE Platform (at least DS0 loop + local switch + transport elements), UNE Channelized DS1 (DS1 loop + multiplexing), Unbundled DS0 loop, Unbundled DS1 loop, Other Unbundled loops, Unbundled Switch, Other UNEs

		# of telephone lines reporting ≥ 2 troubles in the current report month. Total number of troubles in the current report month.
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MAINTENANCE / REPAIR (MR) (con'd)

Function	Measurement Objective	Proposed Service Quality Measurement
		This includes those lines, circuits, or services with a second trouble ticket coded out as CC (Came Clear), CO (central office), FAC (Facility) or STA (station) that follow an initial ticket coded out as Any found or Non-found disposition.
Troubles Per 100 Lines	Measures the frequency of troubles reported within the ILEC's network *	≤ 1.5 per month* MR-4 (# of Initial & Repeated Trouble Reports per exchange per month) \div (Total # of Lines per exchange) x 100
Estimated Time to Restore (Appointments Met) ETTR	Measures the compliance of restoring service within the time estimated to the CLEC, reported for premises visits required and premises visit not required*	$\geq 99\%$ * MR-5 (# of Customer Trouble Appointments Met \div Total # Customer Trouble Appointments) x 100

* *Reported for the following types of service or facility: Resold POTS, Resold ISDN, Resold Centrex/Centrex-like, Resold PBX trunks, Resold Channelized T1.5 Service, Other Resold Services, UNE Platform (at least DS0 loop + local switch + transport elements), UNE Channelized DS1 (DS1 loop + multiplexing), Unbundled DS0 loop, Unbundled DS1 loop, Other Unbundled loops, Unbundled Switch, Other UNES

GENERAL (GE)

Function	Measurement Objective	Proposed Service Quality Measurement
Systems Availability	Measures the availability of operations support systems and associated interfaces (for pre-ordering, ordering and provisioning, maintenance)	<p>≤ 0.1% unplanned downtime per month, reported for each interface:</p> <ul style="list-style-type: none"> Pre-ordering Inquiry Interface Ordering Interface Maintenance Interface <p>GE-1 (# Hours Interface and/or System Not Available as Scheduled) ÷ (Total # Hours Scheduled Availability) x 100</p> <p>GE-2 Mean # of Hours Available</p>
Center Responsiveness	Measures the time for the ILEC representative to answer business office calls in provisioning and trouble report centers.	<p>≥ 95% within 20 seconds 100% within 30 seconds</p> <p>GE-3 <u># Calls Answered Within Specified Timeframe</u> x100 Total # Calls from CLEC to Center</p> <p>GE-4 <u>Mean Time to Answer Calls w/o IVR; if IVR - Mean Time to Answer Calls after the end of IVR</u></p>

BILLING (BI)

Function	Measurement Objective	Proposed Service Quality Measurement
Timeliness of Billing Records Delivered	Measures the timeliness of billing records and wholesale bills (usage, CSRs, service orders, time & materials, adjustments) delivered to CLEC	99.9% billing records received in ≤ 24 hours 100% billing records received in ≤ 48 hours ≥ 99.95% wholesale bills received within 10 calendar days of bill date BI-1 $\frac{\# \text{ Billing Records Delivered on time } \times 100}{\text{Total \# of Billing Records Received}}$ BI-2 Mean Time to Provide <u>Billing Records</u> BI-3 Mean Time to Deliver Wholesale Bills
Accuracy	Measures the percentage <i>and mean time</i> of billing records delivered to CLEC in the agreed-upon format and with the complete agreed-upon content (includes time and material and other non-recurring charges)	≥ 98% wholesale bill financially accurate ≥ 99.99% of all records transmitted BI-4 $\frac{(\# \text{ of Accurate and Complete Formatted Mechanized Bills } , \text{ Total \# Mechanized Bills Received }) \times 100}{\text{Total \# of Billing Records Transmitted Correctly } \times 100}$ BI-5 $\frac{\# \text{ of Billing Records Transmitted Correctly } \times 100}{\text{Total \# of Billing Records Received}}$

OPERATOR SERVICES AND DIRECTORY ASSISTANCE (DA)

Function	Measurement Objective	Proposed Service Quality Measurement
Average Speed to Answer	Measures the percent and mean time a call is answered by an OS or DA operator in a predefined timeframe. Includes all time from initiation of ringing until the customer's call is answered.	<p>For live agent, 90% of calls answered in 10 seconds. For Voice Response Unit service, 100% within 2 seconds.</p> <p>DA-1 $\frac{\# \text{ Calls Answered Within "x" seconds}}{\text{Total DA Calls}} \times 100$ <i>where "x" equals 2 or 10 seconds</i></p> <p>DA-2 <i>DA Mean Time To Answer</i></p> <p>OS-1 $\frac{\# \text{ Calls Answered Within "x" seconds}}{\text{Total OS Calls}} \times 100$ <i>where "x" equals 2 or 10 seconds</i></p> <p>OS-2 <i>OS Mean Time To Answer</i></p>

NETWORK PERFORMANCE (NP)

Function	Measurement Objective	Proposed Service Quality Measurement
<p>Network Performance Parity</p>	<p>Compares ILEC performance distribution for its own customers to ILEC performance distribution for CLEC customers. Measures the deviation from supplier service performance distribution for each metric specified.</p>	<p>Deviation $\leq 0.10\%$ from supplier service performance distribution:</p> <p>Transmission quality:</p> <ul style="list-style-type: none"> • Subscriber Loop Loss • Signal to Noise Ratio • Idle Channel Circuit Noise • Loops-Circuit Balance • Circuit Notched Noise • Attenuation Distortion <p>Speed of Connection:</p> <ul style="list-style-type: none"> • Dial Tone Delay • Post Dial Delay • Call Completion/ Delivery Rate <p>Reliability Requirements: (For TSR Only)</p> <ul style="list-style-type: none"> • Network incidents affecting > 5000 blocked calls • Network incidents > 100,000 blocked calls <p>Statistical comparison based on the Mean ILEC Customer Experience and standard deviation from this mean, the Mean CLEC Customer Experience and standard deviation from this mean, and the number of observations used to determine these means.</p> <p>NP-1 <i>(Mean ILEC customer experience - Mean CLEC customer experience) ÷ Mean ILEC customer experience x 100</i> <i>Deviation between ILEC performance for ILEC and CLEC customers must be less than 0.10%.</i></p>

INTERCONNECT / UNBUNDLED ELEMENTS AND COMBOS (IUE)

Function	Measurement Objective	Proposed Service Quality Measurement
Availability of Network Elements	Measures the availability of network elements (e.g. signaling link transport, SCPs/ Databases, & loop combinations)	<p>Loop Combo availability 100%</p> <p>Signaling Link Transport Unavailability:</p> <ul style="list-style-type: none"> • A-Link: ≤ 1 min per year • D-Link: ≤ 1 sec per year • SCPs/Databases: ≤ 15 min per year • SCPs/Databases correctly updated: ≥ 99% in ≤ 24 hrs <p>IUE-1 <u># minutes Loop unavailable</u> x 100 Total # minutes</p> <p>IUE -2 <u># minutes A-link available during "x" years</u> "x" years</p> <p>IUE-3 <u># seconds D-link unavailable during "x" year</u> "x" year</p> <p>Where x ≤ or ≥ year. After year, monthly reporting should be for a rolling year.</p> <p>IUE-4 <u># Database Records Correctly Updated</u> x 100 Total # Update Requests Received by ILEC</p> <p>IUE-5 (# Database Records Updated within 24 hours of Update Request Receipt) / (Total # Database Update Requests Received) x 100</p>

INTERCONNECT / UNBUNDLED ELEMENTS AND COMBOS (IUE) (con'd)

Function	Measurement Objective	Proposed Service Quality Measurement
Performance of Network Elements	Measures the performance of network elements (e.g. LIDB, routing to CLEC OS/DA platforms, 800, AIN)	<p>Example:</p> <ul style="list-style-type: none"> • LIDB reply rate to all query attempts $\geq 99.95\%$ • LIDB query time-out $\leq 0.05\%$ • Unexpected data values in replies for all LIDB queries $\leq 1\%$ • % of LIDB queries return a missing customer record = 0% • Group troubles in all LIDB queries $\leq 0.5\%$ <p>Delivery to OS platform: Mean Post Dial Delay for "0" calls from LSO to CLEC OS platform ≤ 2 seconds PDD for "0+" calls with 6 digit analysis from LSO to CLEC OS platform: $95\% \leq 2.0$ sec; Mean ≤ 1.75 sec Percent of call attempts to CLEC OS Platform that were blocked $\leq 0.1\%$</p> <p>IUE-6 $(\# \text{ LIDB} \text{ or } 800 \text{ or AIN or } n \text{Query Replies Received by CLEC}) \div (\text{Total } \# \text{ LIDB} \text{ or } 800 \text{ or AIN or } n \text{Queries Received by ILEC}) \times 100$</p> <p>IUE-7 $(\# \text{ LIDB} \text{ or } 800 \text{ or AIN or } n \text{time-out responses received by CLEC}) \div (\text{Total } \# \text{ LIDB} \text{ or } 800 \text{ or AIN or } n \text{Queries Received by ILEC}) \times 100$</p> <p>IUE-8 $(\# \text{ LIDB} \text{ or } 800 \text{ or AIN or } n \text{Query Replies with unexpected data values received by CLEC}) \div (\text{Total } \# \text{ LIDB Queries Received by ILEC}) \times 100$</p>

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INTERCONNECT / UNBUNDLED ELEMENTS AND COMBOS (IUE) (con'd)

Function	Measurement Objective	Proposed Service Quality Measurement
		<p>IUE-9 (# LIDB or 800 or AIN or n Query Replies missing customer record received by CLEC) / (Total # LIDB or 800 or AIN or n Queries received by ILEC) x 100</p> <p>IUE-10 (Cumulative Total # Post Dial Delay Seconds experienced on "0" calls from LSO to CLEC OS platform) ÷ (Total # "0" calls from LSO to CLEC OS platform)</p> <p>IUE-11 (Cumulative Total # Post Dial Delay Seconds experienced on "0+" calls with 6 digit analysis from LSO to CLEC OS platform) ÷ (Total # "0+" calls with 6 digit analysis from LSO to CLEC OS platform)</p> <p>IUE-12 # of "0+" calls with 6 digit analysis from LSO to CLEC OS platform that have Post Dial Delay ≤ 2 seconds ÷ (Total # "0+" calls with 6 digit analysis from LSO to CLEC OS platform)</p> <p>IUE-13 <u># Blocked Call Attempts to CLEC OS Platform</u> x 100 <u>Total # Call Attempts to CLEC OS Platform</u></p>

OP-5 Mean Time to Return FOC

OP-6 $\frac{[\# \text{ of } D\text{-}FOCs \text{ Returned in } \div \text{ (Total \# of Orders Sent - Rejects Returned)]}{\text{Total \# of Orders Sent - Rejects Returned}} \times 100$

OP-7 Mean Time to Return *D-FOCs*

OP-8 $\frac{(\# \text{ of } Syntax \text{ Rejects Returned in } \leq 15 \text{ seconds}) \div \text{ (Total \# of } Syntax \text{ Rejects Returned)}}{\text{Total \# of } Syntax \text{ Rejects Returned}} \times 100$

OP-9 Mean Time to Return Rejects

OP-10 *Jeopardies Returned within 70% of allotted order time \div Total number Jeopardies Returned*

OP-11 $\frac{(\# \text{ of Completions Returned in } \leq 30 \text{ minutes}) \div \text{ (Total \# Completed Orders)}}{\text{Total \# Completed Orders}} \times 100$

OP-12 Mean Time to Return Completion

OP-13 Jeopardies
Total C-FOCs - Total Rejects

FORMULAS QUICK REFERENCE GUIDE

Metric No.	Formula
<i>PRE-ORDER</i>	
PO-1	$\frac{\text{\# of Responses Received on Time}}{\text{Total \# of Queries Sent}} \times 100$
PO-2	Mean Cycle Time
<i>ORDERING AND PROVISIONING</i>	
OP-1	$\frac{\text{\# of Orders Completed on Time}}{\text{Total \# of Order Completed}} \times 100$
OP-2	Mean Completion Interval
OP-3	$\frac{\text{\# of Orders Completed w/o Error}}{\text{Total \# of Orders Sent}} \times 100$
OP-4	$\frac{[\text{\# of C-FOCs Returned in } \leq 4 \text{ hours } \div (\text{Total \# of Orders Sent} - \text{Syntax Rejects Returned})]}{\text{Total \# of Orders Sent}} \times 100$

OP-14 (# of Orders Held for \geq x days) \div
(Total # of Orders Sent to ILEC
in past x days) x 100

OP-15 Mean Time of Orders Held Prior
to Completion

MAINTENANCE / REPAIR

MR-1 (# of Troubles Restored within x hours \div
Total # Troubles) x 100
where "x" = 2,3,4,8,16 or 24 "running
clock" hours

MR-2 Total # of Trouble Minutes
Total # of Trouble Reports

MR-3 # of telephone lines reporting \geq 2 troubles
in the current report months \div
Total # of troubles in current
report months

MR-4 # of Initial & Repeated Trouble Reports per exchange per month
Total # of Lines per exchange x 100

MR-5 # Customer Trouble Appointments Met
Total # Customer Trouble Appointments x 100

GENERAL

GE-1 (# Hours Interface and/or System Not
Available as Scheduled) ÷ (Total # Hours
Scheduled Availability) x 100

GE-2 Mean # of Hours Available

GE-3 # Calls Answered within Specified Timeframe
Total # Calls from CLEC to Center x 100

GE-4 Mean Time to Answer Calls w/o IVR;
If IVR, Mean Time to Answer Calls after
end of IVR

BILLING

BI-1 # Billing Records Delivered on Time
Total # of Billing Records Received x 100

BI-2 Mean Time to Provide Billing Records

BI-3	Mean Time to Deliver Wholesale Bills	
BI-4	(# of Accurate & Complete Formatted Mechanized Bills ÷ Total # Mechanized Bills Received)	x 100
BI-5	<u># of Billing Records Transmitted Correctly</u> Total # of Billing Records Received	x 100

DIRECTORY ASSISTANCE AND OPERATOR SERVICES

DA-1	<u># Calls Answered within "x" seconds</u> Total DA Calls where "x" equals 2 or 10 seconds	x 100
DA-2	DA Mean Time to Answer	
OS-1	<u># Calls Answered within "x" seconds</u> Total OS Calls where "x" equals 2 or 10 seconds	x 100
OS-2	OS Mean Time to Answer	

NETWORK PERFORMANCE

NP-1 (Mean ILEC customer experience - Mean
CLEC customer experience) ÷ Mean ILEC
Customer Experience x 100

INTERCONNECTION / UNBUNDLED ELEMENTS AND COMBOS

IUE-1 # Minutes Loop available
Total # Minutes x 100

IUE-2 # Minutes A-link unavailable during x years
x years
(where 0 < or > 1 year after first year, monthly reporting
should be for a rolling year.

IUE-3 # Seconds D-link unavailable during x years
x years

IUE-4 # Database Records Correctly Updated
Total # Update Requests Received by ILEC x 100

IUE-5 (# Database Records Updated within 24 hrs.
of Update Request Received) ÷ (Total #
Database Update Requests Received)

IUE-6 (# LIDB [or 800 or AIN or n] Query Replies
Received by CLEC) ÷ (Total # LIDB [or 800 or
AIN or n] Queries Received by ILEC) x 100

IUE-7 (# LIDB [or 800 or AIN or n] Time-Out
Responses Received by CLEC) ÷ (Total # LIDB
[or 800 or AIN or n] Queries Received by ILEC) x 100

IUE-8 (# LIDB [or 800 or AIN or n] Query Replies
with Unexpected Data Values Received by CLEC) ÷
(Total # LIDB [or 800 or AIN or n] Queries
Received by ILEC) x 100

IUE-9 (# LIDB [or 800 or AIN or n] Query Replies
Missing Customer Record Received by CLEC) ÷
(Total # LIDB [or 800 or AIN or n] Queries
Received by ILEC) x 100

IUE-10 (Cumulative Total # Post Dial Delay Seconds
experienced on "0" calls from LSO to CLEC OS
platform) ÷ (Total # "0" calls from LSO to
CLEC OS platform)

IUE-11 (Cumulative Total # Post Dial Delay Seconds

experienced on "0+" calls with 6-digit analysis from LSO to CLEC OS platform) ÷ (Total # "0+" calls with 6-digit analysis from LSO to CLEC OS platform)

IUE-12

(# of "0+" calls with 6-digit analysis from LSO to CLEC OS platform that have Post Dial Delay ≤ 2 seconds) ÷ (Total # "0+" calls with 6-digit analysis from LSO to CLEC OS platform)

IUE-13

Blocked Call Attempts to CLEC OS Platform
Total # Call Attempts to CLEC OS Platform x 100