BEFORE THE TENNESSEE REGULATORY AUTHORITY
Nashville, Tennessee

BellSouth's Entry into Long Distance (InterLATA) Service in Tennessee Pursuant to Section 271 of the Telecommunications Act of 1996	))))	**Docket No. 97-00309**

TESTIMONY OF JULIA STROW
ON BEHALF OF INTERMEDIA COMMUNICATIONS INC.
MARCH 27, 1998

Counsel:

LaDon Baltimore
FARRAR & BATES, L.L.P.
211 Seventh Avenue North
Suite 320
Nashville, Tennessee 37219-1823
(615) 254-3060
(615) 254-9835 (facsimile)

Of Counsel:

Jonathan E. Canis
Enrico C. Soriano
KELLEY DRYE & WARREN LLP
1200 19th Street, N.W.
Fifth Floor
Washington, D.C. 20036
(202) 955-9600
(202) 955-9792 (facsimile)

Q: PLEASE STATE YOUR NAME, EMPLOYER. POSITION, AND BUSINESS ADDRESS.

A: My name is Julia Strow. I am employed by Intermedia Communications Inc. ("Intermedia") as Director, Strategic Planning and Industry Policy. My business address is 3625 Queen Palm Drive, Tampa, Florida 33619.

Q: WHAT ARE YOUR RESPONSIBILITIES IN THAT POSITION?

A: I am a primary interface between Intermedia and the incumbent local exchange carriers ("ILECs"). In that capacity, I am involved in interconnection negotiations and arbitrations between Intermedia and the ILECs. I am also primarily responsible for strategic planning and the setting of Intermedia's regulatory policy. In addition, on behalf of Intermedia, I testify in various federal and state proceedings in which Intermedia is a participant.

Q: ON WHOSE BEHALF ARE YOU TESTIFYING TODAY?

A: I am testifying on behalf of Intermedia.

Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A: I graduated from the University of Texas in 1981 with a B.S. degree in Communications. I joined AT&T in 1983 as a Sales Account Executive responsible for major market accounts. I subsequently held several positions of increasing responsibility with BellSouth Telecommunications, Inc. ("BellSouth") Marketing Department, with

responsibilities for Billing and Collection and Toll Fraud Services. In 1987, I was promoted to Product Manager for Billing Analysis Services, with responsibility for the development and management of BellSouth's toll fraud detection and deterrence products. In 1988, I was promoted into BellSouth's Federal Regulatory organization. In that position, I had responsibility for regulatory policy development for various issues associated with Billing and Collection Services, Access Services, and Interconnection. In 1991, due to a restructuring of the Federal Regulatory organization, my role was expanded to include the development of state and federal policy for the issues I mentioned above. During my last two years in that organization, I supported regulatory policy development for local competition, interconnection, unbundling, and resale issues for BellSouth. In April 1996, I joined Intermedia.

Q: PLEASE DESCRIBE INTERMEDIA.

A: As the country's largest and fastest growing independent competitive local exchange carrier, Intermedia provides a full range of local and long distance services, encompassing both voice and data (including Internet services). Through its affiliate, DIGEX, Intermedia provides Internet connectivity, web site management, and private network solutions on a nationwide basis. In Tennessee, Intermedia is authorized to provide interexchange and local exchange services. Intermedia has an Authority-approved interconnection agreement with BellSouth.

Q: IS INTERMEDIA PROVIDING SERVICE IN TENNESSEE AT THIS TIME?

A: Yes. Intermedia is providing voice and data services to business customers through resale of BellSouth's services and over its own network facilities. Intermedia has four data switches in Nashville, Memphis, Chattanooga, and Knoxville, Tennessee.

Intermedia plans to deploy two DMS 500 switches in Memphis and Nashville in the second quarter of 1998.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY TODAY?

A: The purpose of my testimony is to present Intermedia's position with respect to BellSouth's entry into the in-region, interLATA market. Specifically, I will address the issues and assertions set out in BellSouth's Section 271 submissions, particularly those laid out in the testimony of several BellSouth witnesses.

Q: PLEASE SUMMARIZE YOUR TESTIMONY.

A: In this proceeding, BellSouth is asking three things of this Authority: (1) approve its Statement of Generally Available Terms and Conditions ("SGATC"); (2) find that its SGATC meets the competitive checklist items set out in Section 271(c)(2)(B) (the "Competitive Checklist") of the federal Telecommunications Act of 1996 Act (the "1996 Act"); and (3) find that BellSouth's entry into the in-region market for interLATA services would be in the public interest. The record in this proceeding, as well as decisions in various state and federal jurisdictions, make clear that BellSouth's request cannot be granted. In particular, based on BellSouth's submissions, the following conclusions can be properly drawn:

* BellSouth's request that the Authority declare its SGATC compliant with the 14-point checklist of Section 271(c)(1) is procedurally defective--a State commission must first determine whether BellSouth is eligible for in-region, interLATA relief under Section 271(c)(1)(A) ("Track A") (requiring implementation of interconnection agreements) or Track B (requiring an approved SGATC).

* BellSouth is compelled to proceed under Section 271(c)(1)(A), and may not proceed under Section 271(c)(1)(B).

* Even if BellSouth could proceed under Section 271(c)(1)(B)--which it cannot--its SGATC is deficient and fails to meet the standards of Section 271 of the 1996 Act.

* BellSouth has not fully implemented existing interconnection agreements, as required to obtain in-region interLATA approval under Track A.

* Whether proceeding under Track A or Track B, BellSouth fails to meet the Competitive Checklist of Section 271(c)(2)(B).

* Because BellSouth cannot meet the standards required by the 1996 Act, its entry into the in-region, interLATA market at this time would not serve the public interest.

Q: WHO HAS THE BURDEN OF PROOF IN THIS PROCEEDING?

A: BellSouth has the burden of proof in this proceeding. In a recent order addressing Ameritech-Michigan's petition for in-region interLATA authority, the Federal Communications Commission ("FCC") enunciated the burden of proof applicable in Section 271 proceedings:

> Section 271 places on the applicant the burden of proving that all of the requirements for authorization to provide in-region, interLATA services are satisfied. Section 271(d)(3) provides that "[t]he Commission shall not approve the authorization requested in an application . . . *unless* it finds that [the petitioning BOC has satisfied all the requirements of section 271]". Because Congress required the Commission affirmatively to find that a BOC application has satisfied the statutory criteria, the ultimate burden of proof with respect to factual issues remain at all times with the BOC, even if no party opposes the BOC's application.

Thus, according to the FCC, a Bell Operating Company ("BOC") must present a convincing case in its application that all of the requirements of Section 271 have been met. The FCC has concluded that the "preponderance of evidence" standard applicable in most administrative and civil proceedings is the appropriate standard for evaluating a BOC Section 271 application. The FCC interprets the "preponderance of the evidence" standard to mean "the greater weight of evidence, evidence which is more convincing than the evidence which is offered in opposition to it." As I discuss below, the record in

this proceeding demonstrates that BellSouth has not met its burden of proof and, hence, the Authority cannot affirmatively find that BellSouth has satisfied the statutory criteria of Section 271.

Q: PLEASE EXPLAIN THE TRACK A/TRACK B DICHOTOMY.

A: The 1996 Act provides two ways for BOC entry into the in-region interLATA market: entry through Section 271(c)(1)(A) or Track A, and entry through Section 271(c)(1)(B) or Track B. In order to meet the requirements of Track A, a BOC must demonstrate that "it is providing access and interconnection to its network facilities for the network facilities of one or more unaffiliated competing providers of telephone exchange service . . . to residential and business subscribers," and the telephone exchange service is being offered by the competing providers "either exclusively over their own . . . facilities or predominantly over their own . . . facilities in combination with resale." Section 271(c)(1)(B), on the other hand, permits a BOC to seek entry under Track B if "no such provider" has requested the access and interconnection described in Section 271(c)(1)(A) three months prior to the date on which a BOC may apply to the FCC for in-region interLATA authority, and the BOC's SGATC has been approved or permitted to take effect by the relevant state regulatory commission. As discussed below, the plain language of the 1996 Act, and its interpretation by the FCC, makes clear that BellSouth is precluded as a matter of law from seeking 271 authorization via Track B.

Q: WHY IS BELLSOUTH PRECLUDED FROM PURSUING IN-REGION, INTERLATA AUTHORITY UNDER TRACK B?

A: The phrase "no such provider," as used in Section 271(c)(1)(B) refers to a potential competing provider of the telephone exchange service described in Section 271(c)(1)(A).

This interpretation comports with the FCC's recent decision rejecting SBC Communications, Inc.'s Section 271 application in Oklahoma. As the FCC found:

> Congress intended to preclude a BOC from proceeding under Track B when the BOC receives a request for access and interconnection from a prospective competing provider of telephone exchange service, subject to the exception in section 271(c)(1)(B) . . . . Thus, we interpret the words "such provider" as used in section 271(c)(1)(B) to refer to a potential competing provider of the telephone exchange service described in section 271(c)(1)(A). We find it reasonable and consistent with the overall scheme of section 271 to interpret Congress' use of the words "such provider" in section 271(c)(1)(B) to include a potential competing provider. This interpretation is the more natural reading of the statute because . . . it retains the meaning of the term "request." . . . To give full effect to the term "request," we therefore interpret the words "such provider" to mean any such potential provider that has requested access and interconnection.

Because under the FCC's interpretation several potential providers of competitive local service have requested interconnection with BellSouth, BellSouth is precluded from obtaining in-region, interLATA authority under Track B. Indeed, as BellSouth readily admits, it has entered into several interconnection agreements with several competitive local exchange carriers ("CLECs"). In fact, Intermedia has one such an interconnection agreement with BellSouth. Such interconnection agreements, if fully implemented, would result in the provision of telephone exchange service to residential and business subscribers in the manner described in Section 271(c)(1)(A). As long as these qualifying requests remain unsatisfied--and the record in this proceeding clearly demonstrates that these qualifying requests have not been fully satisfied by BellSouth--the requirements of Section 271(c)(1)(A) would remain unsatisfied, and BellSouth would remain foreclosed from obtaining in-region interLATA authority under Track B. BellSouth's argument that Track B automatically becomes available ten months subsequent to the enactment of the 1996 Act is in direct contravention of the overarching legislative objective of promoting facilities-based local exchange competition. As the FCC recently has reaffirmed:

> Once a BOC has received a qualifying request for access and interconnection, Track B is available, by its terms, *only* "if the provider or providers making such a request have (i) failed to negotiate in good faith . . ., or (ii) violated the terms of an [approved] agreement . . . by failure to comply, within a reasonable period of time, with the implementation schedule contained in such agreement."

Q: DOES THE RECENT COURT OF APPEALS DECISION SUPPORT YOUR CONCLUSION CONCERNING BELLSOUTH'S INELIGIBILITY FOR TRACK B?

A: Yes. Although I am not an attorney, it is my understanding that the Court of Appeals for the District of Columbia Circuit recently affirmed the FCC's *SBC-Oklahoma Order*. In its March 20, 1998 decision, the D.C. Circuit held that the FCC's interpretation of the requirements of Track A and Track B is permissible and subject to judicial deference. A copy of this decision is appended to my testimony as Appendix A.

Q: DOES BELLSOUTH MEET THE REQUIREMENTS OF TRACK A AT THIS TIME?

A: No, BellSouth does not meet the requirements of Track A at this time. Section 271(c)(1)(A) of the 1996 Act requires that in order to satisfy the requirements of Track A, a BOC must demonstrate that it "is providing access and interconnection to its network facilities for the network facilities of one or more unaffiliated competing providers of telephone exchange service . . . to residential and business subscribers," and the telephone exchange service is being offered by the competing providers "either exclusively over their own. . . facilities or predominantly over their own . . . facilities in combination with the resale" of another carrier's telecommunications services. 47 U.S.C § 271(c)(1)(A). While BellSouth has entered into one or more binding agreements approved under Section 252 of the 1996 Act with unaffiliated competing providers of

telephone exchange service, to my knowledge BellSouth is not *providing* access and interconnection to its network facilities as contemplated by Section 271(c)(1)(A). The 1996 Act requires *meaningful* facilities-based competition for business *and* residential customers--whether provided by a single competitive provider or a combination of providers--as a condition-precedent to a BOC entry into the in-region interLATA market. To my knowledge, none of BellSouth's competitors in Tennessee are providing telephone exchange service to both residential and business customers either exclusively over their own facilities or predominantly over their own facilities in combination with resale. It is BellSouth's burden to prove otherwise, and it has not done so in this case.

Q: CAN BELLSOUTH PROPERLY RELY UPON PCS PROVIDERS TO DEMONSTRATE COMPLIANCE WITH TRACK A, AS BELLSOUTH SUGGESTS?

A: No. Although the FCC, in its *BellSouth-Louisiana Order*, did not decide whether, for purposes of Section 271(c)(1)(A), Personal Communications Services ("PCS") providers in Louisiana are "competing providers of telephone exchange service," the FCC did emphasize that "an applicant must demonstrate that the PCS provider on which the applicant seeks to rely to proceed under section 271(c)(1)(A) offers service that both satisfies the statutory definition of 'telephone exchange service' in section 3(47)(A) and competes with the telephone exchange service offered by the applicant in the relevant state." The FCC noted that the use of the term "competing provider" in Section 271(c)(1)(A) suggests that there must be an "actual commercial alternative to the BOC." Intermedia believes, as do the FCC and the Department of Justice, that PCS is still in the process of transitioning from a "complementary telecommunications service to a

competitive equivalent to wireline services." Thus, BellSouth cannot rely upon PCS providers to satisfy the requirements of Track A at this time.

Q: SHOULD THE AUTHORITY'S ANALYSIS END ONCE IT HAS REACHED THE CONCLUSION THAT BELLSOUTH HAS NOT MET THE THRESHOLD REQUIREMENTS OF TRACK A/TRACK B?

A: Yes. In this proceeding, BellSouth would have the Authority determine BellSouth's compliance with the Competitive Checklist without having first made a determination that BellSouth can, in fact, pursue in-region interLATA authority under either Track A or Track B. In effect, BellSouth would put the cart before the horse. BellSouth's assertion that the issue of which track BellSouth is permitted to follow should have little, if any, significance in this proceeding is clearly inconsistent with the overall statutory framework of the 1996 Act. Section 271 clearly contemplates a threshold showing of satisfaction of either Track A or Track B *before* a determination as to whether a BOC's agreement or SGATC is compliant with the Competitive Checklist may proceed. Thus, a determination of eligibility under Track A or Track B under Section 271(c)(1) is a condition precedent to a determination of compliance with the Competitive Checklist under 271(c)(2)(B). In very simple terms, an Authority finding that BellSouth does not qualify under either track automatically precludes further consideration of whether BellSouth satisfies the Competitive Checklist. Indeed, in the *SBC-Oklahoma Order*, which the Court of Appeals for the D.C. Circuit recently affirmed, the FCC denied SBC Communications Inc.'s Section 271 application on the basis that SBC did not satisfy the requirements of Section 271(c)(1); the FCC found it "unnecessary to address SBC's

compliance with the competitive checklist requirements set forth in section 271(c)(2)(B)."

Similarly, nothing in the 1996 Act suggests that the relevant State commission need not make a threshold determination of a BOC's eligibility under Track A or Track B. To the contrary, Section 271(d)(2)(B) states:

> (B) CONSULTATION WITH STATE COMMISSIONS.--Before making any determination under this subsection, the Commission shall consult with the State commission of any State that is the subject of the application in order to verify the compliance of the Bell operating company with the *requirements of subsection (c)*.

Subsection (c) of Section 271 clearly requires a determination whether interLATA authority is sought under either Track A or Track B and, under either Track, requires full compliance with the Competitive Checklist. Indeed, it would appear that a State commission would be remiss in its responsibility under the 1996 Act if it were not to make the threshold determination that the BOC applicant meets one of the two tracks for in-region interLATA entry.

Because BellSouth has not satisfied the threshold showing under either Track A or Track B, BellSouth's application is premature. More importantly, because BellSouth is, as a matter of law, foreclosed from proceeding under Track B, and the record demonstrates that it cannot satisfy the requirements of Track A at this time, BellSouth's application for in-region interLATA authority at this time is an exercise in futility and a manifest waste of judicial resources. I should add that, even if BellSouth is eligible to proceed under Track B, its SGATC fails to meet the standards established by the 1996 Act and applicable FCC decisions and, hence, cannot obtain Section 271 authority at this time.

Q: ASSUMING BELLSOUTH CAN PROCEED UNDER TRACK B, CAN THE AUTHORITY FIND THAT BELLSOUTH'S SGATC COMPLIES WITH THE MANDATES OF THE 1996 ACT?

A: No. Even if BellSouth can proceed under Track B--and the record in this proceeding shows that BellSouth is precluded from doing so both as a matter of law and fact--BellSouth's SGATC fails to meet the pricing standards and other requirements of the 1996 Act.

First, BellSouth's SGATC fails to comply with the pricing standards of the 1996 Act at this time. Section 271(c)(2)(B)(ii) of the 1996 Act requires a BOC applying for in-region interLATA authority under Section 271 of the 1996 Act to provide access to unbundled network elements. Section 252(d)(1) of the 1996 Act sets forth the pricing standards that apply to unbundled network elements. In particular, Section 252(d)(1) provides:

> (1) INTERCONNECTION AND NETWORK ELEMENTS CHARGES.--*Determinations by a State commission* of the just and reasonable rate for the interconnection of facilities and equipment for purposes of subsection (c)(2) of section 251, and the just and reasonable rate for network elements for purposes of subsection (c)(3) of such section--
>
> (a) shall be--
>
> (i) based on the cost (determined without reference to a rate of return or other rate-based proceeding) of providing the interconnection or network element (whichever is applicable), and
>
> (ii) nondiscriminatory, and
>
> (b) may include a reasonable profit.

The rates provided in BellSouth's SGATC fail to meet the pricing standards required by the 1996 Act at this time. I am aware that the Authority has a pending proceeding to determine the permanent prices for interconnection and unbundled network elements. Until the Authority has determined these rates and found that they are consistent with the pricing standards of the 1996 Act, BellSouth cannot be found compliant with its statutory obligations. In addition to the fact that the rates proposed by BellSouth have not yet been found to be cost-based by the Authority at this time, some of the network elements included in the SGATC do not even have rates associated with them. Thus, on pricing issues alone, the Authority must find that BellSouth's SGATC does not meet the requirements of the 1996 Act.

Finally, BellSouth's SGATC fails to comply with other requirements imposed by the 1996 Act. As I discuss at length below, BellSouth has demonstrated an inability to comply with the 1996 Act's requirements regarding operations support systems ("OSS") access, resale, access to unbundled network elements, interconnection, and other statutory obligations. These deficiencies demonstrate that the services and UNEs listed in BellSouth's SGATC are not reasonably and practically available and, thus, further compel rejection of BellSouth's application to provide in-region, interLATA services in Tennessee.

Q: YOU HAVE STATED PREVIOUSLY THAT, EVEN IF ALLOWED TO PROCEED UNDER EITHER TRACK A OR TRACK B, AT THIS TIME BELLSOUTH CANNOT SATISFY ITS STATUTORY OBLIGATIONS UNDER ANY CIRCUMSTANCES. PLEASE EXPLAIN YOUR POSITION.

A: Intermedia's experience, as well as the experiences of competing carriers, show that problems with OSS and other related items make it impossible for BellSouth to provide interconnection, access to unbundled network elements, and resale, among other things, pursuant to the Competitive Checklist. These shortcomings, as discussed below, compel rejection under either Track A or Track B. Thus, even if BellSouth were allowed to proceed under Track A or Track B, as BellSouth asserts, BellSouth fails to demonstrate by preponderance of the evidence that it meets *each and every item* of the Competitive Checklist.

Section 271(c)(2) requires a BOC seeking in-region, interLATA authority to meet the requirements of Section 271(c)(2)(B). In particular, a BOC must demonstrate that it is providing or offering access and interconnection which include compliance with the following items: interconnection; nondiscriminatory access to network elements; nondiscriminatory access to poles, ducts, etc.; unbundled local loop; unbundled local transport; unbundled local switching; nondiscriminatory access to 911/E911, directory assistance services, and operator call completion services; white pages directory listings; nondiscriminatory access to telephone numbers; nondiscriminatory access to databases and associated signaling; number portability; dialing parity; reciprocal compensation; and resale. The duty to provide interconnection is subject to the requirements of Sections 251(c)(2) (interconnection at any technically feasible point on nondiscriminatory rates, etc.) and 252(d)(1) (nondiscriminatory cost-based rates); the duty to provide nondiscriminatory access to network elements is subject to the requirements of Sections 251(c)(3) (nondiscriminatory access on an unbundled basis) and 252(d)(1) (nondiscriminatory cost-based rates). The obligation to provide reciprocal compensation

is subject to the requirements of Section 252(d)(2) (mutual and reciprocal recovery of costs associated with transport and termination). Finally, the resale obligation is subject to the requirements of Sections 251(c)(4) (nondiscriminatory resale at wholesale rates) and 252(d)(3) (determination of wholesale rates at retail minus avoided costs).

In addition to these statutory requirements, the FCC has previously concluded that providing nondiscriminatory access to operations and support functions is a "term and condition" of unbundling network elements under Section 251(c)(3), or resale under Section 251(c)(4). The FCC recently reaffirmed this requirement in the *Ameritech-Michigan Order*, and noted that in order for a BOC to demonstrate that it is providing the items enumerated in the Competitive Checklist (e.g., unbundled loops, unbundled local switching, resale services, etc.), it must demonstrate, *inter alia*, that it is providing nondiscriminatory access to the systems, information, and personnel that support those elements or services.

Similarly, the FCC previously has found 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). The BOCs' obligation to provide unbundled OSS upon request under the FCC's regulations has been left intact by the United States Court of Appeals for the Eighth Circuit. In rejecting the BOCs' assertion that the FCC's decision to require the ILECs to provide competitors with unbundled access to OSS unduly expands the ILECs' unbundling obligations beyond the statutory requirements, the Eighth Circuit concluded that OSS and other vertical switching features qualify as network elements that are subject to the unbundling requirements of the 1996 Act. The Eighth Circuit found that:

> [t]he Act's definition of network elements is not limited to only the physical components of a network that are directly used to transmit a phone call from point A to point B. The Act specifically provides that "[t]he term 'network element' means a facility or equipment used in the provision of a telecommunications service." 47 U.S.C.A. § 153(29). Significantly, the Act defines "telecommunications service" as meaning "the offering of telecommunications for a fee directly to the public." Id. § 153(46). Given this definition, the offering of telecommunications services encompasses more than just the physical components directly involved in the transmission of a phone call and includes the technology and information used to facilitate ordering, billing, and maintenance of phone service--*the functions of operational support systems*. Such functions are necessary to provide telecommunications "for a fee directly to the public." Id. We believe that the FCC's determination that the term "network element" includes all the facilities and equipment that are used in the overall commercial offering of telecommunications is a reasonable conclusion and entitled to deference.

Sections 271(c)(2)(B)(ii) and 271(c)(2)(B)(xiv) expressly require a BOC to provide "nondiscriminatory access to network elements in accordance with the requirements of Sections 251(c)(3) and 252(d)(1) and to demonstrate that telecommunications services are available for resale in accordance with the requirements of Sections 251(c)(4) and 252(d)(3). Because the duty to provide access to network elements under Section 251(c)(3) and the duty to provide resale services under Section 251(c)(4) include the duty to provide nondiscriminatory access to OSS functions, compliance with Sections 271(c)(2)(B)(ii) and 271(c)(2)(B)(xiv) necessarily requires compliance with applicable OSS requirements.

Q: DOES BELLSOUTH'S OSS COMPLY WITH THE REQUIREMENTS OF THE 1996 ACT?

A: No. In the *Ameritech-Michigan Order*, the FCC reaffirmed the importance of providing nondiscriminatory access to the BOCs' OSS. In rejecting Ameritech-Michigan's Section 271 application, the FCC reaffirmed that new entrants must have equivalent access to the

functions performed by the systems, databases, and personnel--i.e., OSS--that are used by the ILECs to support telecommunications services and network elements. The FCC further reaffirmed its finding in the *Local Competition Order* that, in order to meet the nondiscriminatory standard of OSS, an ILEC 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.

The FCC also concluded that ILECs must generally provide network elements, including OSS functions, on terms and conditions that provide an efficient competitor with a "meaningful opportunity to compete." Without equivalent access to the BOCs' OSS, the FCC found, many items required by the checklist, such as resale, unbundled loops, unbundled local switching, and unbundled local transport, would not be practically available.

As I discuss here, BellSouth's provision of access to OSS does not satisfy the requirements the FCC has found to be critical in determining BOC compliance with the 1996 Act. Indeed, this conclusion is supported by the recent public statements of high-ranking BellSouth executives. For example, it was reported in the Sept. 29, 19987 issue of TR Daily that David Markey, BellSouth's Vice President for Governmental Affairs, acknowledged that "[BellSouth's] application isn't likely to meet all of the standards for interLATA market clearance outlined by the [FCC]."

Q: HAS BELLSOUTH DEMONSTRATED THAT THE OSS ACCESS PROVIDED TO COMPETING CARRIERS IS EQUIVALENT TO THE OSS ACCESS IT PROVIDES TO ITSELF IN TERMS OF QUALITY, ACCURACY, AND TIMELINESS?

A: No. I should preliminarily point out that BellSouth's OSS processes are the same across BellSouth's territory. BellSouth's OSS interfaces are deficient in many respects. For example, BellSouth's uses an integrated preordering and ordering system when it places its own orders. In contrast, competing carriers are offered separate interfaces for preordering and ordering. For example, to place an order for a loop, a CLEC would need to validate the customer address through the Local Exchange Navigation System ("LENS"). Then, to place the actual order, the CLEC must use the Electronic Data Interchange ("EDI") system. In contrast, BellSouth can obtain preordering information and place an order at the same time using the Direct Order Entry ("DOE") System.

Similarly, BellSouth has not satisfactorily demonstrated--nor can it--that the amount of time required of CLECs to process an order using LENS or EDI is comparable to the time it takes BellSouth to process a similar order using DOE or RNS. In fact, in other state Section 271 proceedings, BellSouth has acknowledged that it cannot make that comparison.

Q: WHAT IS INTERMEDIA'S EXPERIENCE WITH RESPECT TO BELLSOUTH'S OSS SYSTEMS.

A: Intermedia's experience demonstrates that BellSouth has not established systems that will process orders for unbundled network elements and resale services in a reasonable, timely, and nondiscriminatory manner.

Intermedia placed an order for an unbundled DS1 circuit in May of 1997, following the ordering process suggested by BellSouth. Despite adhering to the suggested ordering process, Intermedia's order was referred to, and transferred from, one BellSouth organization to another, with the ultimate effect of severely delaying the

process. It took BellSouth six weeks to provide the DS1 circuit. In contrast, BellSouth's retail customers can obtain a DS1 service from BellSouth in one or two weeks.

Subsequent to this experience, BellSouth assured Intermedia that subsequent orders from Intermedia would be processed more efficiently and in a timely manner. Despite these assurances, however, Intermedia continues to experience the same problems it encountered when it placed its first DS1 order in May 1997. In particular, Intermedia placed a DS1 order on October 1, 1997. Following this, Intermedia was advised that the order could not be handled by the LCSC, and that the order should instead be handled by the ICSC. Subsequent communications revealed that BellSouth had misplaced the initial order, which required Intermedia to fax the order again to BellSouth. This shows that, not only cannot BellSouth process orders from CLECs in a timely manner, but that the performance of BellSouth's LCSC continues to be deficient despite claims by BellSouth to the contrary. BellSouth uses the same OSS in its entire territory, including Tennessee, so that the same OSS problems exist in Tennessee.

Similarly, although BellSouth has committed to confirming orders for services and unbundled network elements within forty-eight hours of submission, Intermedia's experience shows that BellSouth consistently misses its commitments. For instance, a snapshot of Intermedia's orders between January 1 and February 13, 1998, reveals that 50% of its orders did not receive Firm Order Confirmation ("FOC") or clarification within 48 hours. For the same period, the FOCs Intermedia received were, on average, 5.2 days past the 48-hour commitment. Also, for the same period, orders were backlogged (i.e., no FOCs or clarification) for 22% of the orders sent during that time period.

Q: DO YOU HAVE ANY COMMENT ON THE MANNER IN WHICH BELLSOUTH COMMUNICATES CHANGES IN ITS OSS TO CLECs?

A: Yes. BellSouth has no formal processes in place for informing competing carriers of changes in OSS interfaces. Of critical importance to competing carriers is the ability to receive up-to-date information on OSS functionalities as changes occur. BellSouth relies on conferences and the account teams serving the CLECs to apprise them of changes in the interfaces. These methods of information dissemination are unreliable and ineffective. The first method presumes that CLECs will always have representatives at conferences conducted by BellSouth. Considering the limited resources of smaller CLECs, it may not always be possible for them to send representatives to conferences. The second method presumes that BellSouth's account representatives will always have up-to-date information. Intermedia's experience proves that this is not always the case. I understand that BellSouth has recently initiated the development of a formal change control process. However, this process is still underway. Moreover, the process has not yet been tested and it is uncertain whether it ultimately will address the problems being experienced by the CLECs.

Q: ARE YOU FAMILIAR WITH THE STUDY CONDUCTED BY A BELLSOUTH-PAID CONSULTANT RELATING TO THE PERFORMANCE OF THE LCSC?

A: Yes. Through the discovery process in several State Section 271 proceedings, Intermedia discovered a BellSouth-commissioned study that evaluated the quality of service provided by BellSouth's Local Carrier Service Center ("LCSC"). The LCSC is the organization within BellSouth that handles all CLEC orders for unbundled network elements and resold services that are processed manually. As I discuss below, reports

discovered by Intermedia demonstrate an LCSC that is ineffective and dysfunctional. Moreover, although BellSouth likely will claim that these problems have been resolved, Intermedia's recent experience demonstrates otherwise. Instead, this experience shows the LCSC's continuing inability to process orders timely, accurately, and at parity with BellSouth.

The series of reports discovered by Intermedia consists of an initial evaluation of the LCSC conducted on March 13, 1997, and follow-up reports dated April 23, July 8 and August 15, 1997 (attached hereto and incorporated herein by reference collectively as Appendix B). These reports paint a picture of an LCSC that is understaffed, whose personnel are inadequately trained and supervised, and whose proficiency in processing orders from CLECs is astoundingly inadequate.

The March 13 report reflects a 10-day audit of LCSC activities conducted by the consultant between March 3 and March 13. The results of the audit compelled the consultant to report the following conclusions:

* During the entire 10-day period, no supervisor was ever seen training a member of the LCSC staff.

* Supervision is ineffective.

* Employees are undertrained and deficient in skills.

* "Excessive errors and rework are lowering the quality of your service due to missed dates and excessive lead times."

* The current level of errors is alarming due to the low volume level and the fact that current employees whom we studied have been on their current jobs from four months to a year."

* No systems are in place to "evaluate performance by individual or work group."

After receiving this initial report, BellSouth hired the consultant to establish new work flow processes, training programs and other measures to improve LCSC performance. The subsequent reports from the consultant state that significant progress has been made, and that many of the problems identified in the March 13 report have been fixed. Even if this is the case--and there is no evidence in the record of this proceeding to substantiate this claim--the later reports still identify a grossly inadequate level of performance. For example, the July 8 report states that the "Percent of calls abandoned is about 17%." While this is reported as a *23% improvement* over the preceding month, this figure still indicates a wholly inadequate level of service to CLECs.

Similarly, the July 8 report states that, of all the requests for service submitted by AT&T and MCI during the week of June 25, *64.6% of the orders were rejected* and returned to AT&T and MCI. The report further states that, on average, MCI and AT&T *had to resubmit the orders 1.7 times before they were finally processed.* The report does not mention the quality of service provided to CLECs other than AT&T and MCI. While the consultant issued another report on August 15, 1997, that report did not address the percent of CLEC orders that were rejected and the average resubmission rate. Therefore, the data provided in the July 8 report is the most recent data in the record of this proceeding. In addition, the July 8 report notes that the measures for LCSC performance that are documented employ both real orders and fictitious orders used as a work simulation. The report does not identify what percentage of the orders reflected in the test represents fictitious, as opposed to real orders. The August 15 report, however, does indicate that the level of fictitious orders is 10-17%. It is impossible to tell from the

report if this level of fictitious orders skewed the service quality measurements included in the reports, and resulted in more favorable performance than a test based entirely on real orders.

While the August 15, 1997 report states that many of the earlier-reported problems in supervision, work flow processing, and employee training have been fixed, the report nonetheless makes clear that the new systems have not been implemented yet. The report states that "we are developing" a new training organization; that key employees "will report" to department heads; a copy of a new Procedures Manual "will be prepared" for a manager; a Performance Improvement Plan "is still in process;" and that 50 additional service representatives will be hired. As the language of the report makes clear, most of the systems and processes have yet to be fully implemented, and the LCSC is not yet fully staffed. In fact, the final report made available by BellSouth does not even pretend to have evaluated a fully staffed LCSC operating under the new systems and procedures that are intended to remedy the gross deficiencies identified in the March 13 report. The most recent report, dated September 15, 1997, appears to be nothing more than a one-page, self-serving "pat-on-the-back" consultant commentary.

In sum, the reports commissioned by BellSouth provide compelling evidence that the quality of service provided to CLECs out of BellSouth's LCSC is grossly deficient, and clearly inferior to the standards of order processing that BellSouth provides to itself and its retail customers. Moreover, Intermedia notes that the tests conducted in the latter reports have not been subject to review or confirmation by the State commissions or by any interested parties. The record therefore presents a *prima facie* case that the BellSouth LCSC is inadequate to provide reasonable and nondiscriminatory service to CLECs.

Q: WHAT DO THE RESULTS OF THE LCSC STUDY SUGGEST?

A: Results of the LCSC study demonstrates that BellSouth's LCSC fails to meet the OSS standards established by the FCC for Section 271 authorization. In the *Ameritech-Michigan Order*, the FCC established the standard of performance it requires of a BOC's operations support systems before 271 authority can be granted:

> In assessing a BOC's operations support systems, we conclude that it is necessary to consider all of the automated *and manual processes* a BOC has undertaken to provide access to OSS functions to determine whether the BOC is meeting its duty to provide nondiscriminatory access to competing carriers.
>
> * * *
>
> For example, although the Commission has not required that incumbent LECs follow a prescribed approach in providing access to OSS functions, we would not deem an incumbent LEC to be providing nondiscriminatory access if limits on the processing of information between the interface and the legacy systems prevented a competitor from performing a specific functions in substantially the same time and manner as the incumbent performs that function for itself.

The BellSouth-commissioned reports on the functioning of its LCSC clearly demonstrate an order processing system that is inferior to the internal systems the BellSouth employs to provide services to its own retail customers. The original analysis conducted on March 13 illustrates a department that is in complete disarray, and is wholly incompetent to process CLEC orders. While subsequent reports indicate substantial improvement over the state of the LCSC in March of this year, they still demonstrate levels of service to CLECs that are fundamentally unacceptable: the most recent studies show that 65% of the orders submitted by AT&T and MCI were rejected, and that, on average, they had to be resubmitted almost two times. This is not the same

quality of service that BellSouth provides to its access and end-user customers. Moreover, the reports that many of the problems identified with the LCSC on March 13 are based on studies that include fictitious test orders as well as real orders submitted by CLECs.

In short, the LCSC reports commissioned by BellSouth fully support the statements by Intermedia and other CLECs that BellSouth is not processing their orders for unbundled elements and resold service in a reasonable and timely manner, and that the service they obtain from BellSouth is inferior to the service BellSouth provides to itself and its retail customers.

Moreover, as I stated previously, Intermedia continues to experience the same problems it has encountered in the past. In particular, despite assurances from BellSouth that the problems associated with its OSS have been rectified, Intermedia's recent experience in placing a DS1 order demonstrates that this is not the case. This is recent and unequivocal evidence that the problems with LCSC identified before have not been resolved to date. BellSouth bears the burden of proof in demonstrating that it is providing nondiscriminatory access to the operations support systems necessary to provide CLECs with unbundled network elements and resale services. It is incumbent upon BellSouth to demonstrate that the inferior functionality of the LCSC identified in its commissioned reports has been rectified, and that the LCSC is processing orders with the same speed and competence that its Data Service Center and other internal order processing organizations process orders for BellSouth's retail services. BellSouth has not even attempted to meet this burden, and the record in this proceeding provides no data that allows a responsible comparison between BellSouth's internal order processing

functions and those performed by the LCSC. Absent a showing that BellSouth's internal organizations function at parity with the LCSC, the Authority is compelled to find that BellSouth has failed to demonstrate nondiscriminatory access to its OSS, and so fails to meet the requirements for 271 authorization.

Q: HAS THE FCC MADE AN EVALUATION OF BELLSOUTH'S OSS?

A: Yes. In the *BellSouth-South Carolina Order*, the FCC determined that BellSouth had not fully complied and implemented the Competitive Checklist as required by Section 271 because it failed to demonstrate that it offers nondiscriminatory access to its OSS. More recently, in the *BellSouth-Louisiana Order*, the FCC concluded that the marginal improvements made by BellSouth to its OSS thus far did not address the major deficiencies the FCC identified in the *BellSouth-South Carolina Order*. With respect to the LCSC consultant's study to which I referred previously, the FCC has found in the *BellSouth-Louisiana Order* that BellSouth has not been able to rebut the CLEC claims that the LCSC is inefficient.

Q: IS BELLSOUTH PROVIDING UNBUNDLED NETWORK ELEMENTS PURSUANT TO THE 1996 ACT?

A: No, BellSouth fails to provide certain unbundled network elements, as required by the 1996 Act. In the *BellSouth-South Carolina Order*, the FCC concluded that BellSouth has not demonstrated in the record before it that it offers or can timely provide a method of combining unbundled network elements (e.g., collocation). The FCC found that BellSouth has not met its burden under Section 271 of showing that a CLEC can enter a local telecommunications market in South Carolina by acquiring all the necessary

elements from an ILEC, as required by the Section 251 and specifically upheld by the Eight Circuit. The situation in South Carolina with respect to this issue is the same as in Tennessee.

In particular, I understand that BellSouth is still formulating its policy on the issue as it relates to unbundled elements and collocation. BellSouth has made its position on collocation very clear to Intermedia—currently, BellSouth's policies prohibit a CLEC from obtaining combinations of UNEs unless they have physical collocation arrangements in place with BellSouth.

In October 1997, BellSouth informed Intermedia that it interpreted a ruling by the 8th Circuit Court of Appeals to mean that Intermedia cannot obtain the loop that delivers service to its end user customers with the interoffice transport that carries the service to Intermedia's switch unless Intermedia physically collocates in BellSouth's central office. BellSouth admits that it is obligated to provide unbundled loops and interoffice transport to CLECs, but not states that CLECs cannot have access to the two together unless they are physically collocated. This position is fundamentally unreasonable, as a matter of public policy and plain common sense.

First, as a practical matter, an unbundled loop and an unbundled interoffice transport do not work unless they are connected together—BellSouth cannot meet its obligation to provide UNEs to CLECs by providing them two elements that are not connected and that have no functionality unless they are connected. Second, by forcing CLECs to physically collocated every time they want a loop/transport combination to serve a customer effectively prevents CLECs from entering the local services market using UNEs. Physical collocation is very expensive and typically can take six months or

more to implement. At the outset, BellSouth claims that renovations are necessary before collocation can be proved in most central offices. These renovations can cost a hundred thousand dollars or more. Then, actually building the collocation arrangement typically costs $30,000 or more per central office. Finally, CLECs have to build out cable to the central office, which entails digging up the streets, and can easily cost $300,000 to $500,000 or more. When all these costs are considered, a single collocation arrangement typically costs between half a million and one million dollars.

BellSouth takes the position that Intermedia cannot use its existing virtual collocation interconnection arrangements to obtain a combination of loop and interoffice transport, but instead must convert these arrangements to physical collocation arrangements to accomplish this. This interpretation of the 8th Circuit's decision is unreasonable and unfair on its face, and clearly violates both the letter and spirit of the Communications Act. As long as BellSouth maintains that CLECs must physically collocate in order to obtain unbundled loops and transport, it cannot be found to meet Checklist Items 2, 4, and 5—which impose the obligation to provide UNEs. I note that Intermedia has proposed to BellSouth different approaches that would significantly reduce space requirements and the cost of physical collocation, including reducing the size of the central office space that a CLEC has to buy.

Q: IS BELLSOUTH IN COMPLIANCE WITH ITS INTERCONNECTION AND RECIPROCAL COMPENSATION OBLIGATIONS?

A: No. BellSouth's refusal to pay reciprocal compensation for local Internet traffic renders BellSouth noncompliant with the interconnection and mutual compensation provisions of

Section 271(c)(2)(B), checklist items 1 and 13. Recent actions of BellSouth demonstrate that it does not comply with its interconnection and reciprocal compensation obligations.

In a letter dated August 12, 1997, BellSouth informed Intermedia that it will refuse to pay mutual compensation for local calls terminated to ISPs located on Intermedia's network. A copy of this letter is attached to this testimony as Appendix C. The interconnection agreement, however, does not exclude local calls to Internet service providers, does not limit or restrict the definition of local calls or BellSouth's obligation to provide mutual compensation for them, and contains no discussion of local calls to ISPs. During the negotiations between BellSouth and Intermedia that resulted in their interconnection agreement, BellSouth never once raised the issue of excluding local calls to ISPs from mutual compensation. Similarly, to date, BellSouth has never proposed any means by which such local calls could be identified, distinguished from other local calls, and excluded from the measure of local traffic that is subject to mutual compensation.

In addition, BellSouth's unilateral refusal to pay mutual compensation for local calls to ISPs violates the terms of the BellSouth-Intermedia interconnection agreement. The interconnection agreement negotiated between BellSouth and Intermedia--and approved by the relevant State Commissions (including Tennessee)--contains a provision that directs the actions that the parties must take if a rate provision of the agreement is in dispute:

> Except as otherwise stated in this Agreement, the parties agree that if any dispute arises as to the interpretation of any provision of this Agreement or as to the proper implementation of this Agreement, the parties will initially refer the issue to the individuals in each company that negotiated the Agreement. If the issue is not resolved within 30 days, either party may petition the Commission for a resolution of the dispute.

It is beyond debate that the issue of mutual compensation for local calls to ISPs is currently "in dispute," and is the subject of various state and federal proceedings. Indeed, this Authority has before it a complaint on this very issue filed by Brooks Fiber. I understand that Intermedia has both orally and in writing petitioned the Authority for leave to intervene, and is awaiting the Authority's decision. Under these circumstances and pursuant to the terms of the interconnection agreement, BellSouth is prohibited from taking unilateral action, but is required to petition the relevant State commission(s) to resolve the matter. Rather than exercise this provision of the interconnection agreement, however, BellSouth has chosen unilaterally to withhold payments for mutual compensation owed to Intermedia, in violation of its contractual and statutory obligations. Thus, BellSouth is refusing to act in accordance with the terms of its interconnection agreement with Intermedia, and is therefore in violation of items (i) and (xiii) of the Competitive Checklist.

I should note that BellSouth has the ability to remedy this situation simply by paying the full amount of mutual compensation for the terminating local traffic, and asking the relevant State commission to resolve the matter. In so doing, BellSouth could exercise its rights under the interconnection agreement, while pursuing a full refund of the disputed amounts before the relevant State commission. Under such an approach, no dispute would exist over whether BellSouth was meeting its interconnection and mutual compensation obligations under the 1996 Act, and this matter would have no bearing on BellSouth's attempts to obtain in-region, interLATA relief under Section 271. Rather than take this approach, however, BellSouth has chosen unilateral action that forces the

Authority to consider the mutual compensation issue in the instant proceeding, and compels rejection of the BellSouth application.

Q: HAS ANY STATE COMMISSION RULED ON THE ISSUE OF RECIPROCAL COMPENSATION FOR ISP TRAFFIC?

A: Yes. In recent months, in response to complaints from various CLECs, several ILECs have argued before state regulatory commissions that traffic originated by or terminated to enhanced service providers should be exempt from reciprocal compensation under existing interconnection agreements. In each and every case where a state regulatory commission issued a final order, the commission rejected this argument and, instead, has ruled that traffic transported and terminated by CLECs to ISPs is subject to mutual compensation. For example, the Connecticut Department of Public Utility Control ("Connecticut DPUC") has concluded that traffic transported and terminated to ISPs is local in nature and subject to reciprocal compensation. Dismissing SNET's arguments, the Connecticut DPUC found that

> Internet access is composed of various components including the local voice grade connection to the PSN to which an ISP subscribes and the information service actually provided to the end user by the ISP. . . .In the opinion of the Department, it is the local connection component and the traffic carried over it that should be subject to mutual compensation. Subscription of a local voice grade connection to the PSN by ISPs, as well as its use of these connections, is no different than those subscribed to and utilized by other SNET business and residential customers.

Recently, the Public Service Commission of West Virginia clarified that Internet-bound traffic originating in a local calling area and which is terminated within that area to ISPs is "local" traffic for purposes of reciprocal compensation under the 1996 Act. It noted that

historically, calls that originate and are terminated to ISPs in local calling areas are treated as local traffic—regardless of whether the ISP reformats or retransmits information received over such calls to or from further interstate (or international) destinations.

The Michigan Public Service Commission ("Michigan PSC") recently also has concluded that, as a "service matter," ISP calls terminate within the local calling area, and are, therefore, subject to reciprocal compensation. Rejecting Ameritech's argument to the contrary, the Michigan PSC held that

> [t]he disputed calls are made from one local number in the local calling area, and the agreements do not distinguish between calls based on the nature of the customer receiving the call. As such, the calls are local traffic. Contrary to Ameritech Michigan's argument, calls placed to an ISP at a local number are not exchange access traffic because they do not relate to the origination or termination of toll service.

Properly following the lead of other state regulatory agencies, the Texas Public Commission recently unanimously overturned an arbitrator's decision finding that ISP traffic was not subject to reciprocal compensation. In the words of Chairman Pat Wood III, "the decision today that calls to locally based Internet service providers are local is supported by the law, by the facts, and by common sense."

Most recently, the New York Public Service Commission observed that a call to an ISP is "no different from a call to any other large volume customer," concluding that such calls are "all local calls." In all, over 13 state commissions have found that ILECs must pay compensation for ISP traffic.

Q: HAS BELLSOUTH DEMONSTRATED NONDISCRIMINATION IN THIS PROCEEDING THROUGH ADEQUATE PERFORMANCE MEASURES AND STANDARDS?

A: No. BellSouth has not demonstrated parity of access through readily ascertainable and verifiable performance standards. Paper promises or promises of future compliance are simply inadequate to ensure BellSouth's adherence to its obligations under the 1996 Act. It is critical, therefore, that there exists a mechanism through which the Authority can determine BellSouth's compliance with its obligations, including demonstration of parity of access to OSS. To date, BellSouth has not provided adequate, verifiable and ascertainable performance data to permit an informed performance analysis. More specifically, BellSouth has not provided Intermedia with the kind of data and measurement criteria that it needs to determine whether Intermedia is being provided parity of OSS access. For example, BellSouth's proposed measures and standards do not address measurements for frame relay and other data services and UNEs that are critical to Intermedia and other CLECs who provide data services.

Q: WHAT PERFORMANCE STANDARDS SHOULD THE AUTHORITY IMPOSE UPON BELLSOUTH?

A: Intermedia supports and proposes the adoption of the Association for Local Telecommunications Services ("ALTS") Service Quality Measurements (hereinafter, "ALTS Standards"), a copy of which is attached to this testimony as Appendix D, with certain modifications. The ALTS Standards are based upon, and supplement, the Local Competition Users Group ("LCUG") Service Quality Measurements (hereinafter, "LCUG Standards"), a copy of which is attached to this testimony as Appendix E. The ALTS Standards, as modified by Intermedia, do not supplant the LCUG Standards, but rather are intended to supplement them to reflect those measurements and categories that are of special interest to the members of ALTS, of which Intermedia is one. Indeed,

sections of the ALTS Standards had been lifted directly out of the latest LCUG Standards, Version 6.1, dated September 26, 1997, thereby reinforcing ALTS' desire to build a common performance measurement foundation, rather than reinvent a new one.

Q: PLEASE DESCRIBE THE LCUG STANDARDS IN BRIEF.

A: The LCUG Standards measure the ILECs' performance for all the essential operations support systems categories, including:

- preordering
- ordering and provisioning
- maintenance and repair
- network performance
- unbundled elements
- operator services and directory assistance
- system performance
- service center availability
- billing

The preordering standards measure the average response time for preordering information. The ordering and provisioning standards provide measurements for order completion intervals, order accuracy, order status, and held orders. The maintenance and repair standards measure time to restore, frequency of repeat troubles, frequency of troubles (troubles per 100 lines), and estimated time to restore met. The billing standards seek to measure timeliness of billing record delivery, and accuracy of billing records. The operator services and directory assistance standards measure speed to answer. The network performance standards measure network performance parity. The availability

and performance of network elements are measured by the interconnect/unbundled elements and combinations standards. Finally, systems availability and center responsiveness are also measured.

Q: PLEASE DESCRIBE THE ALTS STANDARDS IN BRIEF.

A: A fundamental requirement of the ALTS Standards is to adhere as much as possible to the format of the LCUG Standards, Version 6.1. The ALTS Standards recognize and accept the basic measurement foundation established in the LCUG Standards, Version 6.1. However, the ALTS Standards modify certain portions of the LCUG Standards. For example, the ALTS Standards modify the LCUG Standards' "Order Provisioning" section to include additional measurements, such as "Percent Customer Desired Due Date Met," "Average Completion for INP Coordinated Orders," and "Percent of INP Coordinated Orders with Disconnection, Loop Provisioning, and NP Done within 5 Minutes of Each Other." The "Percent Customer Desired Due Date Met" measures the ILEC performance against what the CLEC customer requested versus the ILEC commitment made based on the ILEC's own internal requirements which do not necessarily consider customer needs. The "Average Completion for INP Coordinated Orders" and "Percent of INP Coordinated Orders with Disconnection, Loop Provisioning, and NP Done within 5 Minutes of Each Other" monitor the quality of work done by the ILEC when physical connection and software updates must be completed at the same time to prevent customer outage and poor service.

In addition, the ALTS Standards include the following supplemental measurement criteria:

• Network Performance	Measures network interconnection performance.
• Emergency Services	Measures the timeliness of updating the 911/E911 databases, the accuracy of the 911/E911 databases, the provisioning of 911/E911 trunks, and the system availability to the Master Street Address Guide ("MSAG").
• Collocation Provisioning	Measures physical and virtual collocation commitments met.

Finally, the ALTS Standards add the following standard service groupings to the LCUG service groupings: ISDN Basic Rate ("BRI"), ISDN Primary Rate ("PRI"), Unbundled DS3 loop, network interface device ("NID"), direct inward dialing ("DID"), remote call forwarding ("RCF"), and Signaling System 7 ("SS7").

Q: PLEASE DESCRIBE INTERMEDIA'S SUPPLEMENTAL PERFORMANCE STANDARDS.

A: The ALTS Standards adequately address the concerns of many CLECs. However, CLECs who provide data services in addition to traditional voice services, such as Intermedia, have needs that are unique to them. In particular, Intermedia believes that the ALTS Standards should be expanded to address the provision of data services. Specifically, the ALTS Standards should be expanded to include measurements for resold frame relay/Synchronet and other simple and complex services, all unbundled data network elements, including but not limited to, four-wire digital circuits and subloop

elements. This list should be expanded as other data UNEs capable of supporting data services are developed and introduced. Because it is difficult to predict what particular services and UNEs might become available in the future, the measurements ultimately adopted should have sufficient flexibility to encompass new applications.

Moreover, standards and measurements that relate specifically to the performance of BellSouth's LCSC are appropriate. As I stated previously, studies conducted previously by BellSouth's own paid consultants revealed that BellSouth's LCSC operations were substandard, inefficient, and otherwise dysfunctional. In this regard, Intermedia recommends that BellSouth should be required to provide data concerning "first time quality" and "orders pending on the questionable activity report." "First time quality" measures the ability of the service representative to process an order, error-free. "Orders pending on the questionable activity report" ensures that orders are cleared on a timely basis if and when they have errors. In addition, to the extent not already reflected in either the ALTS Standards or the LCUG Standards, BellSouth should be required to provide the following additional data: order process duration (measured in hours from the point of receipt to issuance of firm order confirmation); percent of Local Service Requests processed within 48 hours; percent of calls answered within 16 seconds; percent of calls abandoned; and average number of times clarified orders are submitted before being processed.

Finally, Intermedia believes that BellSouth should be required to provide the Authority and the CLECs with reports showing BellSouth's performance. While the level of disaggregation for reporting purposes will necessarily depend upon the needs of

individual CLECs and regulators, the reports should be sufficiently specific to permit conclusions concerning BellSouth's performance to be drawn.

Q: ARE YOU FAMILIAR WITH THE PERFORMANCE STANDARDS RECENTLY PROPOSED BY THE NEW YORK PUBLIC SERVICE COMMISSION?

A: Yes, I am. The New York Public Service Commission recently issued a draft set of carrier-to-carrier performance standards and reports, a copy of which is attached to this testimony as Appendix F.

Q: DO YOU RECOMMEND THAT PROPOSAL?

A: Intermedia believes that the New York standards include critical measurements that should be incorporated into the performance metrics that must be adopted as a precondition to a grant of Section 271 authority.

Q: HAS BELLSOUTH DEMONSTRATED THAT ITS ENTRY INTO THE IN-REGION, INTERLATA MARKET IN TENNESSEE IS IN THE PUBLIC INTEREST?

A: No. Section 271(d)(3) of the 1996 Act provides that the FCC may not approve a Section 271 application unless, among other things, the requested authorization is consistent with the public interest, convenience, and necessity. In the *Ameritech-Michigan Order*, the FCC explicitly rejected the view that its responsibility to evaluate public interest concerns is limited narrowly to assessing whether a BOC entry would enhance competition in the long distance market. Rather, the FCC stated that its public interest inquiry must be a broader one. Consequently, the FCC concluded that its public interest analysis must include an assessment of whether all "procompetitive entry strategies are available to new [local exchange] entrants." Additionally, the FCC stated that its public interest analysis

will include an assessment of the effect of BOC entry on competition in the long distance market. Moreover, the FCC emphasized that it must consider whether conditions are such that the local market will remain open as part of the public interest analysis. In making its public interest assessment, the FCC concluded that, while compliance with the Competitive Checklist is necessary to provide certain minimum requirements necessary for competition, such compliance alone is insufficient to open a BOC's local telecommunications markets to competition.

BellSouth's entry into the Tennessee in-region, interLATA market at this time is not in the public interest for several reasons. First, as discussed at length above, BellSouth has not met--and cannot meet-- its burden of proving that it is providing interconnection, unbundled network elements, and resale in a way that meets all of the Competitive Checklist items, as required by Section 271(c)(2)(B) of the 1996 Act. Indeed, the demonstrated failure of BellSouth to provide efficient and nondiscriminatory access to its operations support systems alone compels a finding that BellSouth fails to meet the standards of Section 271.

Similarly, BellSouth has not agreed to adequate performance monitoring. The FCC has concluded that evidence that a BOC has agreed to performance monitoring would be probative evidence that a BOC will continue to cooperate with new entrants, even after it is authorized to provide in-region, interLATA services. Without adequate performance standards, there is no reliable mechanism by which to gauge BellSouth's compliance with its obligation to provide access and interconnection to CLECs in a nondiscriminatory manner. Similarly, as the FCC has found, performance monitoring establishes a benchmark against which new entrants and regulators can measure

BellSouth's performance over time to detect and correct any degradation of service once it is authorized to enter the in-region interLATA market.

Q: PLEASE SUMMARIZE INTERMEDIA'S POSITION.

A: BellSouth may not seek Section 271 authorization under Track B. The record shows that BellSouth has received qualifying requests for access and interconnection. BellSouth cannot proceed under Track A because it has not demonstrated that there is facilities-based competition in Tennessee. Regardless of the Track BellSouth pursues, however, BellSouth's Section 271 application must fail because it cannot meet the standards of the 14-point Competitive Checklist.

Considering the weight of the evidence in this proceeding, it may legitimately be asked whether BellSouth's pending application is prudent. With Track B foreclosed to BellSouth, and with the record clearly showing that the BellSouth SGATC is noncompliant with the 1996 Act, BellSouth's request for a ruling approving the SGATC is not actionable. Similarly, because neither BellSouth's SGATC nor its efforts in implementing existing interconnection agreements meet the standards of the 1996 Act, the Authority is precluded from finding that BellSouth's entry into the in-region interLATA market at this time would be in the public interest.

Q: DOES THIS CONCLUDE YOUR TESTIMONY?

A: Yes. I reserve the right, however, to amend, change, or otherwise supplement my testimony, as appropriate.

END OF TESTIMONY

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing has been forwarded via U. S. Mail, first class postage pepaid, to all persons listed below this 27th day of March, 1998.

H. LaDon Baltimore

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

Dennis McNamee, Esq.
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0500

Dana Shaffer, Esq.
Nextlink
105 Mallory St., #300
Nashville, TN 37201

Alaine Miller, Esq.
Nextlink
155 108th Ave. NE, #810
Bellevue, WA 98004

Charles B. Welch, Esq.
Farris, Mathews, et al.
511 Union St., #2400
Nashville, TN 37219

Henry Walker, Esq.
Boult, Cummings, et al.
PO Box 198062
Nashville, TN 37219-8062

Martha P. McMillin, Esq..
MCI Telecommunications Corp.
780 Johnson Ferry Road, #700
Atlanta, GA 30342

Jon E. Hastings, Esq.

Boult, Cummings, et al.
PO Box 198062
Nashville, TN 37219-8062

Val Sanford, Esq.
Gullett, Sanford, et al.
230 Fourth Avenue N., 3rd Floor
Nashville, TN 37219-8888

James Lamoureux, Esq.
AT&T
1200 Peachtree St., NE
Atlanta, GA 30309

Carolyn Tatum Roddy, Esq.
Sprint Communications
3100 Cumberland Circle, N0802
Atlanta, GA 30339

Guilford Thornton, Esq.
Stokes & Bartholomew
424 Church St.
Nashville, TN 37219

D. Billye Sanders, Esq.
Waller, Lansden, et al.
511 Union St., #2100
Nashville, TN 37219-1750

Michael McRae, Esq.
TCG
1133 21st St. NW, #400
Washington, DC 20036

Andrew O. Isar, Esq.
Telecommunications Reselleres Assoc.
4312 92nd Ave. NW
Gig Harbor, WA 98335

Donald L. Scholes, Esq.
Brandstetter, Kilgore, et al.
227 Second Ave. N.
Nashville, TN 37219

John L. Quinn, Esq.
Nakamura & Quinn

2100 First Ave. N., #300
Birmingham, AL 35203

Guy Hicks, Esq.
BellSouth Telecommunications, Inc.
333 Commerce St.
Nashville, TN 37201-3300

SBC Communications Inc., et al., Appellants
v.
Federal Communications Commission, Appellee
AT&T Corporation, et al., Intervenors

No. 97-1425.

United States Court of Appeals,
District of Columbia Circuit.

Argued Jan. 9, 1998.

Decided March 20, 1998

Appeal of an Order of the Federal Communications Commission.

Michael K. Kellogg argued the cause for appellants, with whom James D. Ellis, Robert M. Lynch, and Martin E. Grambow were on the briefs.

Christopher J. Wright, General Counsel, Federal Communications Commission, argued the cause for appellee, with whom William E. Kennard, General Counsel, John E. Ingle, Deputy Associate General Counsel, and James M. Carr, Counsel, were on the brief.

David W. Carpenter argued the cause for intervenors AT&T Corporation, et al., with whom Mark E. Haddad, Peter D. Keisler, Mark C. Rosenblum, Roy E. Hoffinger, Anthony C. Epstein, Sue D. Blumenfeld, Michael Finn, Leon Kestenbaum, Jay Keithley, Charles C. Hunter, Catherine M. Hannan, Glenn B. Manishin, Christy C. Kunn, John D. Windhausen, Jr., Gary M. Cohen, Jeffrey Blumenfeld, Genevieve Morelli, Danny E. Adams, Steven A. Augustino, Richard J. Metzger, Emily M. Williams, Daniel L. Brenner, Neal M. Goldberg, David L. Nicoll, Werner K. Hartenberger, Laura H. Phillips, and J.G. Harrington were on the brief. Donald B. Verrilli, Jr. entered an appearance.

Mickey S. Moon, Assistant Attorney General, State of Oklahoma, was on the brief for intervenor Office of the Oklahoma Attorney General

Jeffrey W. Sarles was on the brief for amicus curiae Ameritech Corporation.

James R. Young and Michael E. Glover were on the brief for intervenors Bell Atlantic Telephone Companies and Bell Atlantic Communications, Inc.

Before: SILBERMAN, WILLIAMS, and SENTELLE, Circuit Judges.

SILBERMAN, Circuit Judge:

*1 Appellant SBC Communications contends that in denying its application to provide longdistance telephone service in the State of Oklahoma, the Federal Communications Commission has erroneously interpreted the provisions governing Bell operating company entry into the long-distance market in their home region states (to be codified at 47 U.S.C. § 271(c)(1)(A), (B)). We affirm.

I.

SBC Communications provides local telephone exchange (intraLATA) [FN1] service in the States of Arkansas, California, Kansas, Missouri, Nevada, Oklahoma, and Texas through its subsidiaries Nevada Bell, Pacific Bell, and Southwestern Bell. It is a combination of local telephone companies that AT&T was required to divest pursuant to the Modification of Final Judgment (MFJ), a consent decree between the government and the then-integrated AT&T, as modified by the district court, in settlement of the Justice Department's 1974 antitrust suit. See United States v. American Tel. & Tel. Co., 552 F.Supp. 131, 227 (D.D.C.1982), aff'd sub nom. Maryland v. United States, 460 U.S. 1001, 103 S.Ct. 1240, 75 L.Ed.2d 472 (1983). [FN2] Divestiture was called for, in large part, because it was thought "that a corporation that enjoyed a monopoly on local calls would ineluctably leverage that bottleneck control in the interexchange (long distance) market." United States v. Western Elec. Co., 969 F.2d 1231, 1238 (D.C.Cir.1992). The newly independent Bell operating companies (BOCs) were given AT&T's local network assets, and thus control of the "bottleneck" monopoly (so named because interexchange calls are routed to homes through the local network). See SBC Communications Inc., v. FCC, 56 F.3d 1484, 1491 (D.C.Cir.1995).

Out of concern that the BOCs might similarly leverage that local monopoly to their competitive advantage, the MFJ forbad them from offering long-distance service. See United States v. American Tel. & Tel. Co., 552 F.Supp. at 188 ("there are

many ways in which the company controlling the local exchange monopoly could discriminate against competitors in the interexchange market"). The MFJ provided that the ban might be lifted if the BOCs lost their monopoly over local service, either by "technological developments" or "changes in the structures of competitive markets"; the Department of Justice was to report to the district court on whether the restriction continued to be necessary. See id. at 194-95. But subscriber plant equipment (also known as the "local loop")--inside wiring and equipment, and the wireline connecting each household to a local switching office, see MCI Telecommunications Corp. v. FCC, 750 F.2d 135, 137 (D.C.Cir.1984)--is very costly to install. And, state regulators helped sustain the BOCs' bottleneck control, arguably because they preferred the "subsidies and price-averages" the local monopoly allowed. See M. KELLOGG, ET AL., FEDERAL COMMUNICATIONS LAW 68 (1992). The Department of Justice, indeed, came to believe that "the BOCs' bottleneck monopolies persist[ed] primarily because of local regulation." United States v. Western Elec. Co., 900 F.2d 283, 292 (D.C.Cir.1990) (per curiam). Nevertheless, the BOCs, with the FCC's support, moved in 1987 to have the interLATA restriction removed. We agreed with the government in opposition that "the BOCs failed to show that there was no substantial possibility that they could use their monopoly power to impede competition in the interexchange market." Id. at 301. The restriction remained in force for the duration of the MFJ.

*2 The Congress--responding, in part, to the argument that competition in the huge telecommunications industry should no longer be governed by an antitrust consent decree administered by a single federal district judge, see S.REP. NO.104-23, at 5, 9 (1995)--set forth a new legislative framework, the Telecommunications Act of 1996, Pub.L. No. 104-104, 110 Stat. 56 (1996). Section 601 of the Act provided that the "restrictions and obligations imposed" by the MFJ were to give way (the district judge terminated the MFJ as of February 8, 1996, see United States v. Western Elec. Co., 1996 WL 255904 (D.D.C. Apr.11, 1996)). Congress hoped the Act would "provide for a pro- competitive, deregulatory national policy framework ... by opening all telecommunications markets to competition." H.R. CONF. REP. No. 104-458, at 1 (1996). The question of how best to achieve that goal, however, was the subject of great debate. Some thought that the local and long-distance markets should be open to all competitors immediately. Others believed that the BOCs should have to wait until actual competition was introduced in their local markets before providing interLATA service, since it was claimed that the long- distance market is already competitive. As might be expected for an issue of this economic significance, an extended lobbying struggle ensued. The end product was a compromise between the competing factions.

States and localities were no longer to sanction local monopolies; they are now barred from "prohibiting the ability of any entity to provide ... intrastate telecommunications service." 47 U.S.C.A. § 253(a) (West Supp.1997). The BOCs are obliged to provide any requesting carrier with nondiscriminatory interconnection to their networks and nondiscriminatory access to unbundled network elements at reasonable rates, terms, and conditions; they must also offer telecommunications services at wholesale rates for resale to end users. 47 U.S.C.A. § 251(c). [FN3]

Interexchange carriers may immediately begin providing local telephone service, and the BOCs may provide longdistance service originating from out-of- region [FN4] states without the FCC's approval. See id. at § 271(b)(2). A BOC must apply to the Commission, however, for authorization to provide interLATA services in any of its in-region states under section 271(d)(1). In evaluating any such application, the FCC must consult with the United States Attorney General and the relevant State commission, see id. at § 271(d)(2), and must approve or deny the application within 90 days of receipt. See id. at § 271(d)(3). The FCC may not approve a BOC's request unless it finds that the criteria set forth at 47 U.S.C.A. § 271(d)(3) are satisfied.

As the first step in meeting the section 271(d)(3) criteria, the BOCs must satisfy either 47 U.S.C.A. § 271(c)(1)(A) or 47 U.S.C.A. § 271(c)(1)(B), which the parties refer to as "Track A" and "Track B," respectively. [FN5] Track A provides:

*3 A [BOC] meets the requirements of this subparagraph if it has entered into one or more [approved] binding agreements ... specifying the terms and conditions under which the [BOC] is

> providing access and interconnection to its network facilities for the network facilities of one or more unaffiliated competing providers of telephone exchange service ... to residential and business subscribers. For the purpose of this subparagraph, such telephone exchange service may be offered by such competing providers either exclusively over their own telephone exchange service facilities or predominantly over their own telephone exchange service facilities in combination with the resale of the telecommunications services of another carrier.

47 U.S.C.A. § 271(c)(1)(A) (emphasis added). Put simply then, Track A visualizes a demonstration of a competitor in the local exchange market. Track B, which first became available 10 months after the date of enactment (i.e., on Dec. 8, 1996), is satisfied, on the other hand, if "3 months before ... the [BOC] makes its application" to the FCC, "no such provider has requested the access and interconnection described" in Track A, so long as "a statement of the terms and conditions that the [BOC] generally offers to provide such access and interconnection has been approved or permitted to take effect by the State commission." 47 U.S.C.A. § 271(c)(1)(B). As is apparent, Track B is only available to a BOC as a default mechanism if "no such provider" has requested the access and interconnection Track A contemplates. Just what the characteristics of such a provider are and how they are measured--in other words, how useful is Track B to the BOC's--is the key issue in this litigation.

On April 11, 1997, SBC applied to the Commission for authorization to provide interLATA service originating from its in-region State of Oklahoma. Prior to submitting its application, SBC received the Oklahoma Corporation Commission's (OCC) approval of several negotiated access and interconnection agreements, one of which was made with Brooks Fiber Communications. Before the FCC, SBC contended that it satisfied Track A by virtue of its agreement with Brooks. At the time SBC made its application, Brooks owned and operated local telecommunications networks in Tulsa and Oklahoma City, providing service to 20 business customers (13 in Oklahoma City and 7 in Tulsa), and to three Tulsa residents and one other residential customer--each a Brooks employee. This service alone, SBC urged, meant that Brooks qualified as a Track A provider. To bolster its argument, SBC claimed that the tariff Brooks had filed with the OCC obligated Brooks, under Oklahoma law, to provide residential service over its own facilities to any requesting customer in its areas of operation. The OCC had cryptically opined that SBC had satisfied Track A's requirements, and SBC argued that the FCC was obliged to defer to the OCC's decision.

*4 Alternatively, SBC claimed that it satisfied Track B because if the Commission determined that Brooks did not qualify as a Track A provider, neither did any other carrier. (SBC had filed a statement of terms and conditions at which it offered access and interconnection generally, which the OCC allowed to take effect by failing to complete its review within the 60 day requirement imposed by the Act. See 47 U.S.C.A. § 252(f)(3).) As it happened, a large number of carriers had "requested" access and interconnection agreements of the sort described in Track A, but none of those requests foreclosed Track B's availability to SBC because SBC interpreted the phrase "such provider" to mean a competing local exchange carrier that was already providing the kind of service described in Track A--local telephone service to residential and business subscribers exclusively or predominantly over its own facilities based network--at the time it made its request. SBC acknowledged an exception, however, for a requesting carrier who did not have that position at the time of its request but nevertheless achieved it no later than three months before the BOC applied to the FCC for interLATA authorization. [FN6]

The Commission concluded that appellant had not yet met either Track A or Track B and denied SBC's application. Application by SBC Communications Inc., Pursuant to Section 271 of the Communications Act of 1934, as amended, to Provide In-Region, InterLATA Services in Oklahoma (Oklahoma Application), 12 F.C.C.R. 8685, at ¶¶ 2, 68 (1997). Regarding Track A, the FCC concluded that Brooks--the only potentially Track A satisfying provider that SBC identified-- was not a competing provider of telephone exchange service to residential subscribers. [FN7] The Commission construed Track A's phrase "competing provider" to mean that there be an "actual commercial alternative to the BOC." Oklahoma Application at ¶ 14. Since the four customers to which Brooks provided residential service were its employees, and the service was provided on a test basis free of charge, Brooks did not qualify. A "competing provider must actually be

in the market, and, therefore, beyond the testing phase." Id. at ¶ 17. The Commission also concluded that the terms "telephone exchange service" and "subscribers" as used in Track A meant that the persons receiving the service had to pay for it. Id.

The FCC acknowledged its obligation to consult with the State commissions, but pointed out that the Act is silent as to how much weight it should place on the advice it receives. As the "expert agency charged with implementing" the statute, the Commission decided that it was required to make an independent determination on the matter. Id. at ¶ 15. It thought the OCC's recommendation unpersuasive because the OCC failed to provide the basis or reasoning in support of its decision. Id. at ¶ 16. The Commission then determined that whatever legal obligations Brooks had under Oklahoma law, those obligations could not supply evidence of actual competition. Brooks' own executive vice president had averred that Brooks was " 'not now offering ... nor had it ever offered residential service in Oklahoma.' " Id. at ¶ 18 (quoting affidavit of John C. Shapleigh). And because it lacked the necessary facilities, Brooks was not " 'accepting any request in Oklahoma for residential service.' " Id. Accordingly, the Commission said Brooks "at present has at most paper commitments to furnish service." Id. at ¶ 14. In reaching this conclusion, the Commission explicitly relied upon the comments of the United States Department of Justice, whose recommendations the FCC must give "substantial weight." See 47 U.S.C.A. § 271(d)(2)(A).

*5 The Commission went on to decide that Track B was not open to SBC. The Commission understood Track B to be foreclosed to a BOC if a provider had made a request that if implemented would satisfy Track A. The phrase "such provider" was not limited, as SBC claimed, to a provider who was already providing the very service contemplated at the time of its request (or one who achieved that status three months before a BOC's application), but rather included one who after implementation of its requested access and interconnection agreement would be a competitor. The Commission recognized, to be sure, that whether such a request satisfied this standard was a potentially difficult question that obliged the Commission to rely on its predictive judgment as an expert agency. See id. at ¶ 57. On the record before it, the Commission found that SBC had received 45 requests for interconnection, id. at ¶ 62; "at the very least, ... several [of which were] qualifying requests for access and interconnection that foreclose[d] Track B." Id. at ¶ 61. The Commission identified four of the requesting carriers--Brooks, Cox Communications, Inc., ICG Telecom Group, Inc., and U.S. Long Distance--as having made interconnection agreements that if implemented would satisfy Track A, id. at ¶ 62; two of which--Brooks and Cox--had "already taken affirmative steps to enter the residential and business local exchange markets." Id. at ¶ 63. [FN8]

The FCC rejected SBC's narrow reading of "such provider" in Track B, primarily because under that interpretation, BOCs would have a considerable incentive to delay and prevent interconnection so that they could apply under Track B immediately on December 8, 1996. See id. at ¶ 29. The Commission thought that "Congress intended Track B to serve as a limited exception to the Track A requirement of operational competition," id. at ¶ 46, and believed that its reading "best further[ed] Congress' goal of introducing competition in the local exchange market by giving BOCs an incentive to cooperate with potential competitors in providing them the facilities they need to fulfill their requests for access and interconnection." Id. at ¶ 28. The Commission also discarded what it called the "equally unreasonable" position advanced by SBC's potential competitors--that "any request for access and interconnection submitted by a potential new entrant to a BOC is a qualifying request [that] precludes the BOC from proceeding under Track B"--as that interpretation would allow potential competitors to effectively deny the BOC's entry into the interLATA market by submitting requests that might never satisfy Track A even if implemented. Id. at ¶ 29.

*6 After deciding that SBC could not satisfy either Track A or Track B, the FCC declined to address whether SBC's application could satisfy the remainder of section 271(d)'s requirements. See id. at ¶ 65. SBC appealed, and we have exclusive jurisdiction to hear that appeal under 47 U.S.C.A. § 402(b)(9).

II.

SBC reiterates its statutory interpretation arguments before us, but alternatively argues that even if the

Commission permissibly construed both Tracks A and B, it was arbitrary and capricious not to go on to determine whether SBC's application otherwise satisfied the requirements of section 271(d)(3), see supra note 5, so that at least appellant would have adequate guidance.

Track A

We do not think much of appellant's argument that the Commission was obliged to conclude that Brooks was a "competing provider" in the local residential market merely because four Brooks employees were provided free residential service and under Brooks' tariff it is legally bound to offer such service. Track A does not indicate just how much competition a provider must offer in either the business or residential markets before it is deemed a "competing" provider. Nor does the legislative history offer any guidance. Under those circumstances, the Commission's interpretation of the ambiguous phrase "competing provider" is certainly entitled to Chevron [FN9] deference.

It is at least permissible, within the meaning of Chevron Step II, for the Commission to interpret "competing provider" as meaning that a Track A satisfying provider must offer "an actual commercial alternative to the BOC." Oklahoma Application at ¶ 14. Indeed, we doubt that appellant's interpretation, even if adopted by the Commission, would be thought reasonable. Test service provided to only four employees is hardly a commercial alternative, and Brooks was not accepting requests for further residential service in Oklahoma. Id. at ¶ 18. SBC nevertheless insists that Brooks is required, by virtue of its tariff, to offer local residential service to all who request it. We cannot quarrel, however, with the FCC's conclusion that before a competing local carrier is deemed to offer "an actual commercial alternative," it must have more than "at most paper commitments to furnish service." Id. at ¶ 14. The Commission reasonably interprets the statute to mean that it must ask not whether Brooks is required to provide residential service under state law (which, incidentally, intervenor Office of the Oklahoma Attorney General disputes), but rather whether Brooks was in fact providing such service at the time SBC made its application.

Nor is the Commission obliged to defer to the OCC's judgment that SBC satisfied Track A. Although the Commission must consult with the State commissions, the statute does not require the FCC to give the State commissions' views any particular weight. Unless the FCC concludes to its own satisfaction that the applying BOC has satisfied either Track A or Track B, as well as the other statutory requirements, it "shall not approve the authorization." 47 U.S.C.A. § 271(d)(3). Louisiana Public Service Commission v. FCC, 476 U.S. 355, 106 S.Ct. 1890, 90 L.Ed.2d 369 (1986), which holds that matters in connection with intrastate service are "fence[d] off from FCC reach," simply does not apply in this case. Congress has clearly charged the FCC, and not the State commissions, with deciding the merits of the BOCs' requests for interLATA authorization, and interLATA service is typically interstate. For these reasons, we uphold the Commission's determination that SBC's application did not satisfy Track A's requirements. [FN10]

*7 Track B

Since appellant's argument is primarily a linguistic one, we think it useful to set forth section 271(c)(1)(B) in its entirety.

> (B) FAILURE TO REQUEST ACCESS. A Bell operating company meets the requirements of this subparagraph if, after 10 months after February 8, 1996, no such provider has requested the access and interconnection described in subparagraph (A) before the date which is 3 months before the date the company makes its application under subsection (d)(1) of this section, and a statement of the terms and conditions that the company generally offers to provide such access and interconnection has been approved or permitted to take effect by the State commission under section 252(f) of this title. For purposes of this subparagraph, a Bell operating company shall be considered not to have received any request for access and interconnection if the State commission of such State certifies that the only provider or providers making such a request have (i) failed to negotiate in good faith as required by section 252 of this title, or (ii) violated the terms of an agreement approved under section 252 of this title by the provider's failure to comply, within a reasonable period of time, with the implementation schedule contained in such agreement.

47 U.S.C.A. § 271(c)(1)(B) (emphasis added).

Appellant contends that because the phrase "such provider" in Track B necessarily refers back to the "competing providers" in Track A, Track B must be available to a BOC unless an actual competing provider is on the scene and has requested or entered into binding agreements with a BOC to provide access and interconnection. In SBC's view, it will be recalled, Track B can only be foreclosed if a requesting provider has begun competing in the local telephone market over its own facilities-based network before even asking for an access and interconnection, or, alternatively, if the requesting provider becomes an actual facilities-based competitor at least three months before the BOC makes its application to provide interLATA service (of course, at that point it would not matter if Track B were foreclosed to the BOC because Track A would be available). If the Commission is correct in determining that Brooks is not "such a provider" because it is not sufficiently competitive, then it follows, according to appellant--since no other carrier is claimed to have achieved greater competitive status--that Track B is open to SBC. As we have noted, the Commission read "such provider" differently; it thought that Track B was foreclosed the moment a provider requested interconnection so long as it could predict that the carrier would, after implementing the agreement, provide competitive service to both residential and business customers, at least predominantly over its own facilities.

Regardless of which of these two interpretations is correct, the Commission would still have authority to determine whether a BOC met the other section 271(d)(3) criteria, including whether a BOC's entry into the interexchange market in an in-region state was in the public interest. Still, appellant, intervenors, amicus, and the Commission regard this threshold question as of great significance. Appellant argues that the Commission's interpretation makes Track B virtually useless to BOCs because of the flood of interconnection requests. The record showed that SBC received 45 such requests in Oklahoma, and the Commission concluded that four of those would meet the facilities-based competitive standard after being implemented. [FN11] And SBC asserts that it does not know of any state where no carrier expressing a desire to become a facilities-based competitor requested interconnection. The Commission, on the other hand, contends that appellant's reading would nullify Track A, which it believes Congress intended as the primary path for a BOC seeking to enter the interLATA market.

***8** Carefully parsing the language of the two sections, we come to the conclusion that it is not apparent on their face whether "such provider" in Track B is intended to mean a carrier who has met the requirements of Track A-- i.e., is actually providing service, either on its own, or under an access and interconnection agreement with a BOC--or one who has requested such an agreement but has not yet implemented it and begun providing the requisite service. There seems to be an ambiguity as to how close to competitive status a provider must be when the request is made.

We do see an immediate weakness in appellant's argument. SBC's basic contention--that the statute requires the characteristics of "such providers" to be measured at the time they make their requests--is considerably undermined by its concession that a provider such as Brooks can gain the requisite characteristics and foreclose Track B's availability after it makes a request, so long as that occurs at least three months before the date that the BOC makes its application. It would be one thing for appellant to argue that the term "such provider" must refer to a provider with the characteristics described in Track A at the time it makes its request. Under that construction, the statutory requirement that it make its request "3 months before" the BOC makes its application would be an added condition. But by construing the three months clause as an exception to its basic contention, SBC destroys the linguistic coherence of its argument, and instead simply illustrates Track B's ambiguity concerning the time as of which the characteristics of "such provider" are to be assessed.

The Commission's counsel argued that the draftsmen's words were deliberately and specifically intended to lead to the Commission's interpretation. He noted that in Track A, after setting forth the competing provider requirement, that subsection then states "such telephone exchange service may be offered by such competing providers either exclusively ... or predominantly over their own telephone exchange service facilities." 47 U.S.C.A. § 271(c)(1)(A) (emphasis added). But in Track B, the word "competing" is omitted between "such" and "provider." That omission indicated that Congress

did not require that a requesting carrier be a competing provider at the time it made the request. Appellant protests that this argument is not made in the Commission's decision and therefore should be disregarded. Alternatively, it offers an explanation: the omission of "competing" in Track B was necessary to incorporate Track A's requirements that the provider not only be competing but also be facilities-based. In Track A, "such competing provider" is used to identify which providers must provide service over their own facilities. If Track B had said "such competing provider," Track B may have incorporated only Track A's competitive requirements, to the exclusion of the facilities-based requirement.

*9 Appellant is of course correct that we do not normally accept counsel's post hoc rationalizations. This principle, grounded in the reasoning of SEC v. Chenery Corporation, 318 U.S. 80, 63 S.Ct. 454, 87 L.Ed. 626 (1943) and Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971), requires that courts adjudicate agency actions based solely on the grounds relied upon by the agency. Nevertheless, we must determine on our own whether the statute is ambiguous without regard to the FCC's reasoning, see Rettig v. Pension Benefit Guar. Corp., 744 F.2d 133, 141 (D.C.Cir.1984), and we take counsel's point as an added indication of ambiguity, if not support for the Commission's interpretation.

Looking further to the structure of the sections to understand their meaning, we see that Track B provides that a BOC will be deemed not to have received an interconnection request if a State commission determines that a requesting provider negotiated in bad faith or violated the terms of an interconnection agreement by delaying its implementation unreasonably. We think that provision supports the Commission's interpretation. As should be apparent, the BOCs have an incentive to protect their local markets from competition, just as the long- distance carriers have one to prevent the BOCs from entering the interexchange market. The bad faith and unreasonable delay exceptions explicitly contemplate and seek to deal with the problem that SBC identifies--that a provider might request interconnection only to prevent a BOC from using Track B. If SBC's reading of the statute were correct, a BOC, merely by refusing to enter into an interconnection agreement, could easily prevent a competing facilities-based provider from emerging, thus preserving Track B's availability. To be sure, another provision of the statute obliges the BOCs (as well as requesting carriers) to negotiate access and interconnection agreements in good faith. See 47 U.S.C.A. § 251(c)(1). But only the requesting carriers are penalized for negotiating in bad faith in the Track A and B subsections; there is no reciprocal provision that prevents a BOC from using Track B if it in bad faith refused to allow interconnection. Under SBC's reading, the draftsmen would have left an inexplicable loophole in the legislative scheme, one inconsistent with the treatment of requesting providers acting in bad faith.

The Track B exceptions clause poses another difficulty with SBC's interpretation of "such provider." As the Commission pointed out in its order, the very inclusion of the Track B exceptions for a requester's bad faith or unreasonable delay is an indication that Congress thought "there would be a period during which good-faith negotiations are taking place, interconnection agreements are being reached, and the potential competitors are becoming operational by implementing their agreements." Oklahoma Application at ¶ 45. Under SBC's alternative reading, as the Commission observes, this process would have to occur in the first seven months from the date of enactment (assuming the BOC requested in-region interLATA authorization at its first opportunity, on December 8, 1996). Id. at ¶ 53. Even supposing that there were competitors able to provide the facilities-based service Track A contemplates without an access and interconnection agreement, as SBC surmises, those providers "would need interconnection from the BOC prior to becoming operational in order to complete calls to, and receive calls originating from, BOC customers." Id. at ¶ 33. SBC appears to have conceded as much before the Commission, where it argued that providers "would be full competitors in the local market only after they implement interconnection agreements." It seems unlikely that Congress would have seen the need to include the Track B exceptions had it thought that the negotiation and implementation of agreements would take substantially less than seven months, especially given that Congress gave the FCC six months to promulgate regulations implementing the Act's interconnection requirements. See 47 U.S.C.A. § 251(d)(1). If Congress really meant for Track B to be readily available to the BOCs after 10 months, as

SBC contends, it is very difficult to see why the exceptions clause would be included at all.

*10 Appellant and amicus Ameritech Corporation vigorously protest that Track B's device to protect it against the possible bad faith and unreasonable delay of requesting providers is palpably inadequate for two reasons. First, the unreasonable delay clause is worthless unless the BOCs are entitled to insist that a requesting carrier negotiate an implementation schedule as part of its access and interconnection agreement (Ameritech seems to go so far as to argue that when an agreement with a requesting provider does not include an implementation schedule, the requesting provider is necessarily delaying implementation unreasonably). We think the BOCs make a good point; denial of such freedom to the BOCs would undermine the reasonableness of the FCC's interpretation. But the Commission appears to agree. In its order, the Commission said that the "BOCs are free to negotiate implementation schedules for their interconnection agreements." Oklahoma Application at ¶ 37 n. 109. And the FCC noted further that "nothing in the Commission's rules precludes [the BOCs] from negotiating, or states from imposing in arbitration, schedules for the implementation of the terms and conditions by the parties to the agreement." Id. [FN12] SBC also argues that there could be a number of requesting providers who qualify under the Commission's predictive appraisal, and it is unduly burdensome to show that each is acting in bad faith. It should be remembered, however, that the determination of whether requesting carriers are negotiating in bad faith or unreasonable delaying implementation of their agreements is solely in the hands of the State commissions, which traditionally have not been hostile to the BOCs. In any event, this argument does not really go to congressional purpose as revealed by the structure of the statute but rather to the adequacy of the remedy Congress provided.

At bottom, appellant's reading of Track B rests on its contention, drawn from the legislative history, that Congress understood that there were carriers in existence at the time the statute was passed which were actually competing in the local exchange market, or at least that requesting carriers would quickly become facilities-based competitors, before a BOC was first eligible to file under Track B. In support of the first proposition, SBC points to the Conference Report's acknowledgment that Cablevision and New York Telephone had entered into an interconnection agreement. H.R. CONF. REP. NO. 104-458, at 148. As the Commission noted in its order, "it is not obvious from this reference in the legislative history whether Cablevision either actually provided telephone exchange service to both residential and business subscribers on the date of enactment or intended to do so in the future." Oklahoma Application at ¶ 51. Congress did not find that there were actual competitors in the local market. If anything, the legislative history suggests the opposite; Track B "is intended to ensure that a BOC is not effectively prevented from seeking entry into the interLATA services market simply because no facilities-based competitor that meets the criteria set out in [Track A] has sought to enter the market." H.R. CONF. REP. No. 104-458, at 148 (emphasis added).

*11 Nor is there much support for SBC's alternative contention that the Congress expected cable companies and others to quickly fill the role. Although there was mention of the possibility that cable companies could provide meaningful facilities-based competition in the Conference Report, id., we see no indication that the Congress believed that cable companies, or anyone else, had such near term capability. While SBC argues that competition in the local exchange market has emerged in nine states since the Act became law, it can point to only one such provider--Brooks in the State of Michigan--as one that satisfies the facilities-based competitive requirements of Track A. Even if Congress thought facilities-based competition existed or at least would develop quickly in nine states, we doubt that it would have ignored conditions in the remaining states and enacted Track B so as to permit the BOCs to successfully apply to provide interLATA service in those states after December 8, 1996, when the 10 month moratorium that section provides had elapsed.

In truth, neither the statute itself nor the legislative history focuses specifically on the issue this case presents. If the draftsmen had so focused, it seems to us quite unlikely that the language of Track B would have been written as it was. Indeed, it is flatly inconceivable to us that a competent draftsman would have chosen the language of Track B if he or she had consciously intended SBC's interpretation. It would have been all too easy to have said something more than "such provider" to make clear that this referred to a provider who at the time of its

request (or some specific later date) had satisfied the Track A criteria. [FN13] Track B, like Track A, is ambiguous and therefore under Chevron we must give deference to the Commission's interpretation if it is a permissible reading. We have no doubt that it passes that test; it may again be the only reasonable interpretation.

* * * *

There remains appellant's argument that the Commission was arbitrary and capricious in not proceeding to give it more guidance--and certainty--by determining whether, in the event SBC had satisfied Track A or B, it would also have met the balance of the section 271(d) criteria--the so-called competitive checklist, the separate affiliate requirement, and the public interest standard. Although we can well understand SBC's desire for clarity as to the criteria it must meet, we do not see how a reviewing court can fault the Commission for refusing to answer what on this record could be thought a hypothetical question. Inherent in an agency's ability to choose adjudication rather than rulemaking, see SEC v. Chenery Corp., 332 U.S. 194 (1947), is the option to make policy choices in small steps, and only as a case obliges it to. For similar reasons, we reject amicus Ameritech's complaint that the FCC's use of its predictive judgment to determine whether a requesting provider would be a real competitor if it implemented its interconnection agreement is too imprecise a standard. Ameritech and appellant's complaint that it will be too great a burden on the BOCs to show, at the time they apply for interLATA authorization, that none of many requestors could qualify after implementation likewise fails. These contentions boil down to the proposition that the Commission cannot be trusted to fairly implement the statute to draw an acceptable balance between the interests of the BOCs in breaking out into the interexchange market and the interests of the interexchange carriers in delaying that eventuality. The Commission, to be sure, has on occasion engaged in unprincipled decisionmaking when its policy or political inclinations came into conflict with legal restraints, see, e.g., Bechtel v. FCC, 10 F.3d 875 (D.C.Cir.1993); Bechtel v. FCC, 957 F.2d 873 (D.C.Cir.1992); Meredith Corp. v. FCC, 809 F.2d 863 (D.C.Cir.1987), and this has been so even in the telecommunications field. See American Tel. & Tel. Co. v. FCC, 978 F.2d 727 (D.C.Cir.1992). Still, Congress quite clearly gave the Commission the primary responsibility to make delicate judgments under this statute and we may not presume that the Commission will perform that task in bad faith. The Commission's order is affirmed.

FN1. All former Bell System territory has been divided into Local Access and Transport Areas, or "LATAs." See United States v. Western Elec. Co., 569 F.Supp. 990 (D.D.C.1983). InterLATA service refers to what consumers know as long-distance service; intraLATA to what they know as local service (although some intraLATA calls may be "toll" calls, depending upon classifications made by the state regulatory bodies). See generally M. KELLOGG, ET AL., FEDERAL COMMUNICATIONS LAW 227-34 (1992).

FN2. Under the approved reorganization plan, 22 of AT&T's 24 local telephone companies became what are known as the Bell operating companies (BOCs). The BOCs were consolidated into seven (as the result of mergers, now only five, see Alarm Indus. Communications Comm. v. FCC, 131 F.3d 1066, 1067 (D.C.Cir.1997)) regional holding companies (RBOCs), of which SBC is one. The remaining two local companies, in which AT&T owned a minority interest, became separate corporations. See H.R. REP. No. 104-204, pt. 1, at 48-49 (1995).

FN3. The Commission's regulations implementing these provisions were upheld in part in Iowa Utilities Board v. FCC, 120 F.3d 753 (8th Cir.1997), cert. granted, --- U.S. ----, 118 S.Ct. 879, --- L.Ed.2d ---- (1998).

FN4. A particular state is "in-region" if it is one of the states in which the RBOC controls a local bottleneck--in SBC's case, the States of Arkansas, California, Kansas, Missouri, Nevada, Oklahoma, and Texas. See 47 U.S.C.A. § 271(i)(1).

FN5. The Commission must also determine that: (1) the petitioning BOC has complied with the so-called "competitive checklist" set forth at 47 U.S.C.A. § 271(c)(2)(B), designed to ensure that the BOC is providing access and interconnection of a particular sort; (2) the BOC's requested authorization will be carried out by a separate subsidiary and otherwise in accordance with 47 U.S.C.A. § 272; and (3) granting the application would be in the "public interest, convenience, and necessity." See 47 U.S.C.A. § 271(d)(3)(A)-(C).

FN6. That exception to SBC's general interpretation helps SBC to claim that Brooks was a Track A

provider although it had not been providing all of its relied upon service at the time it made its request. According to SBC, although Brooks did not qualify when it submitted its request in March 1996, it began providing service of the kind described in Track A on January 15, 1997. Since SBC had made its application on April 11 of that year, Brooks became "such provider" a few days too late to foreclose Track B.

FN7. Given this conclusion, the FCC thought it "unnecessary to reach the issue of whether Brooks [was] a competing provider of telephone exchange service to business subscribers." Oklahoma Application at ¶ 13.

FN8. The Commission noted that SBC did not dispute that the requests it had received would "lead to the type of telephone exchange service described in [Track A]," preferring to rest upon its interpretation of Track B. Id. at ¶ 60.

FN9. Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 104 S.Ct. 2778, 81 L.Ed.2d 694 (1984).

FN10. We need not consider whether, as SBC argues, free service provided to a customer can be "telephone exchange service" or that a customer receiving such service is a "subscriber" within the meaning of the statute.

FN11. In making this prediction, the FCC must have at least implicitly determined that the four providers would satisfy Track A's facilities-based requirement. Yet, what it means for a carrier to offer service "exclusively ... or predominantly over their own telephone exchange service facilities," 47 U.S.C.A. § 271(c)(1)(A), is nowhere spelled out in the text or by the Commission (it is clear that pure "resale of the BOC's telephone exchange service does not qualify," H.R. CONF. REP. NO. 104-458, at 148). Indeed, the FCC claimed not to have addressed the issue. Oklahoma Application at ¶ 22. We are puzzled by the FCC's reasoning, but no party has raised this point, so the FCC's interpretation of what it means to be predominantly facilities-based remains for another case.

FN12. At oral argument, FCC's counsel stated that the General Counsel's Office agreed with SBC's reading. Counsel for intervenor AT&T, et al. agreed that "the Commission made it very explicit that the BOCs can get implementation schedules and if they are violated [the] BOCs would then qualify for Track B." He also agreed that Congress included this provision to address "their concern that long distance carriers and others would hold back."

FN13. As the issue was so heavily lobbied on both sides with the support of quite competent lawyers, we must assume that this ambiguity was noticed, but for an undisclosed reason, not addressed in the drafting stage.

END OF DOCUMENT

Thomas B. Alexander
General Attorney

BellSouth Telecommunications, Inc.
Legal Department - Suite 4300
675 West Peachtree Street
Atlanta, Georgia 30375-0001
Telephone: 404-335-0750
Facsimile: 404-658-9022

September 4, 1997

VIA FEDERAL EXPRESS

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

RE: BellSouth Telecommunications, Inc., Petition for Approval of a Statement of Generally Available Terms and Conditions Pursuant to Section 252(f) of the Telecommunications Act of 1996 and Notification of Intention to File a Section 271 Petition for In-Region InterLATA Authority; Alabama Public Service Commission Docket No. 25835

Dear Mr. Soriano:

This letter is to acknowledge receipt of the Nondisclosure Protective Agreement signed by Jonathan E. Canis on behalf of Intermedia Communications, Inc. in connection with the above-captioned docket.

I left you a voice mail this morning that I would be sending a copy of the requested documents out to you today. Enclosed are the following documents:

(1) Analysis Conducted for BellSouth - LCSC
(2) Executive Update, Final Report Phase I, Quick Installations
(3) Executive Update, Final Report Phase I, Quick Results
(4) Executive Update, Phase II - Main Installations

Please let me or Ed Rankin know if you have any questions regarding this matter, otherwise, I will assume Intermedia has received the documents it requested from BellSouth in this docket.

With kindest regards I remain,

Yours truly,

Tom Alexander

Thomas B. Alexander

Enclosures

cc: D. Owen Blake
William J. Ellenberg, II
Edward L. Rankin, III

DeWolff, Boberg & Associates, Inc.
Resources to management for improving performance

P.O. Box 21989 • Charleston, South Carolina 29413-1989 • 1-(800)-800-6030

Krista Tillman
Operations Vice President
BellSouth, Interconnection Services
675 West Peachtree Street
Atlanta, GA 30375

September 15, 1997

Re: BellSouth Telecommunications, Inc. LCSC Project

Dear Ms. Tillman:

We concluded the project on August 15, 1997. Through the joint efforts of BellSouth and DeWolff, Boberg and Associates, objectives of the project were met and, indeed, the expected results were exceeded. Our objective was to assist your organization in accelerating the Operational Readiness of the LCSC centers in Atlanta, Georgia and Birmingham, Alabama. During our Analysis in March, four deliverables were identified as key areas of development focus:

- Detailed process flows that are validated, tested and measured.
- Improved training process that delivers qualified candidates.
- Define Key Performance Indicators.
- Enhance and install Management Operating System to effectively manage the Key Performance Indicators.

With Eddie English, Senior Director, Bill Bolt, AVP, and their staffs, these deliverables have been developed and installed. The centers are operational and ready to handle your customer's request for service. The result of the installations made were measured and compared to the analysis period. Tangible improvements have been attained in Service, Productivity and Quality. For example the numbers of LSRs processed within forty-eight hours improved 79%, processing time was reduced by 45%, and overall productivity increased 160%. Other measurements such as first time quality were installed and they will serve as benchmarks for a continued improvement process.

We have enjoyed working with your organization in this successful project, and we are ready to assist you with any other opportunities in the future.

Sincerely yours,
DeWolff, Boberg and Associates

James LaRue
Chief of Operations

EXECUTIVE UPDATE

PHASE III – ADJUST AND FOLLOW UP

Date: August 15, 1997

To: Krista Tillman, Operations Vice President
BellSouth, Interconnection Services

From: James LaRue, Chief of Operations
DeWolff, Boberg and Associates

Project #: 9706

Project: LCSC (Local Carrier Service Center)

- This project involves the LCSCs located in Birmingham, AL and Atlanta, GA, along with the service support groups located at the BellSouth Center Atlanta.

- The project was authorized for a 22-week period - to start March 17, 1997 and to finish August 15, 1997. This is the status report for the end of Phase III of the project.

- The purpose of this project is to accelerate Operational Readiness. Four key deliverables of this project include:

  - Detailed process flows that are validated, tested and measured.
  - Improved Training process that delivers qualified candidates.
  - Define Key Performance Indicators.
  - Enhance and install Management Operating System to effectively manage the Key Performance Indicators.

- The major benefits of this effort are:

  - Improved operational efficiency.
  - Enhanced service & quality to CLECs.
  - Assured Operational Readiness to meet end-of-year CLECs forecasts.
  - Significant ongoing expense reduction.

I. PROJECT PHASES

A. **Quick Results** - Weeks 1 through 7 – Phase I of the project focused on gaining control of the work and establishing the correct management behaviors / disciplines.

B. **Main Installation** - Weeks 8 through 15 – Phase II of the project focused on testing the capability of the group, and tightening the management routines/systems for controlling performance. Increasing capability towards theoretical capacity is inclusive of working at the right quality and providing competitive service at the appropriate cost. Theoretical capacity has been set using managers actual observations calculated to 3.98 LSRs per employee hour (30 per day/employee). Note; the theoretical capacity is based on the current volume mix and level of automation. "The Hopper" is a process that validates the center's capability by having a ready backlog of test orders to supplement the orders received. The concept of introducing test orders was developed and successfully installed and is currently being used to ensure operational capabilities are ahead of the customer requirements.

C. **Adjust and Follow Up** - Weeks 16 through 22 - Phase III of the project focus was to set new targets (raise the bar), incorporate new products, perpetuate performance, and make adjustments as required. Also, to continue to make progress in alleviating fundamental barriers that are not in BellSouth's control. The fundamental barriers are the lack of predictability of work volume input, and the lack of completeness (quality) in the orders received from CLECs. Therefore, the continued use of The Hopper will be needed until better forecast from the CLECs is available. Also, a process was developed to provide feedback to the CLECs about their level of incomplete/incorrect orders. LSRs with incomplete or erroneous information make it necessary to request for clarification thus increasing the processing time and amount of rework..

II. PROJECT UPDATE

We completed the 22nd week of the project on August 15th. Phase III is now complete. All but one of the scheduled items are completed (48 Key items). The remaining 1 activity in Phase III is in progress and expected to be completed within the next two weeks. For more detail, look at project phases in this write-up and in the attached "Summary of Findings and Approach."

There are three areas of concentration:

1. **Operations Organization** – Along with Bill Bolt, Tom Moran, and Bill Thrasher we are developing the LCSC's management to increase the control of the work by having the managers internalize an employee follow-up routine. This will enable the managers to shift work where required, identify operating opportunities, maintain volumes, production numbers, backlog status, current employee skills, quality and service levels, and department capability.

2. **Support Organization** – Along with Eddie English and Diane Cheng we are developing the support organizations to continue to increase synergy with operations by aligning the organizations under singular measurable goals.

3. **Training and Development** - We are developing a new training organization that is responsible for the employee's continuous development process. There are shared responsibilities between the support and operating organizations for the management of the process. However, key employees responsible for continuous development will report directly to the heads of LCSC's operations and support. This enhancement in training is geared to further accelerate the preparation and delivery of training material, developing/installing/testing material covered in training, updating the content of the presentation as enhancements to products are made, and dramatically shortening the total learning cycle for all employees.

II. Operations Organization – Write up of key details:

A. Improved Control of the Work

Phase I, (Quick Results)

- Process Flows were developed to define the proper methods to process work and Backlog Controls were installed to understand and control work volume levels.

Phase II, (Main Installation)

- Process flows were validated and tested to ensure quality and accurate processing. In addition, work instructions were prepared which provide step by step instructions for order processing.
- Backlog Controls were enhanced to measure Service, Quality and Cost. Cost factor is measured as LSRs / Hour. Quality is measured by two methods: Percent First Time Quality and Service Orders pending on the Questionable Activity Report. Service indicators are measured by the gross cycle time of an LSR and the speed in which Service representatives answer the phone. A Director's Report has been installed that summarizes the key operating indices which are reviewed daily by the Center Directors.
- The Order Tracking System has been enhanced to provide greater definition to the types of LSRs being processed and the reasons that LSRs are going to clarification. The Order Tracking System is also providing data on processing duration and clarification duration.

Phase III, (Adjust and Follow up)

- A Procedures Manual was prepared documenting the system procedures utilized in LCSC. This manual defines the responsibilities and procedures for each step in the management of backlogs, quality, service and productivity. Copies of this manual will be provided to each director and the master will be given to the A.V.P.
- Another manual was prepared which contains the processing work instructions and process flows. This manual was given to the Training Coordinator, Carolyn Davis. A copy will be prepared for the LCSC Performance Manager, Judy Norris. Judy has been trained in the development of process flows and will be responsible for the maintenance of this manual.
- A CLEC evaluation was developed that tracks the percentage of clarifications, cancellations and duplications received from each CLEC. This data is pulled weekly from the LON order tracking system and presented to the Customer Support Managers. They will be responsible for working with the CLEC to correct these issues.
- Compliance Audits were created to follow up on the compliance to and utilization of LCSC management disciplines.

B. Management Behavior / Disciplines

Phase I, (Quick Results)

- Management Roles and Responsibilities were defined and work area layouts were designed.

Phase II, (Main Installation)

- The percent of time that the Managers spend with the team members increased from 12%, as measured during the Analysis; to 30% at the end of Phase I, to about 65%. This increased supervision improved first time quality and service demonstrated by a reduction in escalations by as much as ½ at the AVP level.
- A Continuous Development Process was developed to highlight and address employee training and/or skill deficiencies.
- New floor layouts were implemented into the 14th floor, in Birmingham. In Atlanta, a new work area layout was implemented for some employees, the remainder are awaiting a decision about a possible relocation of the operation.

Phase III, (Adjust and Follow up)

- The managers continue to utilize about 65% of their time supervising their people. This is an appropriate percentage of supervision.
- A work simulation of basic single line resale, (disconnect, new connect, switch "AS IS", and switch with changes) was administered to all LCSC personnel. The Hopper was utilized to perform this work simulation. Service representatives that performed below the expectation of error free processing received additional training and/or coaching.
- A Continuous Development Process was developed utilizing the Hopper as a work simulator. The work simulation enables management to evaluate two aspects of the service representative capabilities, quality and efficiency. Deficiencies in either of these areas would initiate a Performance Improvement Plan. This is the item that is still in process. Each service representative needs to go through the work simulation process for the types of orders that their team process. Based upon that work simulation Performance Improvement Plans should be initiated.
- Teams were initiated. Managers received training on the characteristics that constitute a team vs. a group. Each Team is installing communication boards which include the definition of the teams objectives with respect to quality service and productivity. Each day the Team Leader, (the manager) posts the actual performance for the previous day and has a brief team meeting.

C. Quality, Service and Labor Utilization

In Phase I, (Quick Results)

- The Hopper was developed, preliminary work estimates were developed and an approach to measure quality and service was established.

Phase II, (Main Installation)

- The Hopper was installed and is being used as a work simulation to evaluate Service Representative performance (Quality and Productivity) capabilities, and as a supplement to the workload to enable the managers to meet performance expectations.
- Work to Time Relationships (RE's) were established for each activity that the LCSC currently performs.
- Quality measures were established to measure each Service Representative.
- Service measures were established.
- Productivity improved 74% since first two weeks of Project, as measured in LSRs processed per hour.
- When measured by SOCS orders generated, the Productivity improvement was 94%.

Phase III, (Adjust and Follow up)

- The programming for the First Time Quality (FTQ) reporting is complete. Ron Moore will train managers this week and utilization by the managers is scheduled next week.
- Processing duration time has been reduced from 56.9 hours in May to 31.5 hours the first two weeks of August. This represents a 45% reduction. (see graph of LCSC Duration Time).
- The percentage of LSR's processed within 48 hours improved 58%. In May the percentage was 50%, the first two weeks of August the percentage is 79%. (see graph of LSR's FOC'D < 48 HOURS).
- Productivity has improved an additional 86% since completion of Phase II. Total productivity improvement is 160%, as measured in LSR's per hour. (see three part graph LSR's Per Hour).
- Productivity improved 140% when measured by SOC's orders per hour. (see three part graph SOC'S Per Hour).

IV Support Organization

A. Force Sizing / Forecast Feedback Loop

In Phase I, (Quick Results)

- An activity based force-sizing model was developed.

Phase II, (Main Installation)

- Defined and began tracking key forecast indicators by Resale, UNE and Complex.
- Changes made to Order Tracking System to provide more definition to types of LSRs being processed.

Phase III, (Adjust and Follow up)

- Developed Force Sizing model that incorporates performance to R.E.'s (reasonable expectations).

B. Project Schedule

In Phase I, (Quick Results)

- Defined what a Project Schedule should be, developed format and defined Key events.

Phase II, (Main Installation)

- Project Schedule developed with appropriate level of detailed activities to focus the actions of the support organization and better insure they are working on the appropriate items.
- Structured weekly staff meetings were installed with status reports. It also gives them the ability to get assistance on items that may be in danger of missing scheduled due dates.

Phase III, (Adjust and Follow up)

- Weekly staff meetings to assess project status have continued.

C. Capabilities

In Phase I, (Quick Results)

- The Hopper concept was developed to enable artificial work to be input in order to test capabilities.

Phase II, (Main Installation)

- The Hopper was installed into the LCSC operations and has provided the ability to not only tests the departmental theoretical capabilities but also the individual Service Representative capabilities.
- Staffing and demonstrated performance placed the LCSC capabilities at 1590 LSRs per day considering training, vacations and absenteeism.
- LSR volume was at 742 per day (June Average), of which 10% were Hopper orders.

Phase III, (Adjust and Follow up)

- Current demonstrated capabilities stand at 1625 LSR's per day considering 23% for training, vacations and absenteeism (see Capacity / Capabilities Chart).
- LSR volume is 1195 per day the first two weeks of August. 17% of this volume is Hopper orders. The LCSC should be capable of absorbing 42% more volume with no impact on service or quality. The additional staffing of 50 service representatives would increase this capability to about 100%.

V. Training and Development

A. Selection & Screening Process

Phase I, (Quick Results)

- Definition of skill requirements was defined and appropriate testing determined and installed to screen for these entry-level skills.

Phase II, (Main Installation)

- The expectations of a functional Service Representative were defined. A site visit for all new LCSC candidates will include a review of performance expectations (Quality and Efficiency).

Phase III, (Adjust and Follow up)

- On site visits will be hosted by the Performance Manager, Judy Norris.

B. Content of course material and testing

Phase I, (Quick Results)

- Developed comprehension tests to validate learning process and instituted some changes in the delivery and content of course material.

Phase II, (Main Installation)

- Developed work simulation evaluation using the Hopper to appraise Service Representative's capabilities (Quality and Efficiency).
- Created Modular Training agenda for Single Line Resale (DOE) that will reduce training time from six weeks to two weeks. For a few who do not pass the work simulation, there will be a follow up instruction for three days.
- All the modules have comprehension testing. The comprehension testing will be administered prior to the training and after the module has been delivered.
- LEO training module developed and delivered to increase capacity of LCSC to handle AT&T volume received through LEO.

Phase III, (Adjust and Follow up)

- Developed and delivered LENS training to 14 part time temps in Atlanta. This approach to inputting LSR's to LEO that are received for manual processing drastically reduces the training time to 8 hours and provides an excellent reserve capability.
- Developed training modules for Resale
    - * Single Line DOE
    - * Single Line SONGS
    - * Multiline DOE & SONGS
    - * Belinda Miller, (trainer) used the SONGS training materials in her most recent training class.
- Training modules for Unbundled Network Elements and Complex Services still require development.

II. Operations Organization – Write up of key details:

A. Improved Control of the Work

Phase I, (Quick Results)

- Process Flows were developed to define the proper methods to process work and Backlog Controls were installed to understand and control work volume levels.

Phase II, (Main Installation)

- Process flows were validated and tested to ensure quality and accurate processing. In addition, work instructions were prepared which provide step by step instructions for order processing.
- Backlog Controls were enhanced to measure Service, Quality and Cost. Cost factor is measured as LSRs / Hour. Quality is measured by two methods: Percent First Time Quality and Service Orders pending on the Questionable Activity Report. Service indicators are measured by the gross cycle time of an LSR and the speed in which Service representatives answer the phone. A Director's Report has been installed that summarizes the key operating indices which are reviewed daily by the Center Directors.
- The Order Tracking System has been enhanced to provide greater definition to the types of LSRs being processed and the reasons that LSRs are going to clarification. The Order Tracking System is also providing data on processing duration and clarification duration.

Phase III, (Adjust and Follow up)

- A Procedures Manual was prepared documenting the system procedures utilized in LCSC. This manual defines the responsibilities and procedures for each step in the management of backlogs, quality, service and productivity. Copies of this manual will be provided to each director and the master will be given to the A.V.P.
- Another manual was prepared which contains the processing work instructions and process flows. This manual was given to the Training Coordinator, Carolyn Davis. A copy will be prepared for the LCSC Performance Manager, Judy Norris. Judy has been trained in the development of process flows and will be responsible for the maintenance of this manual.
- A CLEC evaluation was developed that tracks the percentage of clarifications, cancellations and duplications received from each CLEC. This data is pulled weekly from the LON order tracking system and presented to the Customer Support Managers. They will be responsible for working with the CLEC to correct these issues.
- Compliance Audits were created to follow up on the compliance to and utilization of LCSC management disciplines.

B. Management Behavior / Disciplines

Phase I, (Quick Results)

- Management Roles and Responsibilities were defined and work area layouts were designed.

Phase II, (Main Installation)

- The percent of time that the Managers spend with the team members increased from 12%, as measured during the Analysis; to 30% at the end of Phase I, to about 65%. This increased supervision improved first time quality and service demonstrated by a reduction in escalations by as much as ½ at the AVP level.
- A Continuous Development Process was developed to highlight and address employee training and/or skill deficiencies.
- New floor layouts were implemented into the 14th floor, in Birmingham. In Atlanta, a new work area layout was implemented for some employees, the remainder are awaiting a decision about a possible relocation of the operation.

Phase III, (Adjust and Follow up)

- The managers continue to utilize about 65% of their time supervising their people. This is an appropriate percentage of supervision.
- A work simulation of basic single line resale, (disconnect, new connect, switch "AS IS", and switch with changes) was administered to all LCSC personnel. The Hopper was utilized to perform this work simulation. Service representatives that performed below the expectation of error free processing received additional training and/or coaching.
- A Continuous Development Process was developed utilizing the Hopper as a work simulator. The work simulation enables management to evaluate two aspects of the service representative capabilities, quality and efficiency. Deficiencies in either of these areas would initiate a Performance Improvement Plan. <u>This is the item that is still in process.</u> Each service representative needs to go through the work simulation process for the types of orders that their team process. Based upon that work simulation Performance Improvement Plans should be initiated.
- Teams were initiated. Managers received training on the characteristics that constitute a team vs. a group. Each Team is installing communication boards which include the definition of the teams objectives with respect to quality service and productivity. Each day the Team Leader, (the manager) posts the actual performance for the previous day and has a brief team meeting.

C. Quality, Service and Labor Utilization

In Phase I, (Quick Results)

- The Hopper was developed, preliminary work estimates were developed and an approach to measure quality and service was established.

Phase II, (Main Installation)

- The Hopper was installed and is being used as a work simulation to evaluate Service Representative performance (Quality and Productivity) capabilities, and as a supplement to the workload to enable the managers to meet performance expectations.
- Work to Time Relationships (RE's) were established for each activity that the LCSC currently performs.
- Quality measures were established to measure each Service Representative.
- Service measures were established.
- Productivity improved 74% since first two weeks of Project, as measured in LSRs processed per hour.
- When measured by SOCS orders generated, the Productivity improvement was 94%.

Phase III, (Adjust and Follow up)

- The programming for the First Time Quality (FTQ) reporting is complete. Ron Moore will train managers this week and utilization by the managers is scheduled next week.
- Processing duration time has been reduced from 56.9 hours in May to 31.5 hours the first two weeks of August. This represents a 45% reduction. (see graph of LCSC Duration Time).
- The percentage of LSR's processed within 48 hours improved 58%. In May the percentage was 50%, the first two weeks of August the percentage is 79%. (see graph of LSR's FOC'D < 48 HOURS).
- Productivity has improved an additional 86% since completion of Phase II. Total productivity improvement is 160%, as measured in LSR's per hour. (see three part graph LSR's Per Hour).
- Productivity improved 140% when measured by SOC's orders per hour. (see three part graph SOC'S Per Hour).

IV Support Organization

A. Force Sizing / Forecast Feedback Loop

In Phase I, (Quick Results)

- An activity based force-sizing model was developed.

Phase II, (Main Installation)

- Defined and began tracking key forecast indicators by Resale, UNE and Complex.
- Changes made to Order Tracking System to provide more definition to types of LSRs being processed.

Phase III, (Adjust and Follow up)

- Developed Force Sizing model that incorporates performance to R.E.'s (reasonable expectations).

B. Project Schedule

In Phase I, (Quick Results)

- Defined what a Project Schedule should be, developed format and defined Key events.

Phase II, (Main Installation)

- Project Schedule developed with appropriate level of detailed activities to focus the actions of the support organization and better insure they are working on the appropriate items.
- Structured weekly staff meetings were installed with status reports. It also gives them the ability to get assistance on items that may be in danger of missing scheduled due dates.

Phase III, (Adjust and Follow up)

- Weekly staff meetings to assess project status have continued.

C. Capabilities

In Phase I, (Quick Results)

- The Hopper concept was developed to enable artificial work to be input in order to test capabilities.

Phase II, (Main Installation)

- The Hopper was installed into the LCSC operations and has provided the ability to not only tests the departmental theoretical capabilities but also the individual Service Representative capabilities.
- Staffing and demonstrated performance placed the LCSC capabilities at 1590 LSRs per day considering training, vacations and absenteeism.
- LSR volume was at 742 per day (June Average), of which 10% were Hopper orders.

Phase III, (Adjust and Follow up)

- Current demonstrated capabilities stand at 1625 LSR's per day considering 23% for training, vacations and absenteeism (see Capacity / Capabilities Chart).
- LSR volume is 1195 per day the first two weeks of August. 17% of this volume is Hopper orders. The LCSC should be capable of absorbing 42% more volume with no impact on service or quality. The additional staffing of 50 service representatives would increase this capability to about 100%.

V. Training and Development

A. Selection & Screening Process

Phase I, (Quick Results)

- Definition of skill requirements was defined and appropriate testing determined and installed to screen for these entry-level skills.

Phase II, (Main Installation)

- The expectations of a functional Service Representative were defined. A site visit for all new LCSC candidates will include a review of performance expectations (Quality and Efficiency).

Phase III, (Adjust and Follow up)

- On site visits will be hosted by the Performance Manager, Judy Norris.

B. Content of course material and testing

Phase I, (Quick Results)

- Developed comprehension tests to validate learning process and instituted some changes in the delivery and content of course material.

Phase II, (Main Installation)

- Developed work simulation evaluation using the Hopper to appraise Service Representative's capabilities (Quality and Efficiency).
- Created Modular Training agenda for Single Line Resale (DOE) that will reduce training time from six weeks to two weeks. For a few who do not pass the work simulation, there will be a follow up instruction for three days.
- All the modules have comprehension testing. The comprehension testing will be administered prior to the training and after the module has been delivered.
- LEO training module developed and delivered to increase capacity of LCSC to handle AT&T volume received through LEO.

Phase III, (Adjust and Follow up)

- Developed and delivered LENS training to 14 part time temps in Atlanta. This approach to inputting LSR's to LEO that are received for manual processing drastically reduces the training time to 8 hours and provides an excellent reserve capability.
- Developed training modules for Resale
    - * Single Line DOE
    - * Single Line SONGS
    - * Multiline DOE & SONGS
    - * Belinda Miller, (trainer) used the SONGS training materials in her most recent training class.
- Training modules for Unbundled Network Elements and Complex Services still require development.

BELLSOUTH - LCSC
ATLANTA, GA

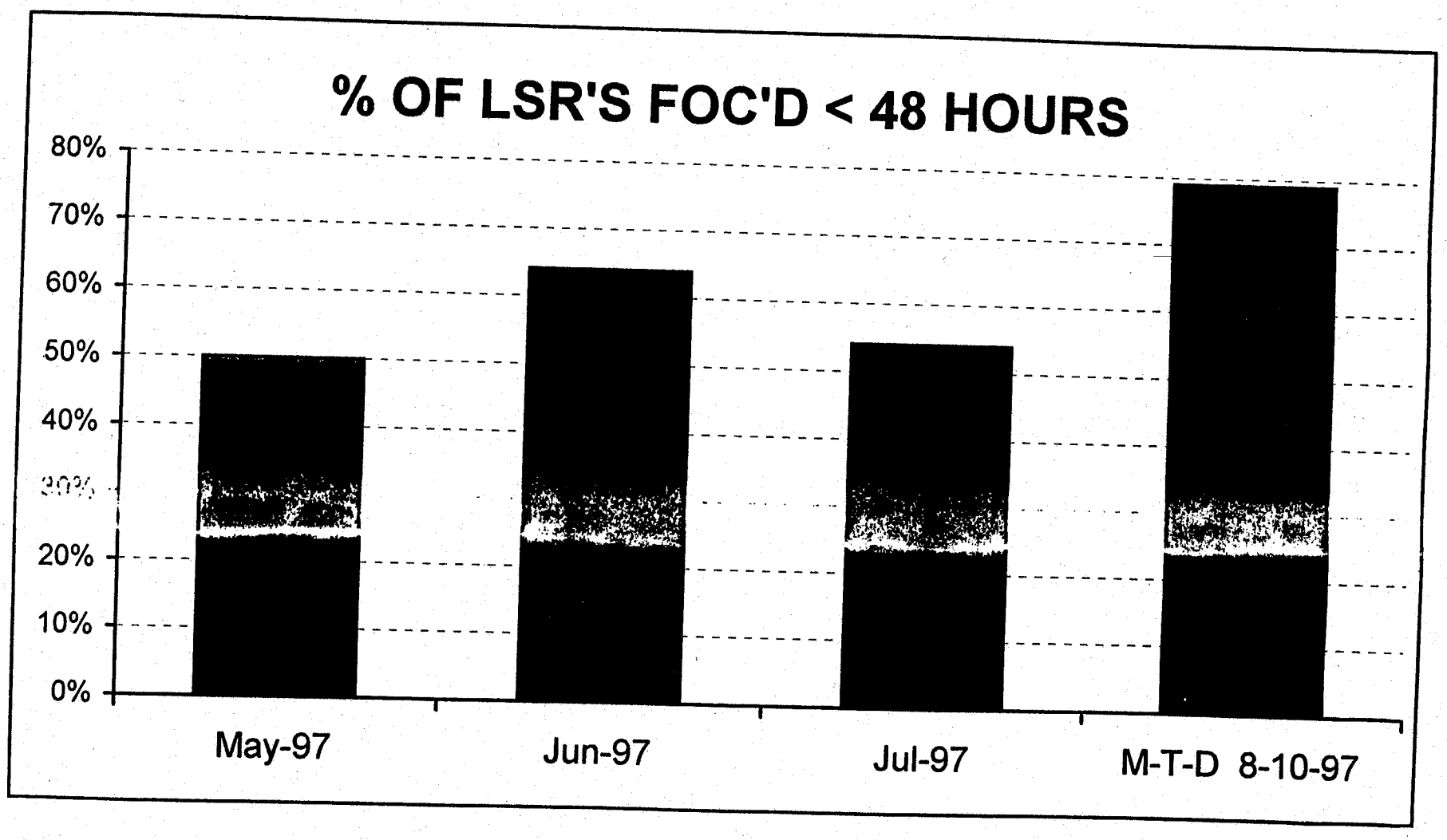
SUMMARY OF FINDINGS AND APPROACH

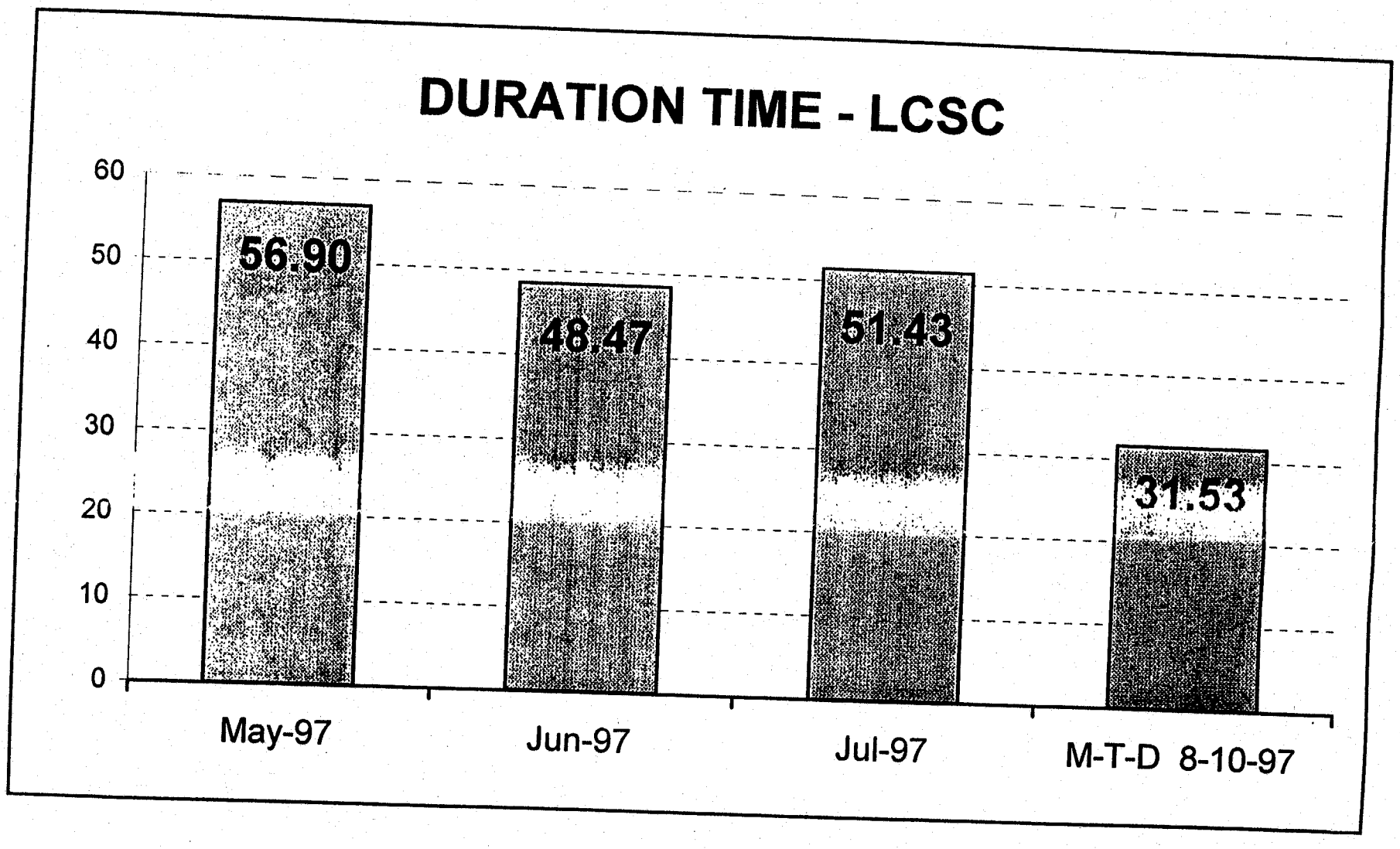
STATUS GREEN - COMPLETED
- IN PROGRESS
RED - IN PROGRESS

Date Updated: August 15, 1997 Week 22 of 22

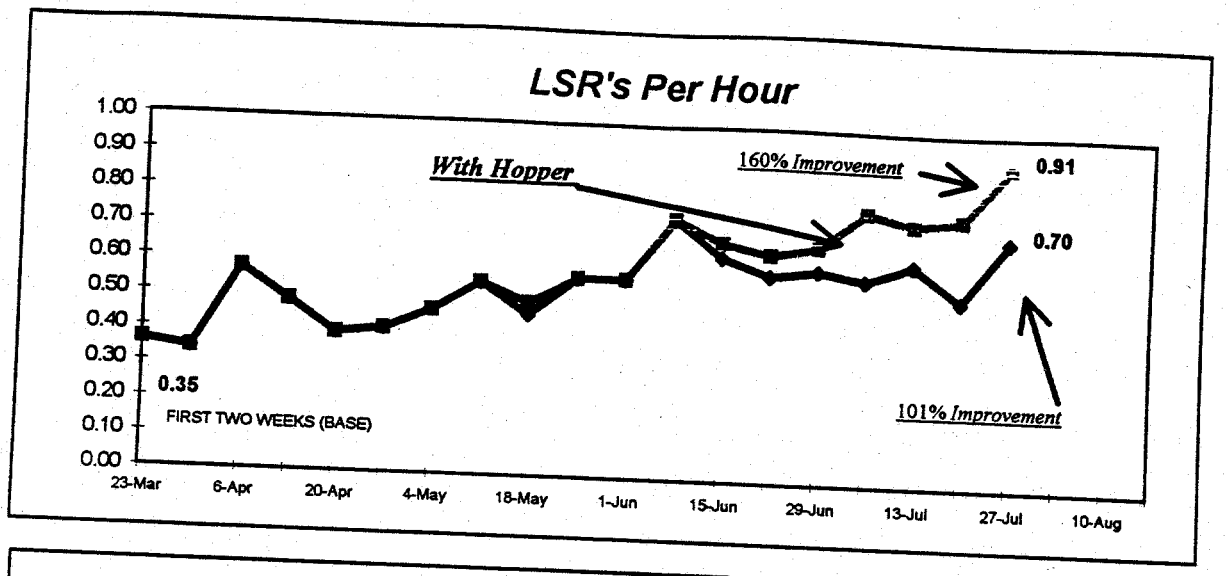
AREAS	FINDINGS	PROPOSALS	PHASES FOR DELIVERABLES: QUICK RESULTS PHASE I	MAIN INSTALLATION PHASE II	ADJUST & FOLLOW-UP PHASE III
MGMT. OPERATING SYSTEM (MOS)	ELEMENTS EXITS BUT REQUIRES UPGRADES	DESIGN AND INSTALL ELEMENTS			
WORK PROCESS	NEEDS BETTER DEFINITION, AND SIMPLER NEEDS TO INTERNALIZE UP-GRADES	INSTALL PREDICTABILITY OF EXECUTION AND KNOW HOW TO REPEAT PROCESS			
EMPLOYEE SKILLS	INCOMPLETE TRAINING - DELIVERY & CONTENT LACKS ON THE FLOOR SUPPORT AND EVALUATION	FILL THE GAPS IN TRAINING DELIVER FUNCTIONAL REPS			
MANAGEMENT BEHAVIOR	LACKS STRUCTURED PARTICIPATION	DEVELOP BEHAVIOR MODEL EVALUATE AND INSTALL			INSTALL CONTINUIOUS DEVELOPMENT PROGRAM
MANAGEMENT ATTITUDES	PASSIVE IN ASSIGNMENT / FOLLOW UP	PROACTIVE ENGAGEMENT			
QUALITY / SERVICE	NO EFFECTIVE MEASURES	DEVELOP TESTING PROCESS DEVELOP REPORTS			
LABOR UTILIZATION	DOCUMENTED 15 - 39% LABOR WASTED	REDUCE LOST TIME THROUGH TRAINING AND SUPERVISORY INTERVENTION			
GOALS AND STRATEGIES	LACKS SYNERGY AND INTEGRATED PLAN	DEFINE THE OBJECTIVES AND MEASURES IMPROVE SYNERGY-SUPPORT & OPERATIONS			

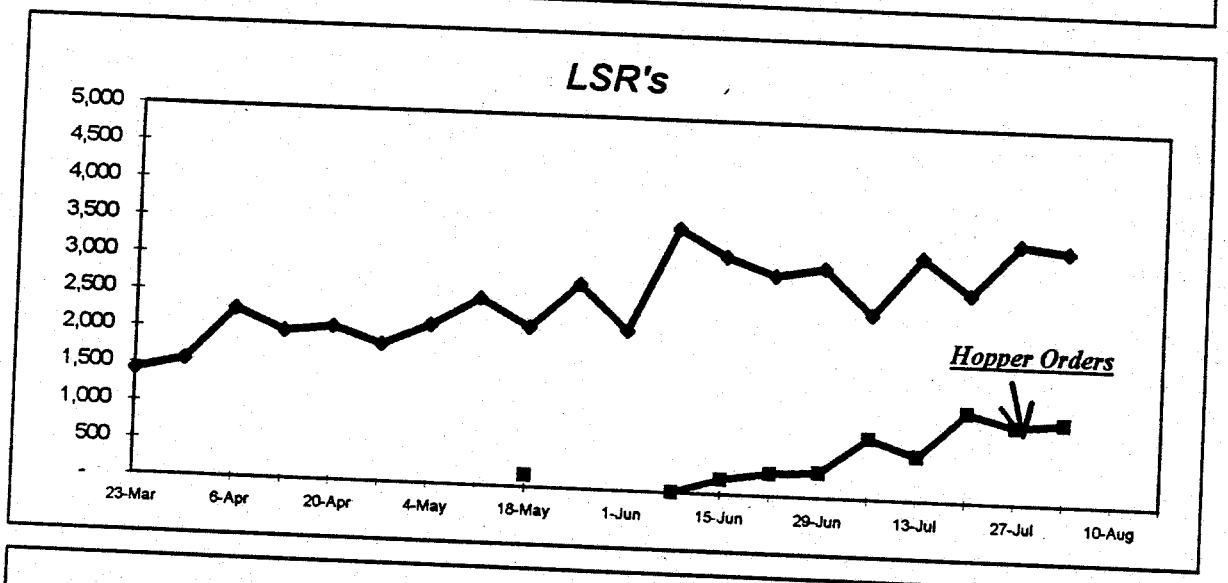
SUMMARY			
COMPLETE	100%	100%	94%

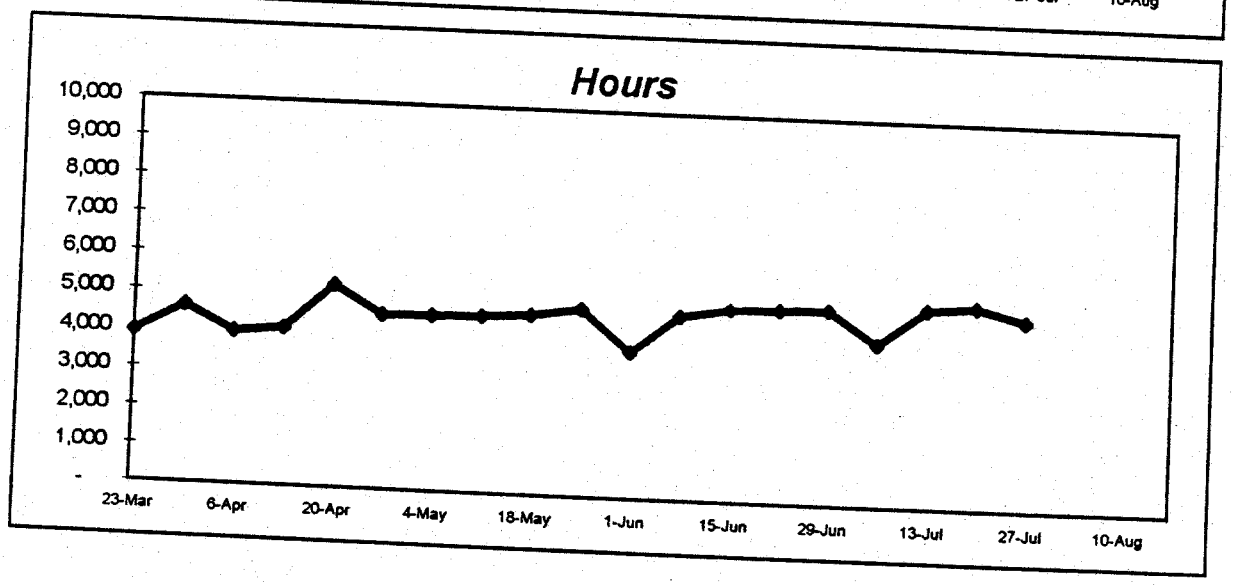

% OF LSR'S FOC'D < 48 HOURS
80%
70%
60%
50%
40%
30%
20%
10%
0%
May-97
Jun-97
Jul-97
M-T-D 8-10-97


DURATION TIME - LCSC
60
50
40
30
20
10
0
56.90
48.47
51.43
31.53
May-97
Jun-97
Jul-97
M-T-D 8-10-97

BellSouth
LCSC

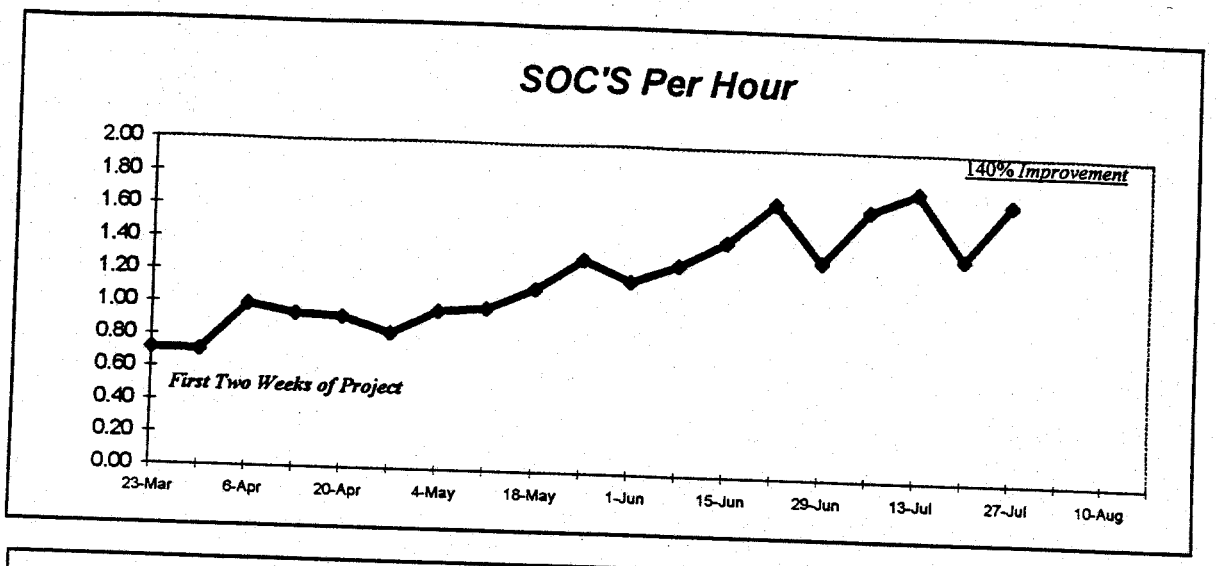


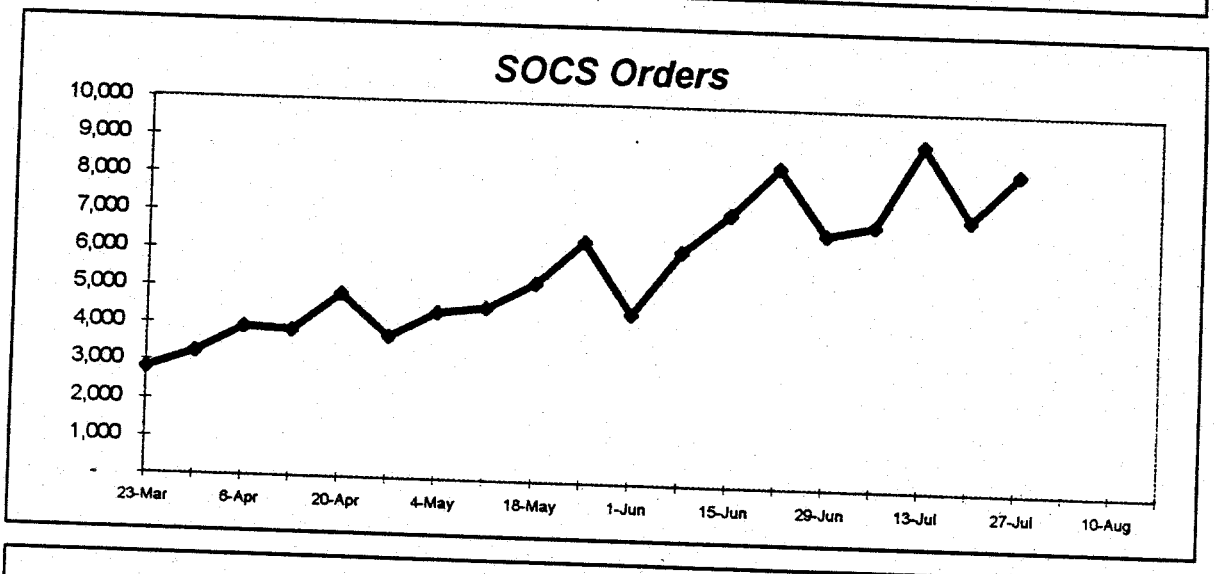


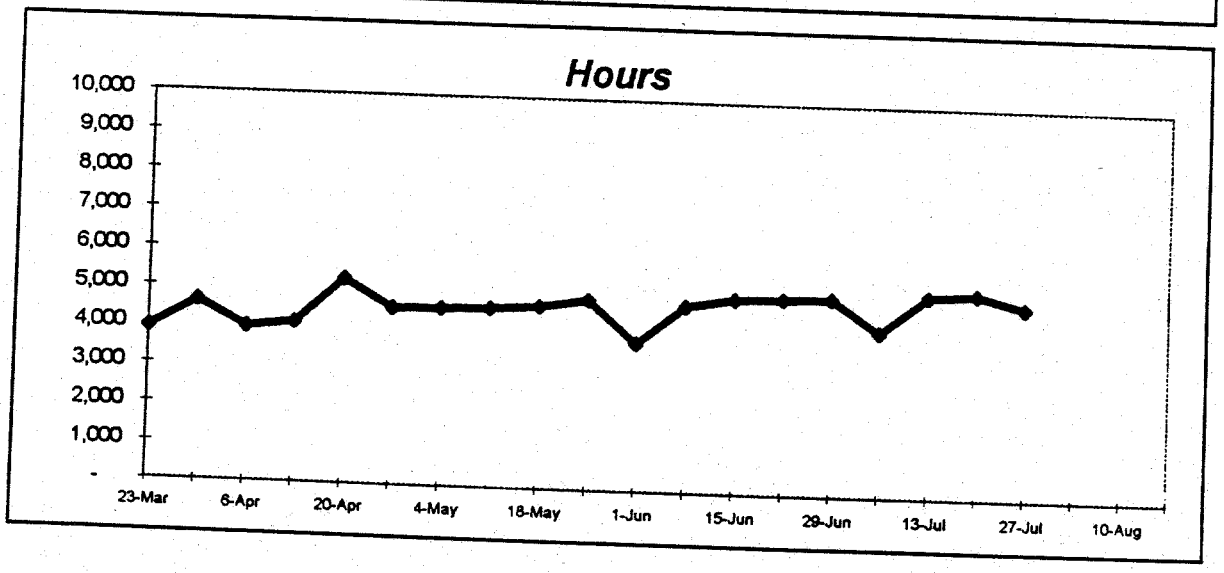


Source:
LSR's - LON Report from Ron Moore
Hours - MTR Report from James Saville

BellSouth
LCSC







Source:
LSR's - LON Report from Ron Moore
Hours - MTR Report from James Saville

BELLSOUTH - LCSC

CAPACITY / CAPABILITY

ITEM	BIRMINGHAM	ATLANTA	TOTAL LCSC
SERVICE REPS	79	63	142
HOURS / DAY	7.5	7.5	7.5
HOURS AVAILABLE	592.5	472.5	1065
%TRAIN,VAC ABS	23%	23%	23%
NET HOURS AVAIL	456	364	820
LSR'S/HR CAPACITY	3.46	4.80	4.05
LSR'S/HR DEMO	1.84	2.16	1.98
DAILY VOL CAPACITY	1578	1747	3325
DAILY VOL CAPABILITY	839	786	1625
PERCENT OF CAPACITY	53%	45%	49%

ANALYSIS CONDUCTED FOR
BELLSOUTH - LCSC
ATLANTA, GA - BIRMINGHAM, AL
MARCH 3, 1997 - MARCH 13, 1997

TABLE OF CONTENTS

I. LETTER OF ENGAGEMENT

II. FINANCIAL HIGHLIGHTS

III. SUMMARY OF ANALYSIS FINDINGS

IV. SUMMARY OF WHAT WE PROPOSE

DEWOLFF, BOBERG & ASSOCIATES, INC.
Resources to management for improving performance

P.O. Box 21989 • Charleston, South Carolina 29413-1989 • (800) 800-6030

Mr. Edward A. English
Senior Director - Interconnection Services
BellSouth Telecommunications
675 West Peachtree Street
Atlanta, GA 30375

March 13, 1997

Dear Mr. English:

Thank you for the opportunity you provided us to analyze the BellSouth LCSC operations in Atlanta, GA and Birmingham, AL. Our objective was to determine whether we could make a worthwhile application of our systems and training installations, designed to reduce costs while improving manager, supervisor and employee effectiveness.

We realize that many of the thoughts we express may have been previously considered by your management group. Your ideas, combined with ours and developed through full participation during the course of the program, will assure maximum results. We consider our ability to install our proposals, achieving predictable and measurable results, to be the most important factor in our usefulness to you.

In our presentations, we have not taken time praising the many good points we have seen, because only by facing the weaknesses, and correcting them, can valuable results be obtained. Our program will consist of working with your people to correct the weaknesses we have outlined. Naturally, our preliminary analysis can only outline areas inviting more detailed study in the application of the principles we propose.

Although we feel there will be enormous productivity and service level gains from the implementation of our management operating system and employee skills training programs, we are not able to put a financial value on them because of the lack of a historical base to measure against. We will, however, measure and track the actual levels of productivity and service to ensure that acceptable levels are achieved.

Please note that we are not attempting to put a financial value on the many collateral benefits that will come about as a result of this program, such as stronger teamwork, quality and service awareness, and ongoing improvements made by your people using this process.

Mr. English
March 13, 1997

The total cost for the development, training and installation of this program is Seven Hundred Ninety Two Thousand Dollars ($792,000). We anticipate spending 22 consecutive calendar weeks on your premises, invoicing you Thirty Six Thousand Dollars ($36,000) per week. All invoices are payable weekly as invoiced. You may discontinue this program at any point and will only be charged for time spent to date.

In the eighteenth week of our program, we will be prepared to discuss the need for transition with our Continuous Improvement Services Group. The purpose of this service is to provide a limited, on-going, follow-up with your people to ensure that the performance improvements are maximized and do not deteriorate over time. The extent and cost for this optional service will be determined at this time.

So that we may use staff members already familiar with your operations and this proposal, we would appreciate your authorization to proceed today. If we are able to start this program on Monday, March 17, 1997, we would plan on using the chief and selected staff from our analysis to provide continuity. We look forward to working with you and your people, and are convinced you will find it a rewarding experience.

Sincerely yours,

DEWOLFF, BOBERG & ASSOCIATES, INC.

Paul J. C. Buchert

James LaRue

002770

SUMMARY OF ANALYSIS FINDINGS

OVERVIEW

This analysis was conducted for the LCSC operations in both Atlanta and Birmingham from March 3, 1997 to March 13, 1997. The purpose was to identify and quantify any opportunities that might exist to improve the operations as your volume and manpower ramps up to meet the forecasted volume. Our purpose was also to develop an approach that addressed these opportunities which was consistent with your vision for the LCSC operation at BellSouth.

We worked with managers and supervisors in their area. The receptivity of your management group and employees was excellent as they shared with us their process flow problems, training deficiencies and frustrations. We conducted behavioral analyses to determine how supervisors utilized their time, supported their people, and we identified the consequences of their management style. We performed a diagnostic assessment of your management organization to determine their attitudes concerning the roles and responsibilities of effective supervision. Our evaluation of your management operating systems was conducted by first determining the effectiveness of the system elements that exist, and second, by evaluating how well they are being utilized by management to crew the operation and resolve operating problems. We determined the current level of labor productivity and the root causes of many problems which diminish productivity. Employee skills analyses were conducted to identify training needs, the degree of flexibility, and management participation in organizational development. We also studied your employee training process by reviewing the systems and training techniques currently in use. We conducted detailed process mapping of two major products, on unbundled and a complicated resale order. This analysis of sample work processes defined the predictability of process compliance, procedures, practices, and the impact these have on productivity, service lead times and quality.

1. We conducted behavioral studies with all of your supervisors, spending a day working with them in their department. We concluded that supervisors spend very little time guiding, coaching, or training their people. They also have very limited control over the work flows and processes. We determined that most of their contact with their people was initiated by the employees and was generally spent in a reactive "fire fighting" mode. We did not observe any supervisor spending time training their employees or recognizing a job well done. We noted a direct correlation between the passive behaviors of the supervisors and the attitudes which we determined through our diagnostic questionnaire. The majority of their time is spent on administrative activities, from which we saw little added value, or was idle / available.

2. Our diagnostic assessment indicates that your supervisory level has a poor understanding of the concepts of proactive supervision, organizational development, and systems utilization. We believe this passive management style is a result of a lack of an effective management operating system in LCSC which would support their efforts to resolve operating problems and address training needs. We also noted the absence of management training programs which provide them with the skill sets necessary to function effectively in a start up operation such as LCSC.

3. Your LCSC management systems contain fragments of most of the basic elements required to control an order entry operation. However, although many of the elements exist, they will require significant upgrades to make them effective management tools. Those elements which could be effective such as assignment controls are not being used by management to identify root causes of productivity, quality and service problems. There are significant opportunities to improve the utilization of your systems by training management on how to identify process breakdowns, causes of rework, training needs and to provide employee feedback.

4. The productivity studies which were conducted with your service representatives indicate that there was a significant opportunity to improve your effective use of labor. This level of ineffective utilization is a result of unclear expectations, employee skills deficiencies, the lack of process documentation and control over the work flow. These problems are unnecessarily inflating your operating cost and limiting your ability to deliver a consistently high level of customer service. Excessive errors and rework are lowering the quality of your service due to missed dates and excessive lead times. The root causes of these problems continue without supervision identifying the problems or developing corrective action strategies.

5. Your employees are not effectively trained to maximize their skills and productivity. These training deficiencies are having a negative impact on both service and quality. We noted that employees must rely upon fellow employees to resolve training needs without the direction nor participation of the supervisors. This is limiting productivity as employees are constantly interrupting fellow workers to get help and direction. Many of your key jobs have insufficiently trained people to assure that employees can be assigned to meet volume requirements. This situation is especially acute as you look forward toward your anticipated ramp up of operations at the LCSC. The lack of supervisory participation is reflected in their poor attitude toward the subscale of employee development as noted in our diagnostics.

6. Our evaluation of your basic work processes in both resale and unbundled, indicated they lack process documentation, compliance, and the accuracy to provide a predictable, high quality output. We repeatedly observed employee skills deficiency and errors which is negatively impacting both productivity and quality. Your current level of quality is unnecessarily low. Due to numerous operating problems, training deficiencies and process non-compliance, this level of quality is inflating your operating costs per order, and contributing to delays in customer service. The current level of errors is alarming due to the low volume level and the fact that current employees whom we studied have been on their current jobs from four months to a year. These quality problems and errors are recurring several times per day without supervisory awareness or corrective action.

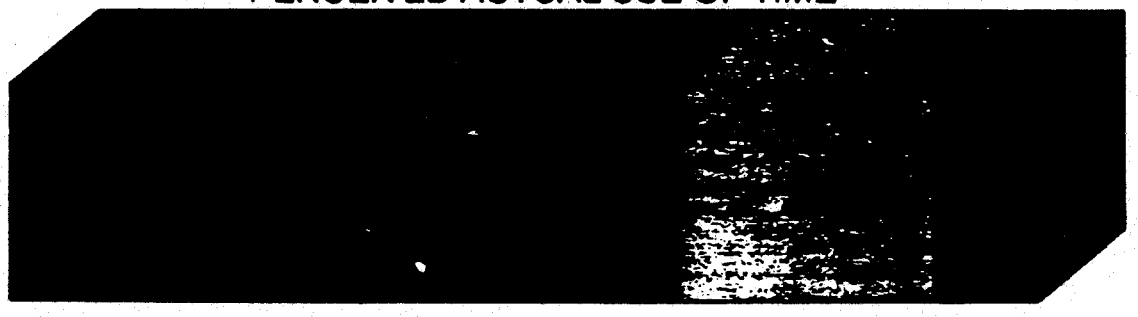
BELLSOUTH LCSC

ATLANTA - BIRMINGHAM
SUPERVISORY USE OF TIME

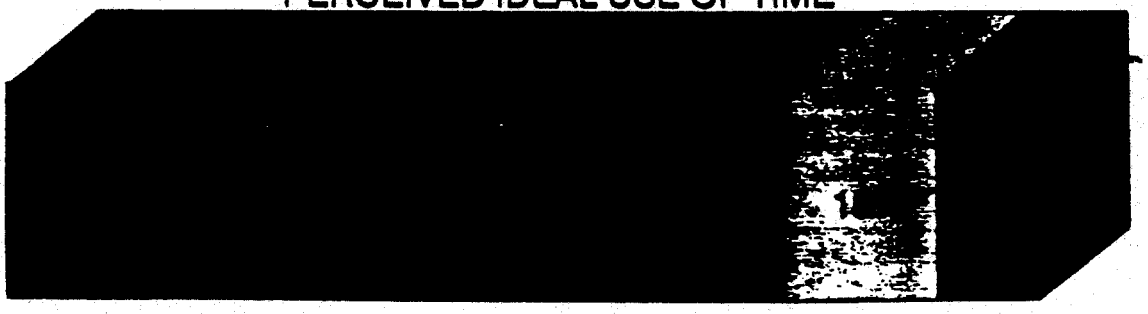
COLOR	DESCRIPTION
	SUPERVISING
	PROBLEM SOLVING
	ADMINISTRATIVE
	EMPLOYEE WORK
	IDLE / AVAILABLE

ACTUAL USE OF TIME

PERCEIVED ACTUAL USE OF TIME



PERCEIVED IDEAL USE OF TIME



SPECIFIC POINTS

1 Supervisors do not use their time to direct, coach or train their people. Their basic management style is passive or reactionary and they tend to deal only with the symptoms of recurring problems. When an employee does bring problems to their attention, supervisors often simply take the problem order upon themselves to solve and do not train. Our observation of supervisory behavior identified the following results.

- Only 12% of their available time is spent in any type of supervisory interaction with their people. The range of time spent in supervisory interaction with their people was from 2 to 22%. The time that we did observe supervising was typically a reassignment of one persons' work to a fellow employee, due to training deficiencies, given to an employee without communicating any performance expectations. We did not see any supervisor actively train an employee, this corresponds to their attitude that they did not feel responsible for the development of their people. We saw no evidence of any supervisors attempting to reinforce/acknowledge high performance or motivating their people. This passive management style often results in the employees lacking direction and clear expectations, resulting in poor productivity, quality, and excessive lead-times which negatively impacts your levels of service.

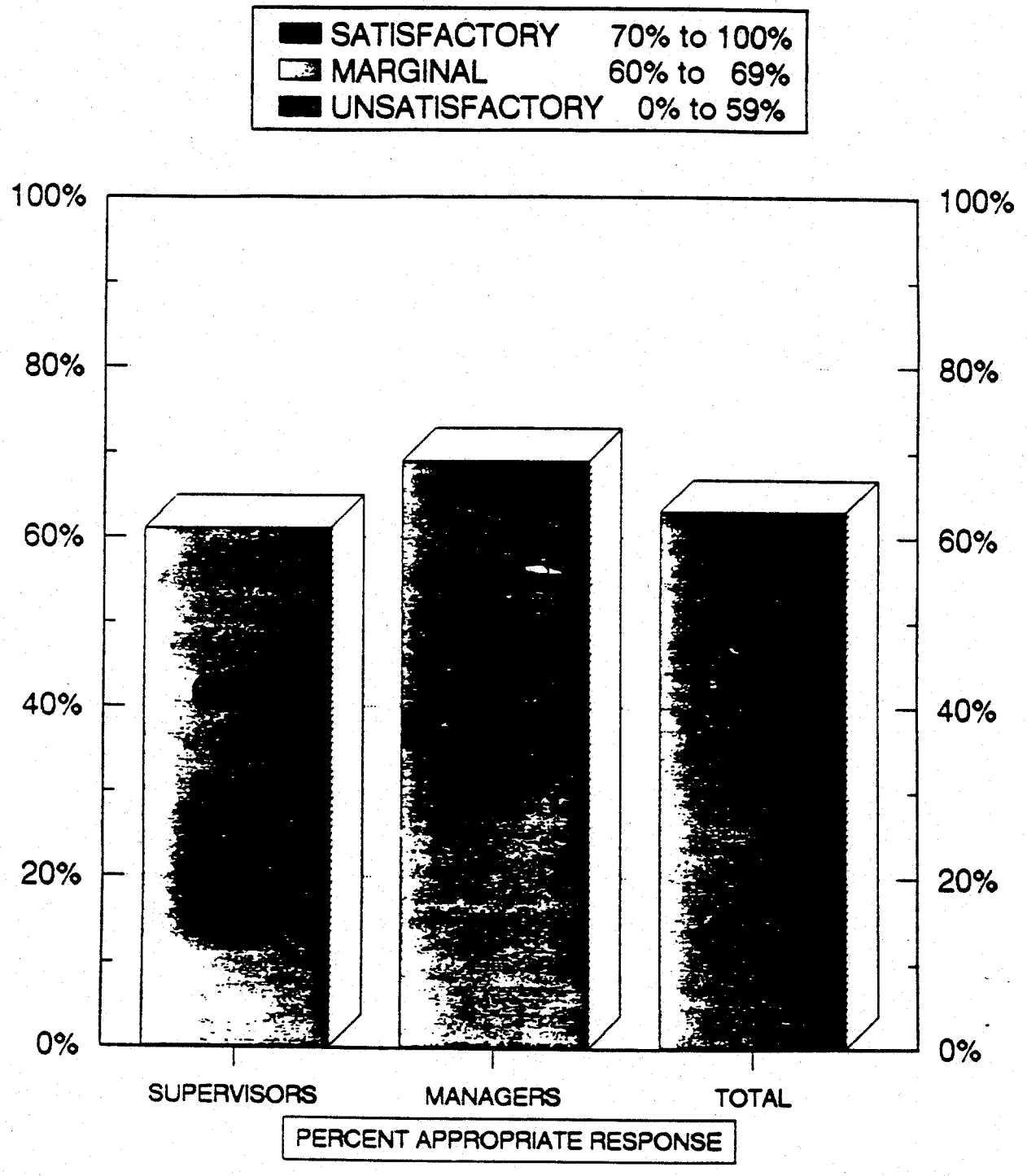
- 37% of their time is spent responding to quality/operating problems or emergencies that are usually brought to their attention by their employees. This problem solving activity was either always reactive, or responding to well established problems. We observed little time devoted to preemptive action to keep problems from occurring or recurring. This "fire fighting" technique results in an approach to problem solving where supervisors address only the symptoms of the problem. We also noted that in the BellSouth culture, the supervisors often take orders which have problems into their office and solve them. They do not train their people. As a result, your problems tend to be recurring. We noted examples where this activity consumed from 14% to 40% of a supervisors' day.

- 38% of their time is spent in administrative functions such as meetings, phone calls, reports or other paperwork which provide little or no added value. Little of this time is spent in planning or analyzing the available date which would cause them to take action. This results in continued process flow problems caused by the lack of action taken to correct the problems in work processes. Reporting variances to plan should be used as a management tool to focus resources on solving root causes of problems. This process was not evident in our supervisory studies. We noted that in the situations where the supervisors spent as little as 31% of their time in administrative activities, the amount of time spent in supervisory interaction with their people ranged from 2% to 22%. This tends to indicate an avoidance management style since even when time was available for direct supervisory interaction with their people they avoided their people.

- 13% of their time is idle or available for other more productive activities. This indicates the supervisors have the time available to take a proactive approach to managing their areas of responsibility. This excessive idle time results in lower employee productivity and quality due to the lack of direct interaction with the employees. A couple of your supervisors spent a third of their time in this activity. In these situations, the amount of time spent in a supervisory interaction with their people was still minimal. The key points are the lack of identifying recurring operating problems, the lack of control over the process flow and the lack of support to their service representatives.

- Your supervisors perceive that they currently spend 35% of their time in supervisory functions and that ideally they would like to spend 35% of their time supervising. This perception is encouraging from the standpoint that they recognize they should be spending more time directing their people, but it is discouraging when compared to their actual time spent in any supervisory function (12%). They are doing what they believe they should be doing and the real problem is the lack of clarity in roles / responsibilities, poor skill sets and unclear expectations as to what they should be doing.

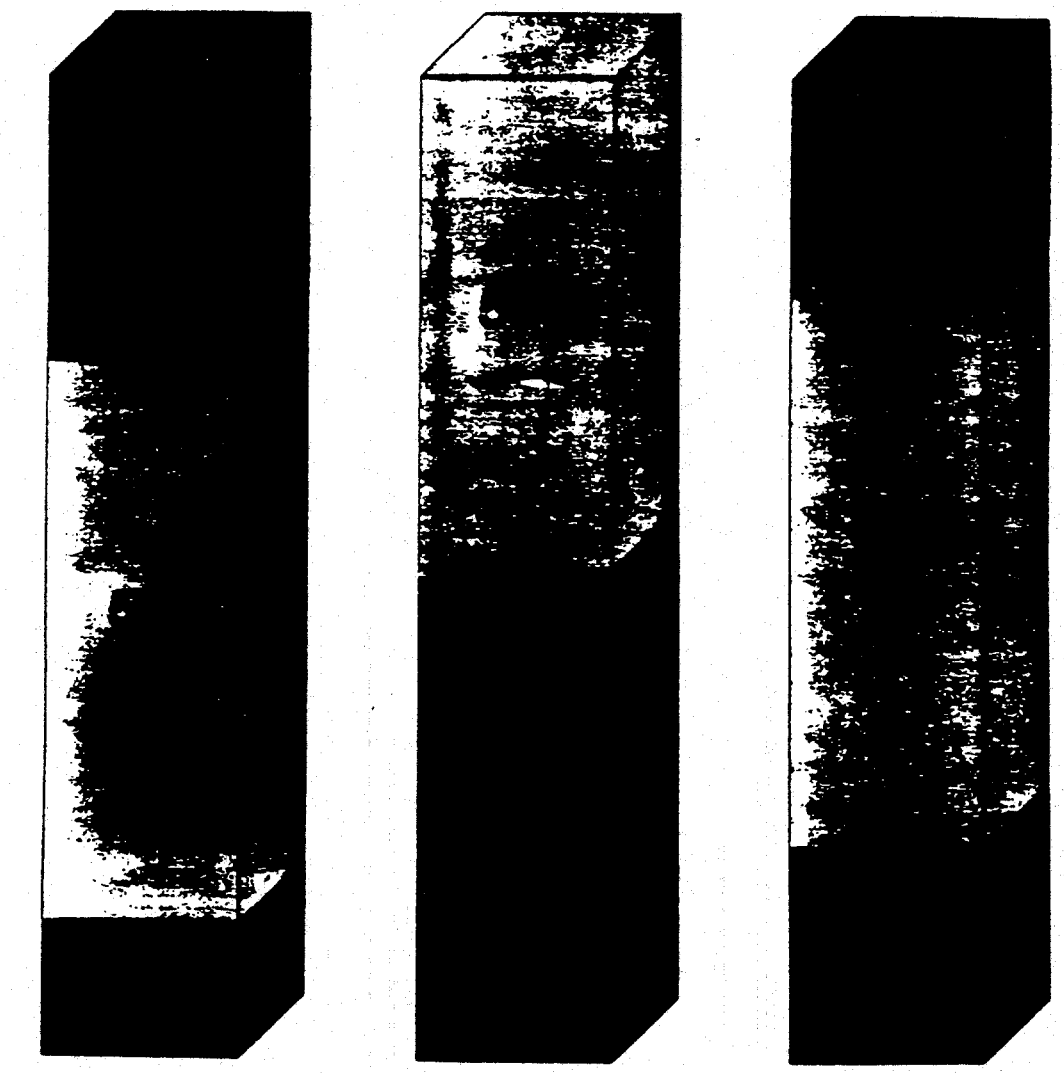
BELLSOUTH - LCSL
ATLANTA - BIRMINGHAM
DIAGNOSTIC ASSESSMENT OF SUPERVISORY SKILLS
OVERALL SCORES



002778

BELLSOUTH - LCSC
ATLANTA - BIRMINGHAM
SUPERVISORY SKILLS ASSESSMENT
POPULATION DISTRIBUTION

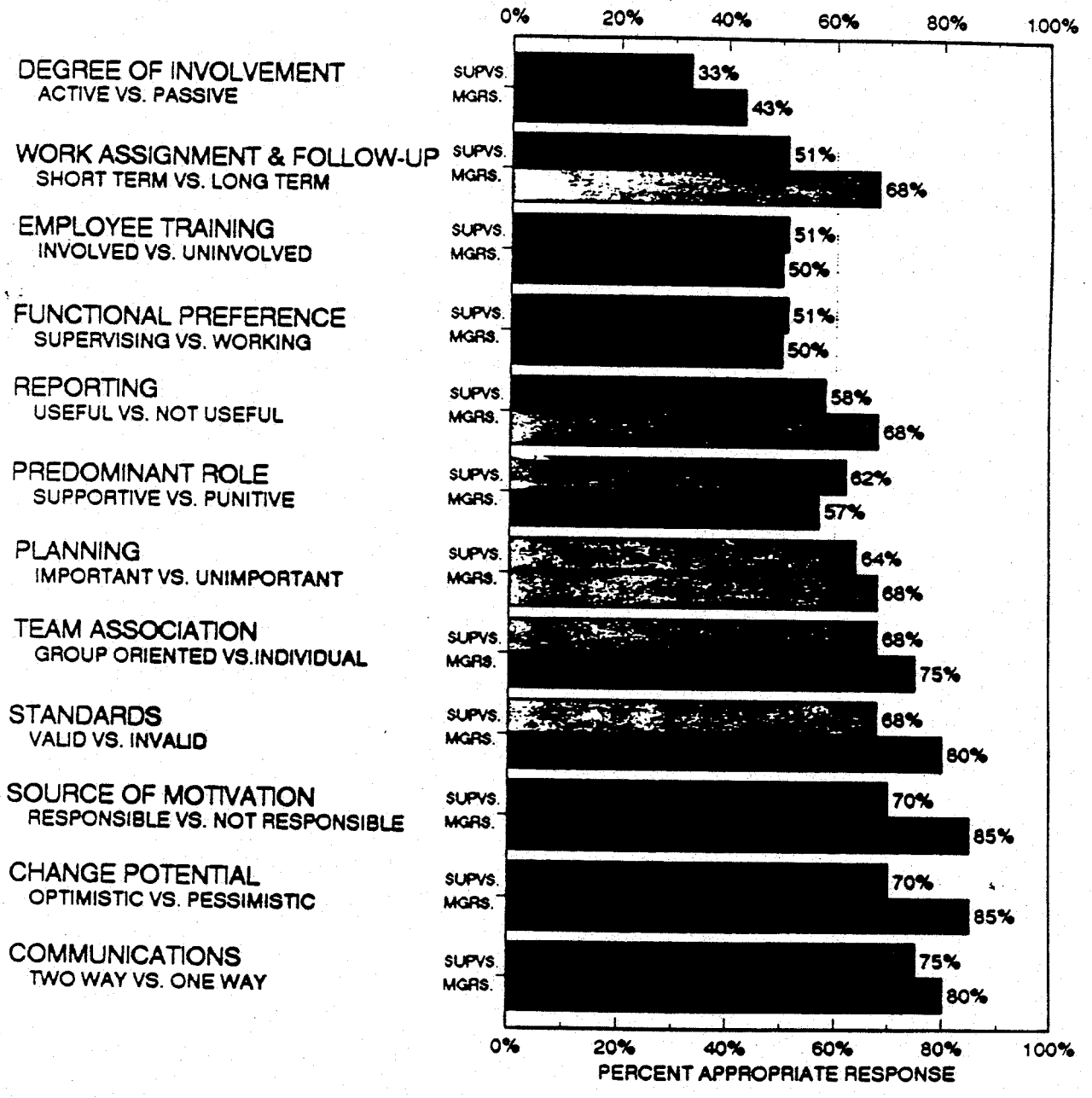
SATISFACTORY	70% to 100%
MARGINAL	60% to 69%
UNSATISFACTORY	0% to 59%



SUPERVISORS MANAGERS TOTAL

BELLSOUTH - LCSC
ATLANTA - BIRMINGHAM
SUPERVISORY SKILLS ASSESSMENT
BY SUBSCALE

SATISFACTORY	70% to 100%
MARGINAL	60% to 69%
UNSATISFACTORY	0% to 59%



002780

2. Diagnostic assessment indicates that your supervisors have a poor understanding of the concepts of effective supervision. Their overall score of 61% is well below the 70% minimum for an acceptable level of understanding. The fact that on several subscales the managers' scores are not significantly higher than the supervisors' indicates a lack of positive role modeling. The poor attitudes in the areas of work flow control, employee development and systems is reflected in the passive management attitude we noted in our supervisory studies. Some specific areas of weakness include:

- DEGREE OF INVOLVEMENT - The managers' score of 43%, and the supervisors' score of 33%, indicate a very passive style of supervision with minimal involvement with their people. This correlates with the small amount of time we observed them actually spending in supervisory functions. (12%) When employees did bring problem orders to their supervisors they typically reacted by either giving the problem to another employee or by solving the problems themselves. In either situation, the employees did not receive feedback or training.

- WORK ASSIGNMENT & FOLLOW-UP - The supervisors' score of 51%, indicate that they generally believe in giving long term assignments with vague expectations, and providing follow-up on an infrequent basis. This attitude is consistent with the behaviors we observed in our studies, as we did not observe any of the supervisors assign work by communication expectations relative to quality or productivity. We also did not see supervision involved in systematic follow up or monitoring of work in progress. These situations do not permit the timely resolution of problems.

- EMPLOYEE TRAINING - The managers' score of 50%, and the supervisors' score of 51% indicate they do not accept the responsibility for training employees, and do not feel they need to participate in their development. They believe that employee development is some one elses' responsibility, such as BellSouth corporate staff function. They also prefer to let an employee learn from another employee, failing to recognize that the skills required to perform an activity are different from those required to teach that activity. This perception and practice results in the continuation of "bad" habits and ineffective methods, instead of properly training the employees and providing them with the support they deserve. The fact that the Managers' score is lower than the supervisors indicates that their is a lack of positive role modeling.

- FUNCTIONAL PREFERENCE - The managers' score of 50% and the supervisors' score of 51%, indicate they are more comfortable in doing the work themselves, than in directing their people. This coincides with our studies, in which observed the supervisors frequently solving problem orders by taking the order themselves to respond the problem without training their people. The fact that the managers' score is lower that the supervisors again points to the lack of proper role modeling to solve this problem of management role and responsibilities. It also indicates that the entire management structure tends to function at a level lower that their title would indicate.

- REPORTING - The supervisors' score of 58%, indicate a poor understanding of the purpose of reporting in the LCSC operating system. Their perception is that reporting is an indication of a lack of trust from management rather than a means of communication. They feel the reports are of little value to them individually. This results in a lack of support and focus from management which perpetuates the operating problems evident in their areas. This poor attitude is compounded by the fact that the reporting elements of your operating systems are either weekly or monthly which does not support the timely resolution of problems. The managers' score of 68% is promising, however, the large difference in perceptions tends to indicate the lack of training by the managers of their supervisors. This highlights the need for a formal management development program.

- PREDOMINATE ROLE - The managers' score of 57%, and the supervisors' score of 62% indicates that many believe their primary function is to maintain discipline in their department, and take punitive action when necessary. They do not understand that their primary function is to support their people and provide positive feedback whenever possible. This lack of support diminishes productivity, quality and order turn around time. It also will generally lower morale of the employees and complicate your efforts to build an effective LCSC operation. This is the last subscale in which the managers did not score higher than the supervisors and reinforces the point again about the lack of positive role modeling.

- STANDARDS - The fact that both levels scored well in this subscale is encouraging from the standpoint that their attitudes are that effective measurement tools could be used to monitor and control the work processes. Unfortunately, standards do not exist in your current LCSC system, whoever, if they are developed with your people, their attitude would indicate that they are receptive to using work measurements to identify and respond problems.

- In the subscales that measure SOURCE OF MOTIVATION, CHANGE POTENTIAL and COMMUNICATIONS, both levels demonstrated relatively positive attitudes. We will build on these areas of strength to facilitate the specific training needed in the areas of work assignment, follow up, active supervision, clarification of roles / responsibilities and organizational development.

BELLSOUTH - LCSC

MANAGEMENT OPERATING SYSTEM EVALUATION

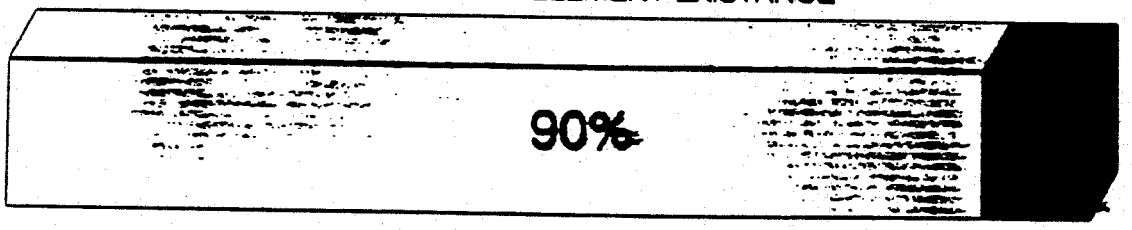
ELEMENT EXISTS

EXISTS-REQUIRES UPGRADE
POOR UTILIZATION

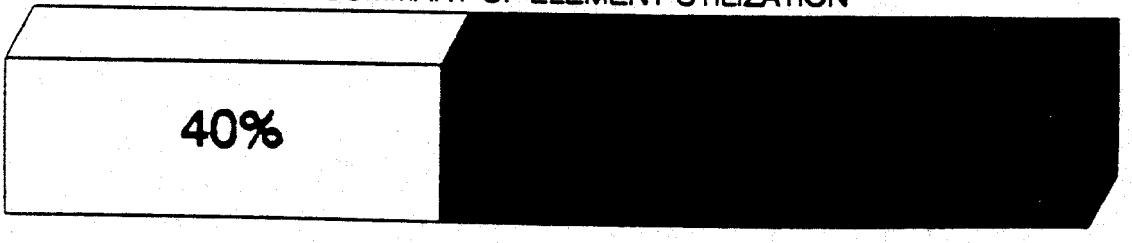
DOES NOT EXIST
IS NOT UTILIZED

SYSTEM ELEMENT	EXISTS	DESCRIPTION	UTILIZ-ATION
VOLUME FORECAST		VOL FORECAST DOES NOT MATCH CREWING PLANS DOES NOT HAVE FEEDBACK ADJUSTMENT LOOP	
PRODUCTION STANDARDS		EXISTS AS AN OVERALL EXPECTATION, DOES NOT ACCOUNT FOR MIX & UNKNOWN EFFICIENCY FACTORS	
STAFFING DETERMINATION		LOGIC IS INCOMPLETE. MISSING ACTIVIES, STANDARDS, UNREALISTIC VARIABLES AND NOT MIX SENSITIVE	
SHORT RANGE PLAN		IT IS NOT TIED TO THE INPUT RATE IT IS NOT BEING USED BY THE SUPERVISORS	
WORK ASSGN / FOLLOW UP		GUIDELINES EXIST FOR BOTH PRIORITY AND MGMT. EXPECTATIONS. NOT BEING USED BY SUPV.	
BEST PRATICE DEFINATION		SOME EXIST AT A HIGH LEVEL, HOWEVER DETAILED PROCESS DEFINATION DOES NOT EXIST	
BACKLOG CONTROLS		EXISTS BUT THEY ARE NOT BEING USED PROPERLY BY ALL SUPERVISORS. DOES NOT FEED THE FORECAST	
PERFORMANCE REPORTING		SOME VOLUME TRACKING EXIST. THERE IS NO PRODUCTIVITY MEASUREMENTS	
QUALITY /SERVICE CONTROLS		QUAL CONT ARE BEING DESIGNED - NOT IMPLEMENTED TRACKING OF SERVICE DATES, SERVICE FEEDBACK EXISTS NOT INSTALLED - WAITING FOR AUTOMATION	
EMPL. SKILL DEVELOPMENT		BASIC FLEX TOOL EXIST. IT LACKS SPECIFICITY AND BENCHMARKS. LACKS SUPV INVOLVMENT	

SUMMARY OF ELEMENT EXISTANCE



SUMMARY OF ELEMENT UTILIZATION



3. Although you generate considerable data, this information will have to be upgraded to become more effective and it is not currently being used to get back to the employees who are creating productivity and quality problems. Although the production management system elements exist, 90% will require upgrades and 10% do not exist and must be developed. Poor compliance and utilization of the elements which exist have minimized management systems as a useful tool to identify problems and to control labor costs. None of the existing elements are being used effectively, while only 40% of the elements are being marginally used and 60% are not being used at all.

- Your current volume forecast has obvious weaknesses. Your current forecast is not build upon activity based work content. The base data does not account for work content by product mix. Also, the current forecasting techniques do not recognize the variances between resale orders. We noted logic problems and base parameters which can not be verified. The fact that you have no historical information limits the accuracy of the current forecast. Although that situation is unavoidable, your systems lack a feedback mechanism that tracks actual order input so that the current forecast can be continually upgraded based upon actual input trends.

- You lack activity based standards which could be used in the forecasting, planning and work assignment. Currently you only have general average times to process an order which does not account for product mix between unbundled and resale nor the degree of complication within the resale product group. You lack objective information that could be used as base data to be used to develop a creditable work volume forecast. Without this information it is impossible to effectively plan or assign work to balance the workload between employees. You can not therefore evaluate performance by individual or work group. As a result, supervision can not identify training needs and take corrective action. Problems tend to continue for extended periods of time which inflates your operating cost and limits customer service.

- System elements such as staffing determination exists however, without activity based work standards you can not determine the actual number of people you will need to process a given volume of work. Without this key element of an operating system, crewing decisions are currently be made based upon faulty conclusions and inaccurate information. As a result you are planning an excessive number of employees to handle forecasted volumes which increases your operating labor cost.

- Your current systems contain elements which could be used for short range planning and backlog controls. Your short range plan does not use activity based standards to determine work planning. These elements are not being used by most supervisors and are not effective. Backlog controls exist but have the same problem as they are not based upon realistic work standards. Neither the planning elements nor the backlog controls are tied to the forecast. As a result you have no way to monitor actual work input on a continuous basis so that the forecast can be upgraded. The lack of short range planning tools restrict the supervisors ability to control work backlogs and sequence work assignments.

- Although you have daily assignments sheets, they are not being used by supervisors to assign and follow up on work in progress. You lack a systematic approach to follow up on work assignments. You do not have elements that require supervisors to objectively review work assignments compared to standards to actual work completed. As a result, your supervisors cannot identify operating problems that are causing productivity, quality and service problems on a timely basis.

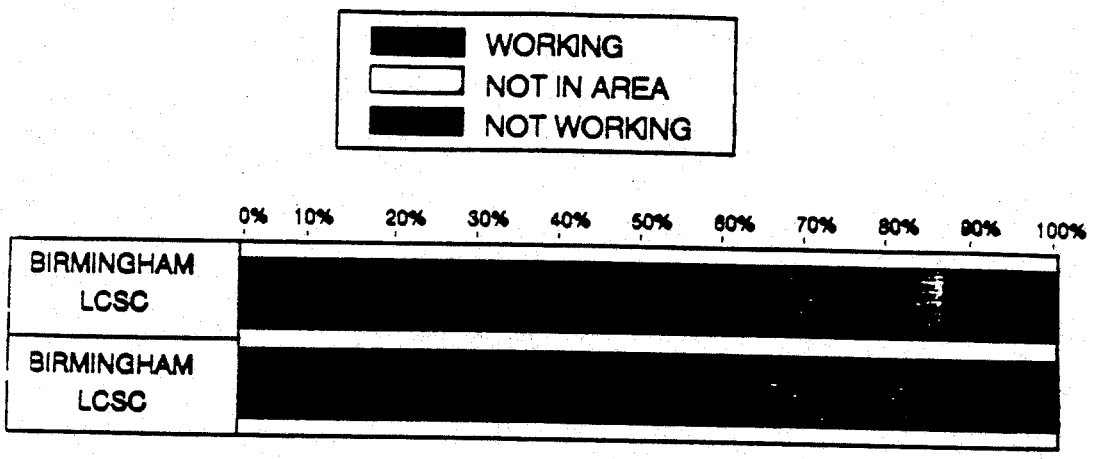
- Your best practice definition exists only as a macro level. You lack detailed documentation of your key processes by step in sufficient detail that they can be used as a training tool. Without this level of documentation, employees who have questions must interrupt fellow workers who might have an opinion on how to process the order. This situation not only lowers labor productivity, it also has a negative effect on quality on various methods and techniques are used to process the same type of order. You lack standardization to your processes that insure a constant level of quality.

- You do not have individual and departmental productivity measurements. This inability to determine accurate productivity levels restricts the identification of operating problems and perpetuates lost time.

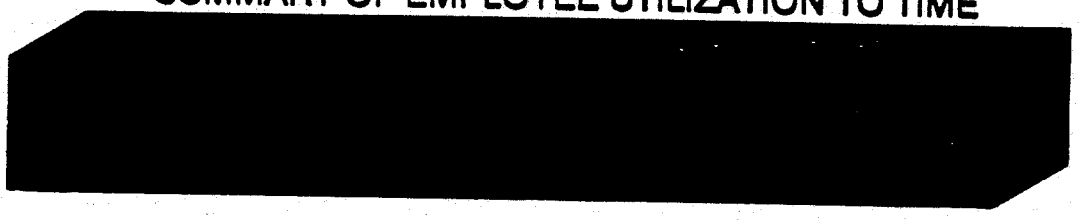
- Currently both quality and service measure are being developed but have not been installed. As we have noted in other system elements which do exits, the challenge you face is not the design of these management tools, it the implementation and use of the tools by supervision. You lack an installation process that insures that supervisors are trained in the preparation and use of system elements. You must also spend time on the floor to insure that supervision understands how to use the tools to identify quality and service problems on a timely basis to identify training problems.

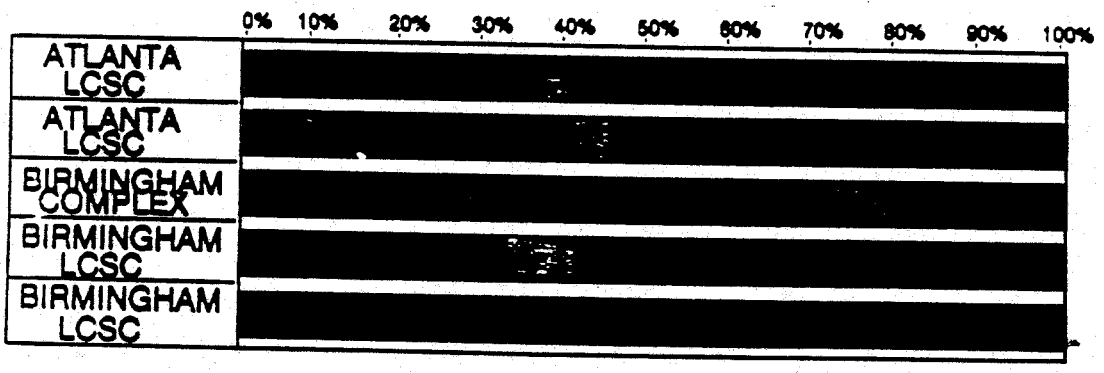
- Employee skills flexibility charts exist in some of the areas, however, they are not being actively used by supervisors to identify training needs so that they can be addressed. Also you lack benchmarking that can be used to quantify training needs. For additional information on this key area of your business, please see the employee skills section of this summary.

BELLSOUTH - LCSC
ATLANTA - BIRMINGHAM
SUMMARY OF EMPLOYEE UTILIZATION OF TIME

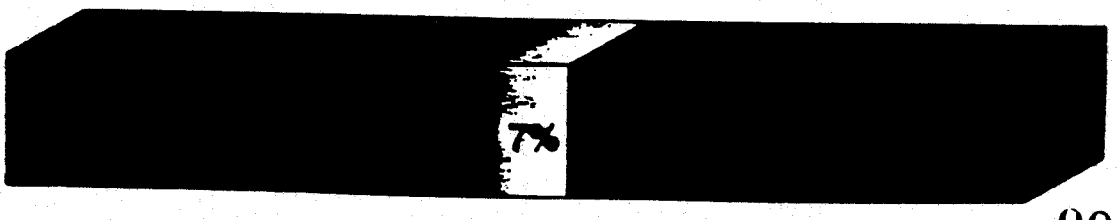


SUMMARY OF EMPLOYEE UTILIZATION TO TIME





SUMMARY



4. As a result of the lack of clear goals, inconsistent work processes, employee skills deficiencies and a passive management style, our analyses indicate service representatives are either not working or not in their area 39% of the time. Detailed analysis of the work being performed indicates that 7% of the time representatives are doing someone else's work and 27% of the time they are engaged in non value added rework. Our analysis indicates that the amount of time being spent doing work right the first time is only 38 to 48% of the reps' time. Due to various operating, training and quality problems which are not being resolved, your current level of labor utilization is inflating your operating costs, and building excessive lead-times into your order process.

- Problem solving techniques are not effective in most cases. We observed supervisors waiting until the employees brought problems to their attention. We observed that several times the supervisors either take problem orders upon themselves to resolve or reassign the orders to other workers with the "know how". Supervisors also do not identify and correct the root cause by providing feedback to the representative. This reactionary, non supportive management style contributes to the perpetuation of quality problems and non value added rework.

- Supervisors very rarely follow up on work in process. This lack of supervisory involvement has left your employees to solve most problems by themselves. In the BellSouth LCSC environment, it is the employee's responsibility to locate their supervisor to get assistance. As a result, persistent problems tend to continue before corrective action is taken, and it often deals only with the symptoms rather than root causes of the problem. Rep's spend from 10% to 15% of their day correcting errors which they had caused without management awareness or assistance.

- Some reps' exhibit poor work habits without management awareness or corrective action. We observed several cases where workers were repeatedly creating rework and delays for other BellSouth operations, but were not confronted by their supervisors, thereby condoning the practice. Supervisors rely on system edits and error reporting to correct the problems rather than confront employees on poor work habits, poor disciplines and skills deficiencies.

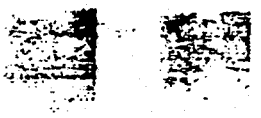
- In your LCSC environment, the clarification requests seem to be used as a "fail safe" to catch quality problems and missing input information prior to order processing. We noted situations in which every portability order required clarification due to missing information. 10 to 12% of the rep's day was wasted getting clarification from the customer. Management is not aware of this condition and is not gathering the data necessary to develop a corrective action strategy with the account teams to solve the problems before they hit the LCSC and force lost time into your operation.

- Improperly trained employees are forcing lost time into the operation. 7% of the representatives time is spent doing work for another employee. The single largest cause of this situation is because an employee must ask for assistance or hand off the order to another representative who can resolve the problem.

- We observed situations where non compliance to existing procedures was forcing lost time and rework into the operation. For example, when a representative uses the phone to ask for clarification, and later hands the order to a fellow employee to complete, the second rep does not know what work has been done.

- We observed your representatives wasting their valuable time doing the work which is to be completed by the clerks in the department. Several of the reps will leave their station in order to send faxes, which is supposed to be done by the clerks. Oftentimes when a representative leaves their work station they interrupt the rhythm of their work and stop by fellow employees' workstations to visit.

- The layout of the work areas is not conducive to foster a supportive environment for the service representatives. Your reps are isolated in cubicles which hinders supervisory coaching and support. Those who seek help must leave their work areas thus forcing lost time into the operation. Since you are starting up the LCSC you have a ideal opportunity to create an environment which fosters management support and interaction.



BELLSOUTH

LCSC

TRAINING AND DEVELOPMENT PROCESS

[redacted] ELEMENT EXISTS EFFECTIVELY UTILIZED

[redacted] EXISTS- REQUIRES UPGRADE POOR UTILIZATION

[redacted] DOES NOT EXIST IS NOT UTILIZED

SYSTEM ELEMENT	EXIST	DOCUMENT	UTILIZ-ATION
SKILL REQUIREMENTS	[redacted]	CURRENTLY USE WAGE SCALE 23, SERVICE REP's. NOT SURE IF THIS	[redacted]
SCREENING TESTS	[redacted]	IS RIGHT SKILLS FOR THE LCSC SERVICE REP POSITION.	[redacted]
TRAINING AGENDAS	[redacted]	THERE ARE SEVERAL TRAINING AGENDA's. HANDOUTS & GUIDES	[redacted]
PROCESS FLOWS	[redacted]	THERE ARE ORDER FLOWS, NOT DETAILED ENOUGH FOR TRAINING	[redacted]
COMPREHENSION EVALUATION	[redacted]	EVALUATION IS SUBJECTIVE BY INSTRUCTOR. LESSON TESTS OPT.	[redacted]
EFFECTIVENESS ASSESSMENT	[redacted]	NO ASSESSMENT AT THIS TIME BUT WILL BE DEVELOPED	[redacted]
TRAINING STATUS CHARTS	[redacted]	CTRS AVAILABLE, SUPV TRACKS TRAINING RECEIVED MANUALLY	[redacted]
IND / TEAM PERF TRACKING	[redacted]	DATA AVAILABLE (Errors, Orders Processed) BUT NOT USED TO EVAL	[redacted]
MONITORING / OBS	[redacted]	OBS/ MONITORS ARE NOT STRUCT EXCEPT PHONE. POOR LAYOUT	[redacted]
INDIVIDUAL COACHING	[redacted]	COACHING IS NOT STRUCTURED AT THIS TIME.	[redacted]

SUMMARY OF ELEMENT EXISTENCE

[redacted]

SUMMARY OF ELEMENT UTILIZATION

[redacted]

002793

5a. We analyzed your structured training process with your staff support, trainers, line management and trainees. We determined that your current training process is less than effective. While most of the basic elements of the process are present, significant upgrades are required to make them effective. Of the elements which are available, few are being used effectively by your organization.

- 40% of the basic elements exist and required no additional enhancements. For example, the screening process for the identification of candidates is functional and there are well developed agendas and modules to support the training process.

- 50% of the elements exist but will require significant upgrades to become effective . Process flows that define the steps necessary to successfully complete an order are vague and not usable training tools. The evaluation of lesson comprehension is subjective rather than objective. You lack an objective post testing vehicle to evaluate a trainees level of comprehension. 10 modules actually have "lesson learned testing" but they are not being used by your people.

- The only element that does not exist is assessment effectiveness. There is no feedback to trainers relative to the effectiveness of their programs, as a result, weakness cannot be identified and enhanced. We administered a questionnaire to 28 recent trainees to understand their perceptions of the training effectiveness. The results indicated that 77% found the training inadequately prepared them for their task. The lack of supervisory follow up after the formal training was identified as a key concern.

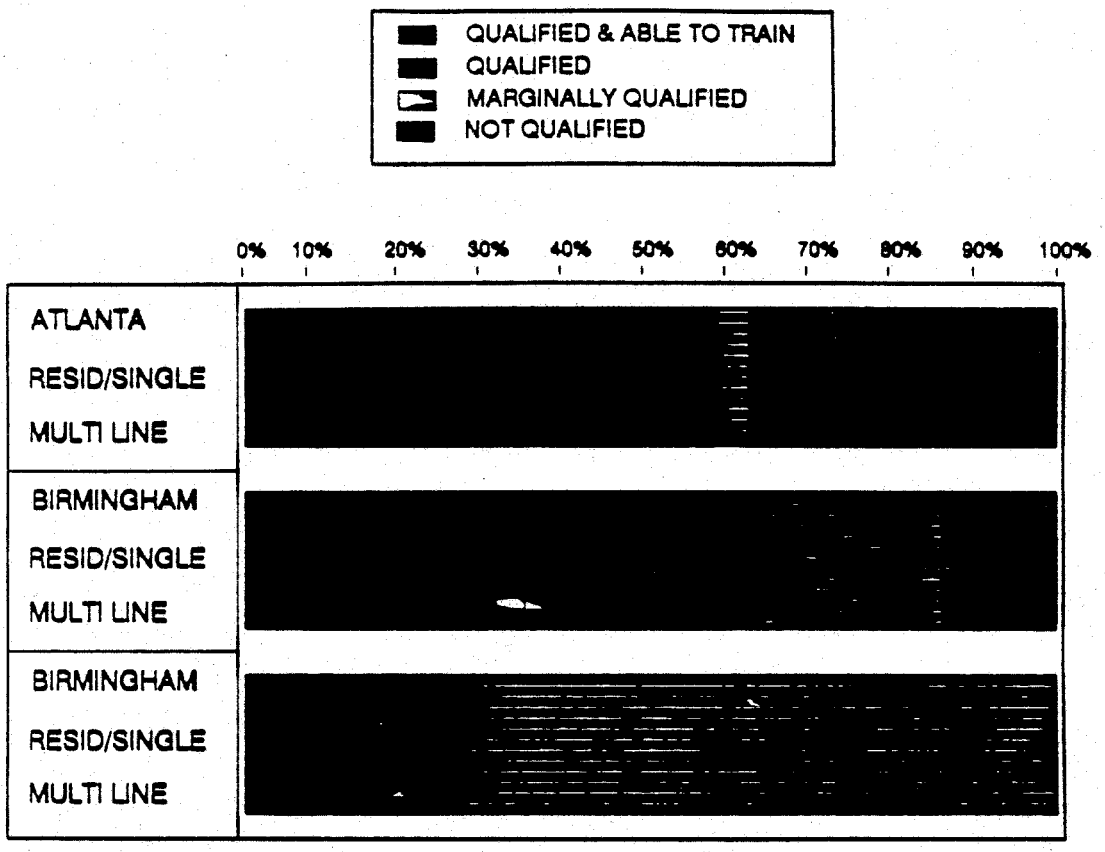
- Although performance data is available, it is not being utilized by supervision to provide information relative to skills sets of the service reps. In addition, monitoring / observing is still in the development stages and has not been implemented. The result is that you cannot provide meaningful feedback and coaching to your employees to further their development.

- Only 10% of the elements are currently being utilized effectively. Another 50% are only marginally used and 40% are not being used at all. There are significant opportunities to improve the ongoing effectiveness of your current training process by installing on the floor training development with supervision through effective coaching. Trainees are somewhat abandoned by BellSouth once they are assigned to their areas.

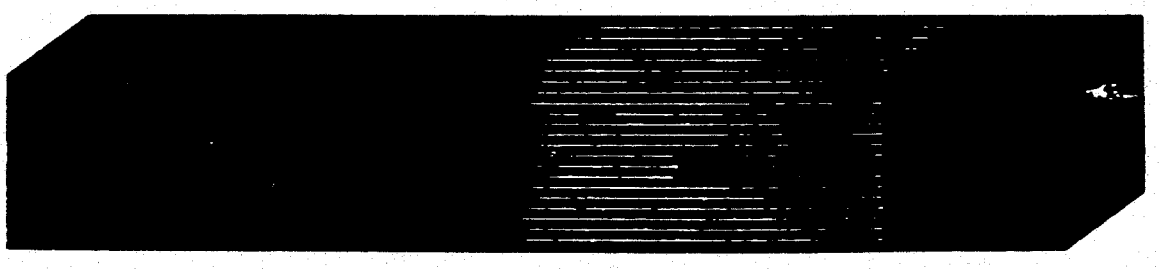
BELLSOUTH - LCSC

ATLANTA - BIRMINGHAM

EMPLOYEE SKILLS TRAINING



SUMMARY



5b. We conducted an evaluation of your employee skills flexibility to identify the training needs of your service representatives. We determined that their are significant training needs within this "experienced" work group. These needs have resulted in limited employee flexibility and the inability to maximize the effective use of your manpower which limits the quality of your order processing.

- Our studies indicate that only 48% of the key jobs have employees who are qualified to perform there functions effectively. This has significant impact on the supervisors' ability to make adjustments for absenteeism and volume mix.

- According to their supervisors, 35% of the jobs have employees who are marginally qualified to perform the tasks. Marginal means they are only able to perform selected functions of a total order processing flow without constant follow up. This is a key point, since we saw very little training of employees by the supervisors during our studies.

- We observed different methods being used by multiple employees to perform the same task. This resulted in significant variances in both quality and productivity. This frequently results in errors and rework as vital steps of the process are missed and must be corrected after the fact. This is impacting your customer service and unnecessarily inflating your order processing time.

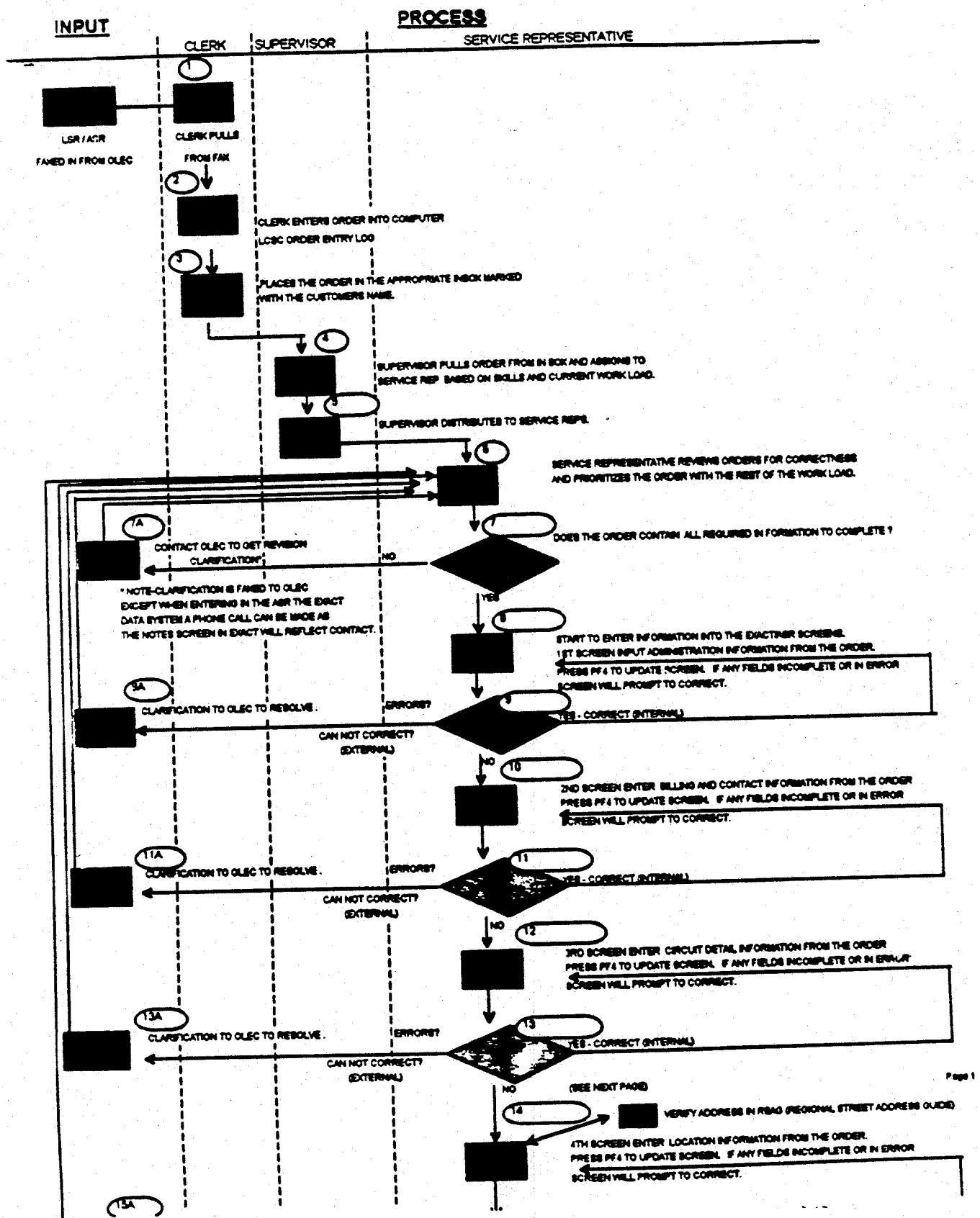
- Ineffective employee cross training restricts productivity and reduces your ability to meet volume demands. 17% of the people are not qualified to perform the functions. This is having a negative impact on both productivity and quality.

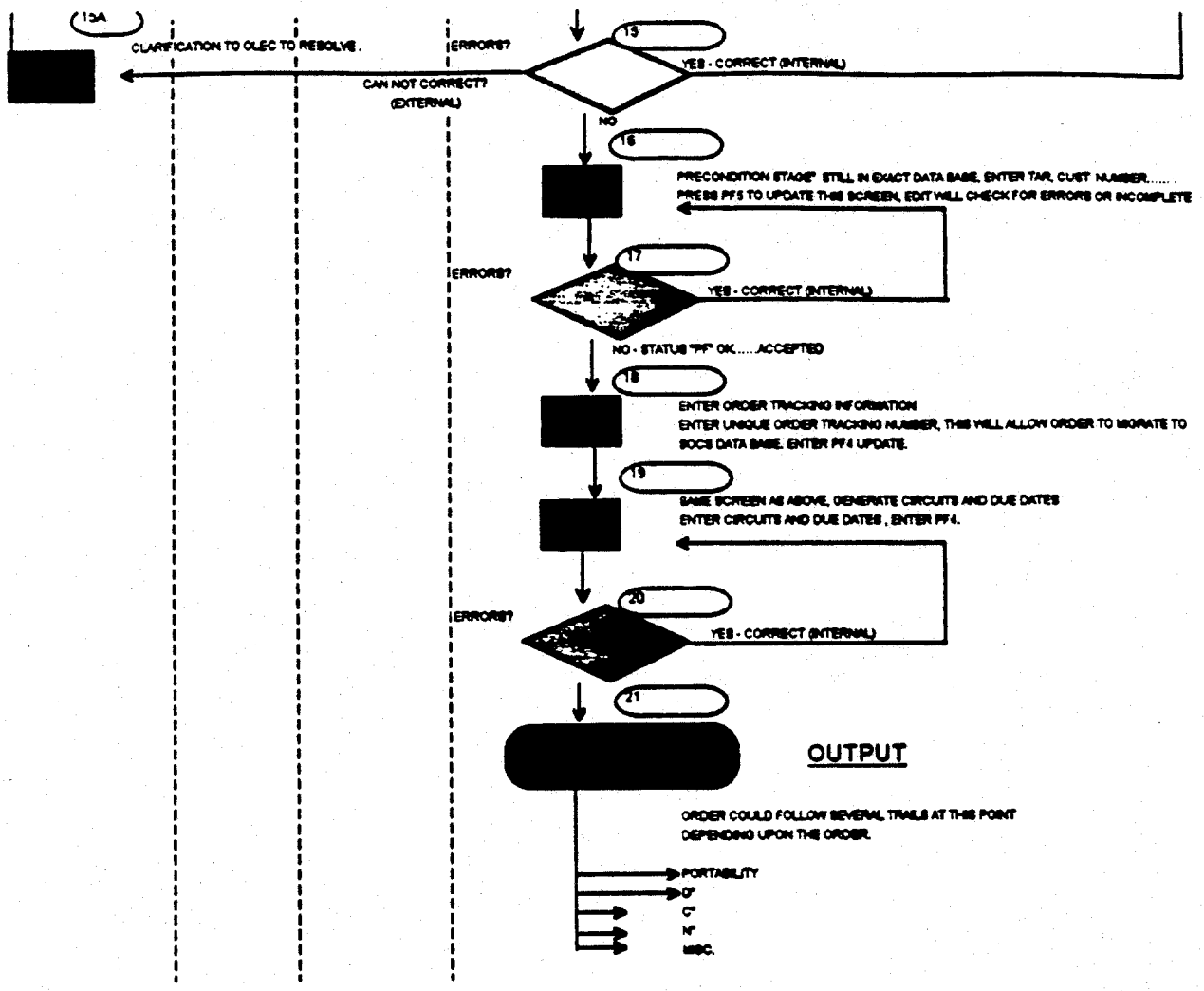
- 38% of the people, in the supervisors' opinion, are qualified to perform the functions of the department successfully.

- Only 10% of the people, in the supervisors opinion, are qualified to perform the functions of the department and possess the ability to train fellow workers.

- Instead of training and developing your people to do the work right the first time, you rely on rework to find errors. These activities do not add value and unnecessarily inflate your operating cost and order lead times.

UNBUNDLED LOOPS





COL	DESC.	STEPS	%
[redacted]	Rework	5	18%
	Eval. Step	7	25%
	Work Step	16	57%
	TOTAL	28	100%

[redacted]

6. Our analyses of your work flow processes for both resale and unbundled orders indicates that your current level of process documentation is insufficient to assure process compliance and integrity. You lack the ability to use process documentation as a training aid that can be used to upgrade the skill sets of you representatives. There is a lack of clearly defined process requirements. As you transist from the current manual process through semi automated to ultimately an automated work process, there will always be the need to detail and validate the steps to insure quality and service. The true work content of each step or activity must constantly be updated to realize a continuous improvement culture within the LCSC process.

- Processes are not being used to assess the skills proficiency of you service representatives. Without the detail it is impossible to objectively identify training needs and if needs are not identified, they cannot be addressed to constantly improve the skills of your service representatives.

- Activity based standards are not being used to develop your force sizing models. Since the work content varies by order type, this base data must be maintained and upgraded to insure that as your product mix changes, you have the ability to properly determine the manpower requirements.

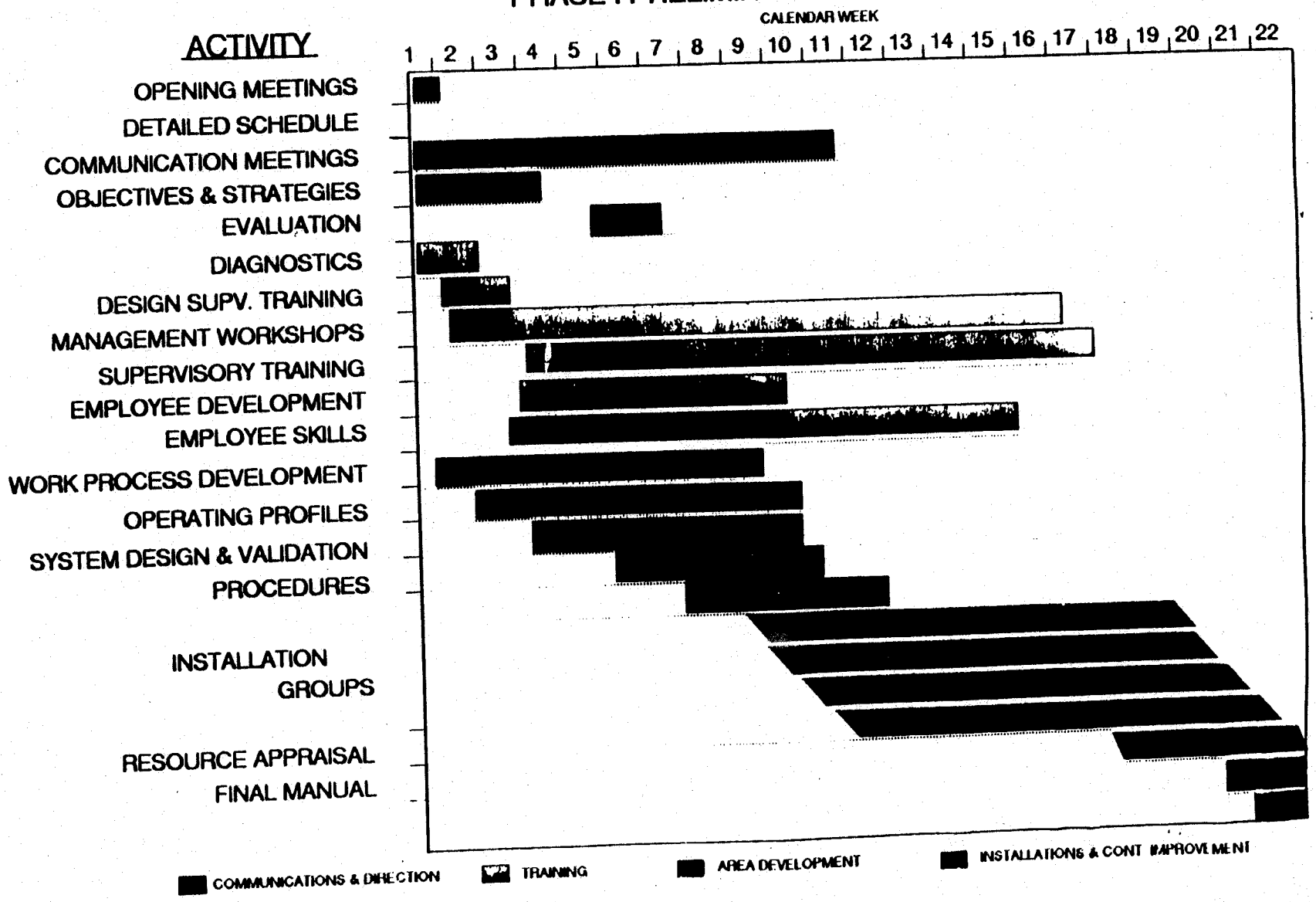
- Detail process flows do not exist and cannot be incorporated into a continuous employee training process. As a result, you are not keeping up with the latest upgrades to the order processing flow and the frequency of errors tends to increase. This has a negative effect upon both internal and external customer service.

- Failure to have the process detailed step by step has limited your ability to quantify and qualify the procedural barriers that affect productivity and quality. This diminishes the ability of the support operation to be able to enhance and react to the most significant barriers. As a result, the support functions are left to design improvements to the needs as they view them, not as the people responsible to deliver your service know the needs to be.

- As new services are introduced, new processes will have to be developed and detailed. The challenge is not to document your current processes. The challenge is to have the knowledge and ability to repeat the detailing process to insure that the LCSC always has effective processes that are properly balanced and maintained.

BELLSOUTH - LCSC
ATLANTA - BIRMINGHAM

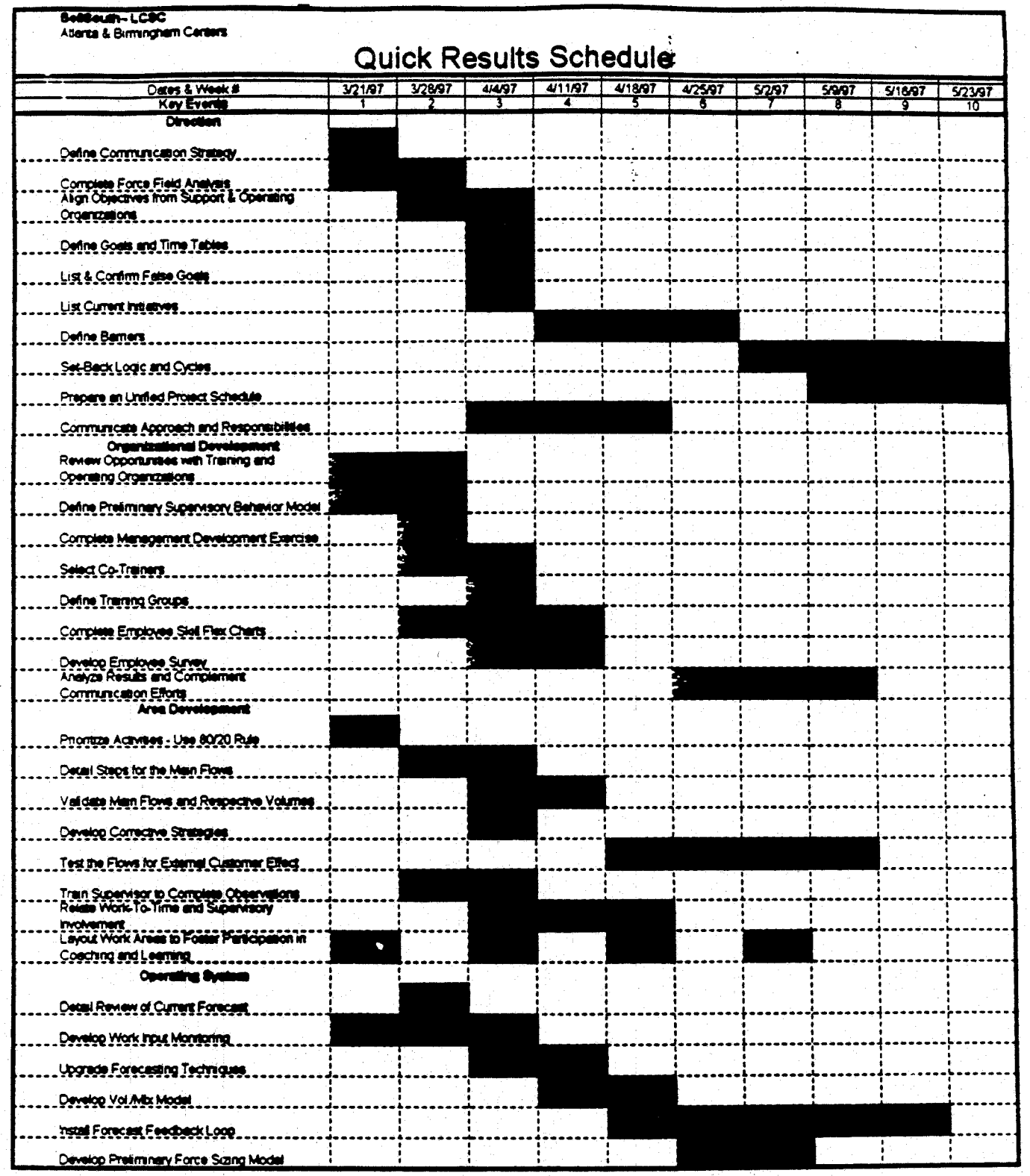
PHASE I PRELIMINARY KEY EVENT SCHEDULE



002803

BellSouth- LCSC
Atlanta & Birmingham Centers

Quick Results Schedule



WHAT WE PROPOSE

OVERVIEW

We propose a 22 week concerted effort to upgrade the management operating systems, detail/update/test and measure work procedures/processes. We will also improve the effectiveness of the skills development process and develop a performance oriented supervisory culture at the BellSouth LCSC operations in the Atlanta and Birmingham locations. Working closely with your management group, we will change the image of supervision from a task work/passive one to a supportive/proactive one. We will design and install management systems to give your supervisors and managers the information they need to effectively control all of the functions within their areas. We will train your supervisors and managers "on the floor", so they truly understand how to apply and use the systems and management concepts in their operations.

SPECIFICS

1. Together, we will conduct a series of opening meetings with support and operating departments during the first week, to set the stage for the process that is starting. We want all levels of personnel to understand that this is a program requiring their active participation, which will be a very positive experience.

2. Together, we will prepare a detailed weekly schedule during the first 3 weeks, to provide a plan for accomplishing all of these tasks in the allocated time. This will also enable management to follow along with our schedule on a weekly basis.

3. We will develop a method to assess the status of deliverables to measure the attainment of our proposals on a weekly basis. This method will be finalized by the 7th week. By the 10th week we will establish a reference level of historical performance indices, setting future targets, and tracking attainment of these targets. The on-going tracking will be turned over to the operating and support organizations.

4. We will complete the diagnostic assessment during the first 2 weeks of the process. We will administer our Supervisory Opinion Questionnaire (SOQ) to the remaining supervisors and managers not included in the analysis assessment. This will provide us with a profile of the overall groups' strengths and weaknesses, so that training can be focused specifically on the needs of your people. The profiles of strengths and weaknesses for each individual will also help us to follow up and maximize their personal development.

5. Together, we will generate a supervisory behavior model. We will design the supervisory workshops based on the weaknesses we observed, and reconfirmed by the diagnostic questionnaire administered to your supervisors and managers. This program will be designed by the 4th week.

6. We will initiate a process in the 1st week to communicate specific LCSC's findings, proposals, areas of focus, and priorities to all departments. This will ensure that each group understands their part in achieving overall objectives, the strategies to be utilized in achieving specific deliverables.

7. We will develop operating profiles in the first 9 weeks of the change process. This is the process of identifying all of the activities, volumes, standards, associated skills levels, quality levels, service levels and document current systems needs.

8. Data development is the process where we observe activities, and teach your people to make observations to set benchmarks. We will collect information with your supervisors and managers to establish realistic planning guidelines that they can use with confidence for planning and follow up purposes. The data gathered will also be used to complete force sizing models to establish short range production planning requirements.

9. We will upgrade the management operating systems with the supervisors and managers to provide all of the currently missing elements.

- Forecasting - mix, evaluation, cycles
- Accurate planning guidelines
- Staffing requirements determination
- Effective daily plans
- Work assignment and follow-up
- Departmental and individual productivity reporting
- Performance to plan and feedback - quality, service, cost
- Lost time identification and documentation

10. A Quick Results Program will occur during the first 10 weeks of the project. These are elements of the system which can be installed prior to the long term cultural change phase of the project. These action steps are outlined in our Quick Results Schedule.

- Align organization to focus on value added activities
- Area Layout
- Documentation of core flows
- Definition of skill deficiencies
- Correct gaps in training and OTF development
- Design Hopper - sample order generator to gauge quality and capacity utilization

11. We will review your current work mix and make recommendations to balance the resources to clarify responsibilities, and more effectively control the work processes.

12. Preliminary procedures will be written to provide answers to system questions that may arise during the change process.

- Purpose - Why each system element exists?
- Responsibility - Who prepares, reviews and takes action from each element?
- Frequency - How often is each system element prepared?
- Distribution - Where do copies of each element go?
- Preparation - Where does data come from and how is it used?

13. Management workshops will start in the 3rd week so that managers are prepared to support and reinforce the more in depth workshops that the supervisors will be going through, and be prepared to co-facilitate those sessions in later workshops.

14. Supervisory workshops will start in the 4th week of the change process. These workshops will cover both the technical aspects of supervision, and the tactical/interpersonal side of dealing with their people. The program will involve workshop sessions, to establish the concepts of effective supervision, as well as one on one follow-up with the supervisors to help them apply the concepts in real life situations. We will coach them on appropriate behaviors required to meet expectations. These workshops support the system upgrades and assist the supervisors in identification of barriers to productivity, quality and service. These workshops will also provide the basic skills necessary to effectively deal with the barriers identified.

15. We will, with your people, enhance the employee skills development process. We will review the selection process to ensure proper job requirements are met. We will upgrade training materials to include "as is" activities / steps within the work flows. We will incorporate on the floor supevisory follow up and coaching to facilitate the mastering of work activities.

16. Employee skills training programs may be jointly enhanced for key activities that associates perform. Working with technical advisers from your organization, we will determine the best methods for various key activities, and then design programs to teach these methods to future trainees. We will also assess the skills flexibility for current and expected requirements. We will schedule training where needed and focus coaching to specific steps within the work processes. This will include integrating your existing training materials into an ongoing associate training program. Together with management, we will determine the requirement of such programs by the 6th week.

17. Dry / Wet running is the process where supervisors and managers can test and practice using the various controls to demonstrate the capacity and gain confidence in the reliability of the expectations that have been set. Dry / Wet running includes testing proposals on operating system upgrades, skills development enhancements, and sample order "hopper" generator system.

18. Weekly progress review meetings will be held between DB&A and the management of LCSC to review the project schedule, measure the progress accomplished to date, identify barriers to future installations, and prepare required action plans to prevent technical and tactical barriers impeding progress.

19. The change process involves all employees associated with LCSC, using the systems and workshops to identify problems causing lost time and taking appropriate corrective action. This is the point where the final productivity commitments are reached. Our staff will work one-on-one with management to ensure that they truly understand their new roles and achieve their performance improvement goals.

20. A Resource Appraisal to identify and respond to additional opportunities for improvement in the next area of the order cycle is an additional service that is offered. The extent and cost for this service will be determined based on the size and scope. The timing should be based on the progress made by and the ability of your people to maintain the installations on their own.

21. A final procedures manual will be turned over to you in the 20th week, providing documentation of all systems and procedures that have been designed and installed. This manual provides assistance for training new supervisors and maintaining the installations in the future. This manual will be given to your people on diskette <MSWord> so they can maintain and upgrade your management operating system as your business climate dictates.

EXECUTIVE UPDATE
FINAL REPORT PHASE I
QUICK INSTALLATIONS

Date April 23, 1997

To Krista Tillman, AVP
BellSouth Interconnection Services

From James LaRue, Chief of Operations
DeWolff, Boberg and Associates

Project # 9706 - Bell 6

Project: LCSC (Local Carrier Service Center)

- This project involves the LCSC's located in Birmingham, Al. and Atlanta, Ga., and the service support groups located at the downtown Atlanta Building.

- The project was authorized for a 22 week period - to start March 17, 1997 and complete August 15, 1997. We are working in the seventh week and this is the final report. For more detail, look at project phases in this write up and in the "Summary of Findings and Approach."

- The purpose of the project is to accelerate Operational Readiness. Four key deliverables of this project include:
  - Detail process flows that are validated, tested and measured.
  - Improve Training process that delivers qualified candidates
  - Define key Performance indicators.
  - Enhance and install management operating system to effectively manage the Key Performance Indicators.

- To summarize, the major benefits of this effort are:
  - Improved operational efficiency (reduce head count requirement by 51)
  - Enhanced service quality to CLECs
  - Assures Operational Readiness to meet end of year CLEC forecasts
  - Significant ongoing expense reduction

  To date, the program is ahead of schedule. Phase I activities (7 weeks) included installation of some "quick installations" initiatives that began March 17, have been completed and will formally close out May 9.

Project Schedule – The goals for the support organization The goal is to insure that BellSouth is prepared for Local Interconnections with the required processes, systems, center organization, and skilled personnel The criteria for success has also been defined for his four support managers· resale, facility based, provisioning · maintenance, and training The strategy for catching up is to get closer to the detail by getting on the floor. A review meeting to review the status of the project schedule has been implemented. Need to compliment the detail available in the plan.

Capability Issues - LCSC has hired resources to forecast the volume that is forecasted to enter the centers. The problem is that these resources are largely untested. Since volume has not materialized, one aspect of the project is to address the volume issue, but not to wait to be tested with live orders. To do this, we must introduce artificial work volume into the centers, to test the theoretical capacity. Currently, Martha Jackson has assigned a driver to this projeet. A method to implement this project has been designed. Action item has gained momentum and we are on schedule.

3. Training – Detailed Write Up:

Selection & Screening – The fundamental skills required to already have for LCSC candidates include: visual perception of names/numbers/acronyms,typing and reading. Current screening identifies that service representatives should take the GQT (General Qualifications Test). The BST Job Title/Test Matrix shows that the CS-TAP is required to be taken by all candidates and keyboard tests (DEST or CTT) are also included. The situation that needs to be corrected is that we have extreme variance in the skill level of the candidates while in training. The training was not designed to overcome those shortcomings. The cause is that some of these tests have been optional, and there is a plan is needed to remedy this situation.

Interviews will be conducted to select candidates for UNE and complex work at beginning of training cycle.

Course Material and Classes

We participated in the entire single line residential / business training. During that course we identified improvement opportunities that should be made in the delivery, course content, testing, modular training, and sequencing, the actual training content. The improvements identified are as follows

The current residential/business single line training took 4 weeks and 2 days to complete. We have targeted to reduce this training cycle to 3 weeks

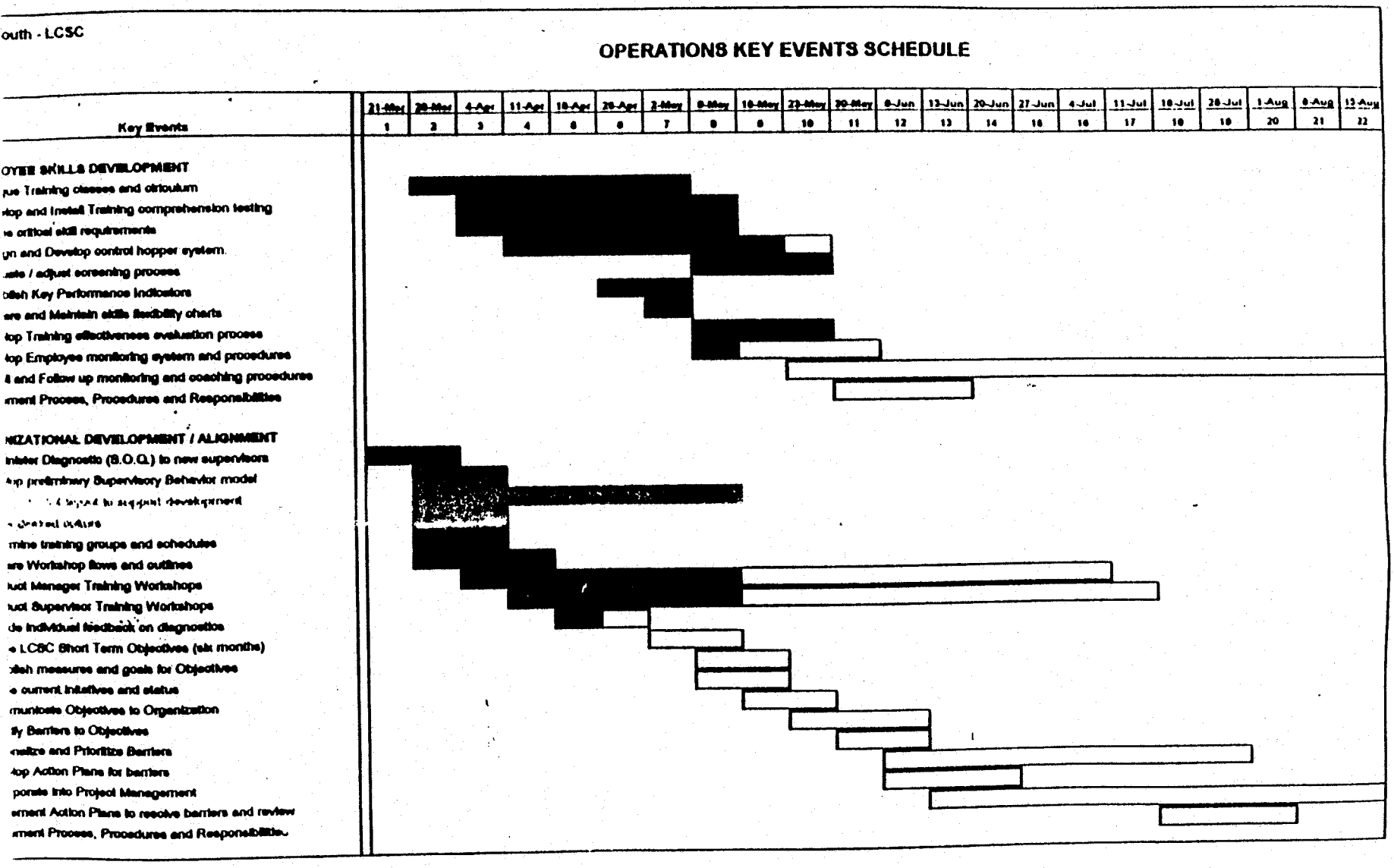
Learning cycle will be accelerated to upgrades in content and sequencing.

We expect to reduce most of these timetables and use the time for remedial training

Training questionnaire will be issued to the LCSC representatives who have been on the floor for 4 weeks since completing training The questionnaire is designed to provide identify the areas that need further support on the floor, and were not covered in training sessions Skills charts are being developed and maintained by the Managers to identify for each individual representative for remedial training and on the floor coaching.

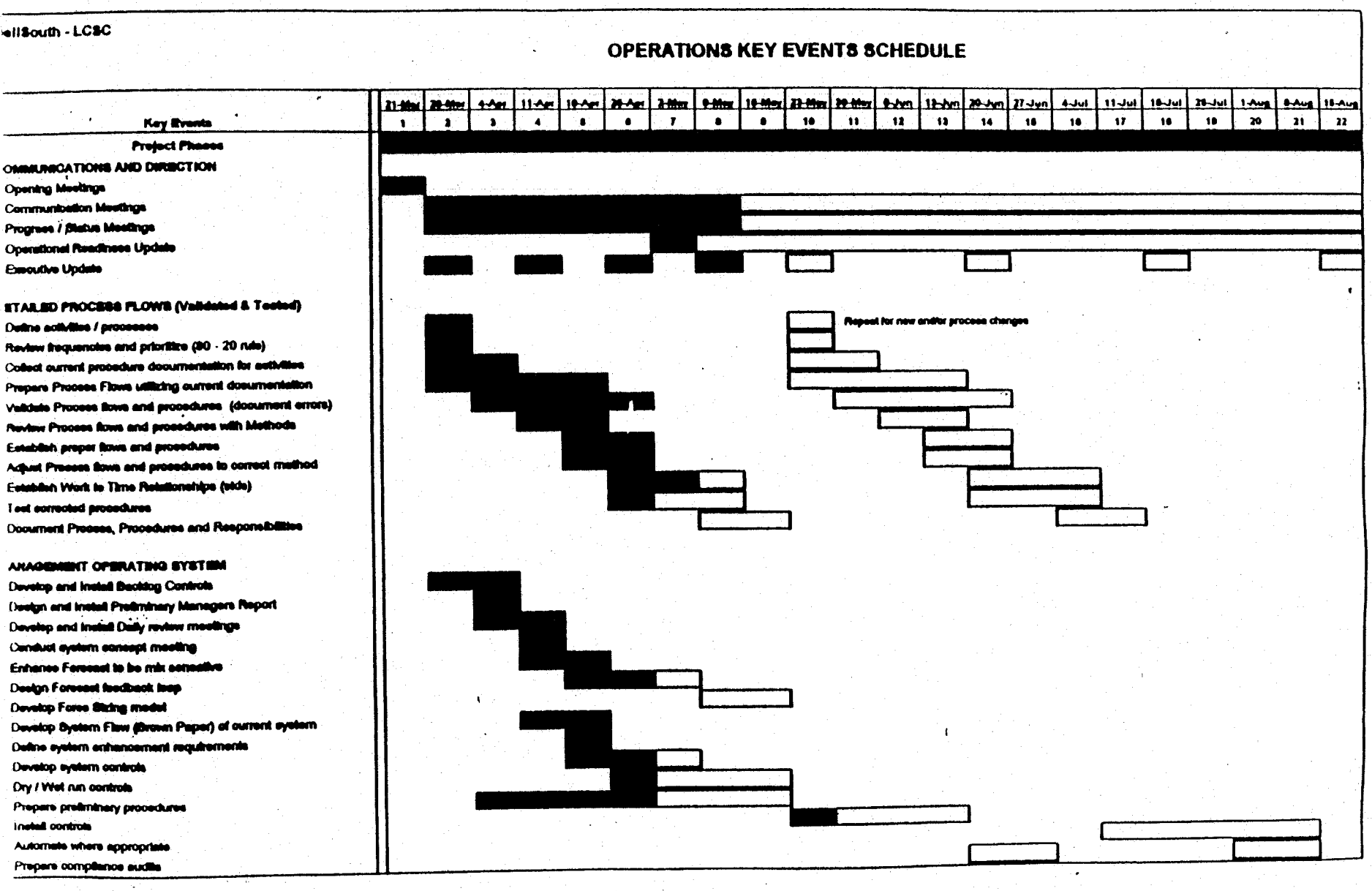
outh - LCSC

OPERATIONS KEY EVENTS SCHEDULE



ellSouth - LCSC

OPERATIONS KEY EVENTS SCHEDULE



BELLSOUTH - LCSC
ATLANTA, GA

SUMMARY OF FINDINGS AND APPROACH

STATUS CPLETE - COMPLETED
- IN PROGRESS
RED - IN PROGRESS

AREAS	FINDINGS	PROPOSALS	PHASES FOR DELIVERABLES: QUICK INSTALLATIONS PHASE I	INSTALLATION PHASE II	ADJUST & FOLLOW-UP PHASE III
MGMT. OPERATING SYSTEM (MOS)	ELEMENTS EXITS, BUT REQUIRE UPGRADES	DESIGN AND INSTALL ELEMENTS		INSTALL FORECAST FEEDBACK LOOP INSTALL PERFORMANCE CONTROLS	UPGRADE FORECAST FORMALIZE PROCEDURES
WORK PROCESS	NEEDS BETTER DEFINITION, AND SIMPLER NEEDS TO INTERNALIZE UP-GRADES	INSTALL PREDICTABILITY OF EXECUTION AND KNOW HOW TO REPLAT PROCESS			UP GRADE TO NEWLY DEVELOPED PRODUCTS AND AUTOMATION
EMPLOYEE SKILLS	INCOMPLETE TRAINING - DELV & CONTENT LACKS OTF SUPPORT AND EVALUATION	FILL THE GAPS IN TRAINING DELIVER SUPERVISOR SKILLS		CORRELATE COMPREHENSION TESTING TO FLOOR PERFORMANCE INCORPORATE FLOWS IN TRAINING	IMPLEMENT COACHING AND DEVELOPMENT PROCEDURES IDENTIFY AND SCHEDULE REMEDIAL TRAINING REQUIREMENTS
MANAGEMENT BEHAVIOR	LACKS STRUCTURED PARTICIPATION	DEVELOP BEHAVIOR MODEL EVALUATE AND REVISE		DEVELOP MONITORING AND COACHING PROCEDURES IMPLEMENT LAYOUT	FOCUS ON PERFORMANCE
ATTITUDES			ONE-ON-ONE DIAGNOSTIC FEEDBACK	FOLLOW UP ROUTINES TO ENGAGE THE OPERATING PROBLEMS	FOLLOW UP ROUTINES TO ENGAGE THE OPERATING PROBLEMS
QUALITY / SERVICE	NO EFFECTIVE MEASURES	DEVELOP TESTING PROCESS DEVELOP REPORTS		IMPLEMENT HOPPER (I) QUALITY & CYCLE REPORTING	CONTINUOUS IMPROVEMENT
LABOR UTILIZATION	DOCUMENTED 15 - 30 % LABOR WASTED	REDUCE COST THRU THROUGHPUT GAINS AND SUPERVISORY PERFORMANCE		ESTABLISH WORK TO TIME RELATIONSHIPS (RE'S) UTILIZE HOPPER TO IMPROVE CAPABILITIES	TIE RE'S AND PERFORMANCE FACTORS TO FORCE SIZING MODELS TEST MAX CAPABILITY THROUGH TEST ORDERS
GOALS AND STRATEGIES	LACKS SYNERGY AND INTEGRATED PLAN	DEFINE BUSINESS UNIT OBJECTIVES IMPROVE SYSTEM SOLUTIONS		CLARIFY EXPECTATIONS & ACTION EXECUTE THE PLAN, W/ FREQUENT REV.	MONITOR ATTAINMENT TO GAINS PROD QUAL & SERV OBJECTIVES RESULTS

SUMMARY			
COMPLETE	88%	0%	0%
BEHIND SCHEDULE	6%	0%	0%
NOT STARTED	0%	19%	100%

5/7/97

Detail, as a reference point the center operated at 0 50 LSR's per hour (3 75 per day) at the beginning of the project BellSouth has set a target of 3 73 LSR's per hour (28 LSR's per day) Theoretical capacity based upon manager's estimates, calculates to 4 27 LSR's per hour (32 per day) Theoretical capacity is based on the current mix and level of automation The fundamental barrier to exceed the target is that the input volume is not in BellSouth's control In addition, to test the capability should not be done with live orders Therefore, what is needed is a means to control the work input to test performance (quality, service, and productivity) The hopper concept with a backlog of test orders is being developed/installed to enable to test current capability ensuring operational readiness

PROJECT PHASES – See "Summary of Findings and Approach"

Quick Installations - Weeks 1 through 7 – Phase I of the project will focus on gaining control of the work and establishing the correct management behaviors / disciplines

Main Installation - Weeks 8 through 15 – Phase II of the project will focus on testing the capability of the group, and increase the requirements to approximate theoretical capacity Installation of systems for controlling performance. Schedule remedial training.

Adjust and Follow Up - Weeks 16 through 22 - Phase III of the project will set new targets (raising the bar), incorporating new products, perpetuating performance and making adjustments as required.

PROJECT UPDATE

Project is on last week of Phase I. Currently, 12 items are in progress and 15 items are completed. One item behind schedule. Have plan to recover in two weeks We project that by the end of Phase I all items but project management will be done Five items are ahead of schedule in installation phase two In summary, there are three organizations that DB&A is concentrating:

1. **Operations** - Working with Bill Bolt and the LCSC management to gain control of the work by the supervision spending more time with the employees and getting a handle on fundamental volumes, production numbers, backlogs, current employee skills, and department capability.
2. **Support** - Working with Eddie English and the support organizations to get them closer to the detail and focus on those activities that affect the performance on the floor concentrating in organization, skills, and the hand-off between support and operations.
3. **Training** - Working with Barbara Ayers to upgrade the delivery of the training material, testing that material, update the content of the presentation, and dramatically shorten the learning cycle for UNE and more complex work

I. Operations – Detail Write Up

Control of Work - Steps have been taken to gain control of the work. Two of the most significant steps are

1. Development of process flows and procedures to identify the work
2. Installation of a backlog control to manage work.

All process flows have been detailed Procedures are being tested

Backlog controls were designed and installed with the front line supervision to focus on fundamentals of running the business, i.e. backlog levels, distribution, rate of input and rate of processing. As a result, work has been redistributed for balance of the workload and for improved cycle time. The front line managers have begun to recognize differences in individual performance (quality, service, and rate of production), by following up every two hours with every employee. The data collected on the backlog control is summarized on a managers report each day and reviewed with the director. Demonstrated a significant improvement in Birmingham (LSR's/Hr). Atlanta will follow as volume picks up. For further details, see attached findings and approach chart.

Management Behavior / Disciplines - Roles and Responsibilities were developed for every level. They were developed with Bill Bolt and his staff. Identified and listed current supervisory activities that were interfering with performance enhancement. In summary, a manager should spend 6.5 hours per day, (70%+ of his / her day) should be spent on the floor with the service representatives. During the analysis 12% of the supervisor's time was spent with their people. We estimate at this time that the supervisors are spending approximately 30% to 35% with their people. The rest of the day the time is spent on other activities such as administrative or activities that the support organization should be handling. To help with the supervisory contact with the employees, new floor plans have been developed, where the service representatives in a "U shaped" layout with the supervisor in the middle. Tiffany Ray has received the layout and is preparing for implementation.

II. Support – Detailed Write Up:

Force Sizing / Forecast Feedback Loop – Jim Freeman is responsible of developing a force sizing model for the LCSC. The model is an activity based model that currently uses supervisory estimates to determine the hours required to complete the work and the total hours required on roll to support those hours. The variables associated with the model are: volumes, mechanization fallout, reasonable expectations, and current productivity levels. The ability to model different situations has been built in.

For the short term, the focus is placed on developing the feedback loop, rather than completing the development of the forecast. Volume to forecast is about 10-20%, but resources applied are on target to forecast. Thus, the critical information needed is the capability of the organization as it is currently crewed. The actions required are to keep the capability ahead of the actual volumes coming into the centers. Such capability should be tested with the hopper concept.

EXECUTIVE UPDATE
FINAL REPORT
PHASE I - QUICK RESULTS

Date: May 9, 1997

To: Krista Tillman, Operations Vice President
BellSouth, Interconnection Services

From: James LaRue, Chief of Operations
DeWolff, Boberg and Associates

Project #: 9706

Project: LCSC (Local Carrier Service Center)

- This project involves the LCSCs located in Birmingham, Al. and Atlanta, Ga., along with the service support groups located at the BellSouth Center Atlanta.

- The project was authorized for a 22-week period - to start March 17, 1997 and to finish August 15, 1997. We have completed the seventh week and this is the final report for Phase I of the project. For more detail, look at project phases in this write-up and in the attached "Summary of Findings and Approach."

- The purpose of the project is to accelerate Operational Readiness. Four key deliverables of this project include:

    - Detailed process flows that are validated, tested and measured.
    - Improved Training process that delivers qualified candidates.
    - Define Key Performance Indicators.
    - Enhance and install Management Operating System to effectively manage the Key Performance Indicators.

- The major benefits of this effort are:

    - Improved operational efficiency.
    - Enhanced service & quality to CLECs.
    - Assured Operational Readiness to meet end-of-year CLEC forecasts.
    - Significant ongoing expense reduction.

I. PROJECT PHASES

A. **Quick Results** - Weeks 1 through 7 – Phase I of the project focused on gaining control of the work and establishing the correct management behaviors / disciplines.

B. **Main Installation** - Weeks 8 through 15 – Phase II of the project will focus on testing the capability of the group, and will tighten the management routines/systems for controlling performance. Increasing capability towards theoretical capacity is inclusive of working at the right quality and providing competitive service at the appropriate cost. BellSouth has set a target of 3.73 LSR's per employee hour (28 LSRs per day/employee). Theoretical capacity has been set using managers' estimates calculated to 4.27 LSR's per employee hour (32 per day/employee). Also, the theoretical capacity is based on the current volume mix and level of automation. The fundamental barrier to meet the target is twofold: the volume input, and the quality of the orders received from CLECs. Both barriers are not in BellSouth's control; to stay ahead of the requirements we will avoid testing the teams' capability through live orders. Therefore, what is needed is a means to control the work input and the work mix to test performance (quality, service, and productivity). "The Hopper" is a process that validates such capability by having a ready backlog of test orders to supplement the orders received. The concept of introducing test orders is being developed and installed to ensure operational capabilities are ahead of the requirements.

C. **Adjust and Follow Up** - Weeks 16 through 22 - Phase III of the project will set new targets (raising the bar), incorporate new products, perpetuate performance, and make adjustments as required.

II. PROJECT UPDATE

We are on the 8th week of the project, Phase I is complete. To date, the program is ahead of schedule. Phase I activities (7 weeks) included most "quick result" initiatives that began March 17, and have been completed by May 2nd. Currently, in total, 12 items are in progress, 15 items are completed, there are 5 items ahead of schedule in the implementation of Phase II, and 1 item is behind schedule. The item that is behind schedule is the formalizing of the overall plan. We have an action plan to complete this item in two weeks; we will complete the detail, formalize it on paper, and incorporate it into the total project plan. During Phase I, DB&A approached the implementation of quick results through individual strategies for each organization affected by the project. There are three areas that were concentrated on:

1. **Operations Organization** – With Bill Bolt we are developing the LCSC's management to gain control of the work by having the managers spend more time with each employee. This will enable them to get a handle on fundamental volumes, production numbers, backlogs, current employee skills, and department capability.

2. **Support Organization** - With Eddie English we are developing the support organizations to increase synergy with operations by getting support closer to the detail, and focusing on those activities that affect performance. Getting closer to the detail means to give greater emphasis to the hand-off from the support groups to the operating groups.

3. **Training Organization** - With Barbara Ayers we are developing the training organization by upgrading the delivery of the training material, developing/installing/testing the material covered in training, updating the content of the presentation, and dramatically shortening the learning cycle for UNE and more complex work.

III. Operations Organization – Write up of key details:

A. Improved Control of the Work - Steps have been taken to gain control of the work. Two of the most significant steps are:

1. Development of process flows, with proper methods to complete the work.

2. Installation of a backlog control to manage work.

All process flows have been detailed and are being tested. Backlog controls were designed and installed with the front-line supervision to focus on the fundamentals of running the business (i.e., backlog levels, distribution of work, rate of input, and rate of processing). As a result, the work has been redistributed for better balance of the workload, resulting in improved response time. The front-line managers have begun to recognize and act on differences in individual performance (quality, service, and rate of production) by following up every two hours with every employee. The data collected on the backlog control is summarized on the manager's report each day and should be reviewed with the director. A significant productivity improvement has been demonstrated in Birmingham. Atlanta will follow as volume picks up.

B. Management Behavior / Disciplines - Roles and Responsibilities were developed with Bill Bolt and his staff for every employee and management level. We identified and listed current supervisory activities that were interfering with performance enhancement. In summary, a manager should spend 6.5 hours per day (70%+ of his / her day) on the floor with the service representatives. During the analysis period, 12% of the managers' time was spent with their people. We estimate at this time that the managers are spending approximately 30% to 35% of their working hours with their team. The increase in supervisory time is primarily due to changing the focus of the manager from actually handling the work (clarifications, difficult orders, etc.) to coaching employees to complete the work themselves. This expands the managers' effectiveness. Currently, the remainder of the manager's day is spent on other activities such as administrative work or other duties required in a start- up operation. To help supervisory contact with employees new floor plans have been developed placing the service representatives in a "U shaped" layout (with the manager in the middle). Tiffany Ray has received the layout and is preparing for implementation.

IV. Support Organization – Write up of key details:

A. Force Sizing / Forecast Feedback Loop – DB&A along with Jim Freeman is responsible for developing a Force Sizing Model for the LCSC. The model is activity-based allowing for the determination of the resources required to complete the work. The current version of the model uses management estimates, which later will be standardized through observation. The variables associated with the Force Sizing Model are: volumes (forecasted and actual) by product, level of mechanization, reasonable expectations, and current productivity levels. The ability to model different scenarios has been built into the algorithm.

For the short term, the focus is placed on developing the feedback loop rather than completing the development of the forecast. Actual LSR volume to forecast is running about 10-20%; but the resources BellSouth has applied are on target to forecast. Testing is required to keep the capability ahead of the actual volumes coming into the centers. Such capability is being tested by work group and by product type with the "Hopper" concept.

B. Project Schedule – The goal is to insure operational readiness with the required processes, systems, organization, measurements, and skilled personnel to handle/process orders competitively within established service levels. The action items required for success have been defined for/by the support group managers. The strategy for accelerating the implementation of action item initiatives is to get support closer to the detail of the operation. A staff meeting to review the status of the project schedule has been implemented. What is needed to bring this item up to schedule is compliment the detail and to formalize the plan.

C. **Capability Issues** - LCSC has hired the resources to handle the volume forecasted to enter the centers. However, the resource capacity is largely untested since the volume/mix has not materialized. One of the deliverables in the project is to address the testing capability issue ahead of the actual requirements. The "Hopper" will test the capacity of the center by introducing artificial work volume into the center. Progressively testing the theoretical capacity for an expected work mix will generate real available capability for each team. Currently, Martha Jackson has been assigned as the driver for this project. A method to implement this initiative has been designed and is currently under testing. The action items have gained momentum and we are on schedule to move from a testing mode to implementation.

V. **Training Organization – Write up of key details:**

A. **Selection & Screening Process** – Some of the fundamental skills required from a potential service representative candidate include: visual perception of names/numbers/acronyms, typing, and reading. The current screening process requires potential service representatives to take the GQT (General Qualifications Test). The BST Job Title/Test Matrix requires that the CS-TAP is taken by all candidates, along with keyboard tests (DEST or CTT). What needs correction is the variance in the skill level of the candidates while in training. The training can be more effective with more homogeneous groups. Another part of the skill variance results from some tests being optional. And yet the variance can be improved through better planning.

There is a plan in place to remedy variances in the skill level of the candidates. The training sequence of the different types of products should be based on the individuals previous experience. Further interviews will be conducted to select candidates for UNE and complex work at the beginning of the training cycle to properly group candidates with similar strengths. Along this vein, skills charts are being developed and maintained by the Managers to identify each individual representative for remedial training and on the floor coaching.

B. Content of Course Material and Testing – We attended the entire single line residential / business training sessions. During that course we identified improvement opportunities that should be taken advantage of in the delivery, testing, modular training, sequencing, and the actual training content. The current residential/business single line training took 4.4 weeks to complete. We would like to reduce this training cycle to 3.0 weeks. Learning cycles will be accelerated due to upgrades in material content and sequencing of modules. We expect to reduce most of the training timetables, and use some of the time for testing and remedial training. The training questionnaire is designed to identify the areas that need further support from the training organization and/or management. We expect the training cycle for facility based orders to be reduced to one fifth of the current cycle.

BELLSOUTH - LCSC
ATLANTA, GA

SUMMARY OF FINDINGS AND APPROACH

STATUS GREEN - COMPLETED
- IN PROGRESS
RED - IN PROGRESS

Date Updated: May 2, 1997 Week 7 of 22

AREAS	FINDINGS	PROPOSALS	PHASES FOR DELIVERABLES: QUICK RESULTS PHASE I	MAIN INSTALLATION PHASE II	ADJUST & FOLLOW-UP PHASE III
MGMT. OPERATING SYSTEM (MOS)	ELEMENTS EXITS, BUT REQUIRES UPGRADES.	DESIGN AND INSTALL ELEMENTS	[redacted]	INSTALL FORECAST FEEDBACK LOOP	UPGRADE FORECAST
			[redacted]	INSTALL PERFORMANCE CONTROLS	FORMALIZE PROCEDURES
WORK PROCESS	NEEDS BETTER DEFINITION, AND SIMPLER	INSTALL PREDICTABILITY OF EXECUTION	[redacted]	[redacted]	UP GRADE TO NEWLY DEVELOPED
	NEEDS TO INTERNALIZE UP-GRADES	AND KNOW HOW TO REPEAT PROCESS	[redacted]	DESIGN, VALIDATE, TEST ALL FLOWS	PRODUCTS AND AUTOMATION
EMPLOYEE SKILLS	INCOMPLETE TRAINING - DELIVERY & CONTENT	FILL THE GAPS IN TRAINING	[redacted]	CORRELATE COMPREHENSION TESTING TO FLOOR PERFORMANCE	IMPLEMENT COACHING AND DEVELOPMENT PROCEDURES
	LACKS ON THE FLOOR SUPPORT AND EVALUATION	DELIVER FUNCTIONAL REPS	[redacted]	INCORPORATE FLOWS IN TRAINING	IDENTIFY AND SCHEDULE REMEDIAL TRAINING REQUIREMENTS
MANAGEMENT BEHAVIOR	LACKS STRUCTURED PARTICIPATION	DEVELOP BEHAVIOR MODEL	[redacted]	DEVELOP MONITORING AND COACHING PROCEDURES	FOCUS ON PERFORMANCE
		EVALUATE AND INSTALL	[redacted]	IMPLEMENT LAYOUT	
MANAGEMENT ATTITUDES	PASSIVE IN ASSIGNMENT / FOLLOW UP	PROACTIVE ENGAGEMENT	[redacted]	FOLLOW UP ROUTINES TO ENGAGE THE	FOLLOW UP ROUTINES TO ENGAGE THE
			ONE-ON-ONE DIAGNOSTIC FEEDBACK	OPERATING PROBLEMS	OPERATING PROBLEMS
QUALITY / SERVICE	NO EFFECTIVE MEASURES	DEVELOP TESTING PROCESS	[redacted]	IMPLEMENT HOPPER	CONTINUOUS IMPROVEMENT
		DEVELOP REPORTS	[redacted]	QUALITY & CYCLE REPORTING	
LABOR UTILIZATION	DOCUMENTED 15 - 39% LABOR WASTED	REDUCE LOST TIME THROUGH TRAINING	[redacted]	ESTABLISH WORK TO TIME RELATIONSHIPS (RE'S)	TIE RE'S AND PERFORMANCE FACTORS TO FORCE SIZING MODELS
		AND SUPERVISORY INTERVENTION	[redacted]	UTILIZE HOPPER TO IMPROVE CAPABILITIES	TEST MAXIMUM CAPABILITY THROUGH HOPPER ORDERS.
GOALS AND STRATEGIES	LACKS SYNERGY AND INTEGRATED PLAN	DEFINE THE OBJECTIVES AND MEASURES	[redacted]	CLARIFY EXPECTATIONS & ACTION	MONITOR ATTAINMENT TO GAINS PROD.
		IMPROVE SYNERGY-SUPPORT & OPERATIONS	[redacted]	EXECUTE THE PLAN, WITH FREQUENT REVIEW	QUALITY AND SERVICE OBJECTIVES RESULTS

SUMMARY			
COMPLETE	88%	6%	0%
BEHIND SCHEDULE	6%	0%	0%
NOT STARTED	0%	25%	100%

EXECUTIVE UPDATE

PHASE II – MAIN INSTALLATIONS

Date: July 8, 1997

To: Krista Tillman, Operations Vice President
BellSouth, Interconnection Services

From: James LaRue, Chief of Operations
DeWolff, Boberg and Associates

Project #: 9706

Project: LCSC (Local Carrier Service Center)

- This project involves the LCSCs located in Birmingham, AL and Atlanta, GA, along with the service support groups located at the BellSouth Center Atlanta.

- The project was authorized for a 22-week period - to start March 17, 1997 and to finish August 15, 1997. This is the status report for the end of Phase II of the project.

- The purpose of this project is to accelerate Operational Readiness. Four key deliverables of this project include:

  - Detailed process flows that are validated, tested and measured.
  - Improved Training process that delivers qualified candidates.
  - Define Key Performance Indicators.
  - Enhance and install Management Operating System to effectively manage the Key Performance Indicators.

- The major benefits of this effort are:

  - Improved operational efficiency.
  - Enhanced service & quality to CLECs.
  - Assured Operational Readiness to meet end-of-year CLECs forecasts.
  - Significant ongoing expense reduction.

I. PROJECT PHASES

A. Quick Results - Weeks 1 through 7 – Phase I of the project focused on gaining control of the work and establishing the correct management behaviors / disciplines.

B. Main Installation - Weeks 8 through 15 – Phase II of the project focused on testing the capability of the group, and tightening the management routines/systems for controlling performance. Increasing capability towards theoretical capacity is inclusive of working at the right quality and providing competitive service at the appropriate cost. Theoretical capacity has been set using managers actual observations calculated to 3.98 LSRs per employee hour (30 per day/employee). Note; the theoretical capacity is based on the current volume mix and level of automation. "The Hopper" is a process that validates the center's capability by having a ready backlog of test orders to supplement the orders received. The concept of introducing test orders was developed and successfully installed and is currently being used to ensure operational capabilities are ahead of the customer requirements. (see current results and capabilities)

C. Adjust and Follow Up - Weeks 16 through 22 - Phase III of the project will set new targets (raising the bar), incorporate new products, perpetuate performance, and make adjustments as required. Also, we expect to continue to make progress in alleviating fundamental barriers that are not in BellSouth's control. The fundamental barriers are the lack of predictability of work volume input, and the lack of completeness (quality) in the orders received from CLECs. Therefore, the continued use of The Hopper will be needed until better forecast from the CLECs is available. Also, a process needs to be installed to provide feedback to the CLECs about their level of incomplete/incorrect orders. LSRs with incomplete or erroneous information make it necessary to request for clarification thus delaying the processing time and increasing the amount of rework. For example the percentage of AT&T and MCI LSRs needing clarification the week of June 25th was 64.6%. The average number of times these LSRs were sent back in order to complete the processing was 1.7. This high level of clarifications suggest improvement is required in the CLEC's preperation of the LSR, (Local Service Request). The amount of time that is required to process an order including clarification is more than twice what it should take at standard without the rework.

II. PROJECT UPDATE

We completed the 15th week of the project on June 27th. Phase II is now complete. To date, the program is ahead of schedule both against schedule and in results. All of the scheduled items are completed (32 Key items). The remaining 16 activities in Phase III are in progress and expected to be completed on or ahead of schedule. For more detail, look at project phases in this write-up and in the attached "Summary of Findings and Approach."

There are three areas of concentration:

1. **Operations Organization** – Along with Bill Bolt, Tom Moran, and Bill Thrasher we are developing the LCSC's management to increase the control of the work by having the managers internalize an employee follow-up routine. This will enable the managers to shift work where required, identify operating opportunities, maintain volumes, production numbers, backlog status, current employee skills, quality and service levels, and department capability.

2. **Support Organization** – Along with Eddie English and Diane Chang we are developing the support organizations to continue to increase synergy with operations by aligning the organizations under singular measurable goals.

3. **Training and Development** - We are developing a new training organization that is responsible for the employee's continuous development process. There are shared responsibilities between the support and operating organizations for the management of the process. However, key employees responsible for continuous development will report directly to the heads of LCSC's operations and support. This enhancement in training is geared to further accelerate the preparation and delivery of training material, developing/installing/testing material covered in training, updating the content of the presentation as enhancements to products are made, and dramatically shortening the total learning cycle for all employees.

II. Operations Organization – Write up of key details:

A. Improved Control of the Work

Phase I, (Quick Results)

- Process Flows were developed to define the proper methods to process work and Backlog Controls were installed to understand and control work volume levels.

Phase II, (Main Installation)

- Process flows have been validated and tested to ensure quality and accurate processing. In addition, work instructions have been prepared which provide step by step instructions for order processing.
- Backlog Controls were enhanced to measure Service, Quality and Cost. Cost factor is measured as LSRs / Hour. Quality is measured by two methods: Percent First Time Quality and Service Orders pending on the Questionable Activity Report. Service indicators are measured by the gross cycle time of an LSR and the speed in which Service representatives answer the phone. A Director's Report has been installed that summarizes the key operating indices which are reviewed daily by the Center Directors.
- The Order Tracking System has been enhanced to provide greater definition to the types of LSRs being processed and the reasons that LSRs are going to clarification. The Order Tracking System is also providing data on processing duration and clarification duration.

B. Management Behavior / Disciplines

Phase I, (Quick Results)

- Management Roles and Responsibilities were defined and work area layouts were designed.

Phase II, (Main Installation)

- The percent of time that the Managers spend with the team members continues to increase. The supervisory time has increased from 12% of the manager's day, measured during the Analysis; to 30% at the end of Phase I, to about 65% currently. This increased supervision has improved first time quality and service demonstrated by a reduction in escalation's by as much as ½ at the AVP level.
- A Continuous Development Process has been developed to highlight and address employee training and/or skill deficiencies.
- The new floor layouts are implemented into the 14th floor, in Birmingham, where the LCSC operations will move August 17th. In Atlanta, a new work area layout has been implemented for some employees, the remainder are awaiting a decision about a possible relocation of the operation.

C. Quality, Service and Labor Utilization

In Phase I, (Quick Results)

- The Hopper was developed, preliminary work estimates were developed and an approach to measure quality and service was established.

Phase II, (Main Installation)

- The Hopper has been installed and is being used as a work simulation to evaluate Service Representative performance (Quality and Productivity) capabilities, and as a supplement to the workload to enable the managers to meet performance expectations.
- Work to Time Relationships (RE's) have been established for each activity that the LCSC currently performs.
- Quality measures have been established and will be measured by Service Representative. There will be two quality measures, First Time Quality and Orders Pending on the Questionable Activity Report. First Time Quality will measure the ability of the Service Representative to process an order, error free. Orders Pending on the Questionable Activity Report will ensure that orders are cleared on a timely basis when and if they have errors. Reformatting of the Questionable Activity Report is complete.
- Service measures have been established: (See Service Indicators Chart)
  - Order processing duration is measured in hours from the point of receipt to firm order commitment time (FOC). In May average duration was 56.9 hours. First week of July average duration 30.9 hours, a 46% improvement.
  - Percent of LSRs processed within 48 hours in May was 50%, the first week of July was 76%, a 52% improvement.
  - Percent of calls answered within 16 seconds is about 90%. Trend from May through June has 5% improvement trend.
  - Percent of calls abandoned is about 17%. Trend from May through June has a 23% improvement trend.
- The Service indicators demonstrate a significant improvement and are currently meeting reasonable expectations. In Phase III new targets will be established.
- Productivity has improved 74% since first two weeks of Project, as measured in LSRs processed per hour. (See Three Part Graph - LSRs Per Hour)
- When measured by SOCS orders generated, the Productivity improvement is 94%. (See Three Part Graph - SOCS Orders Per Hour)
- From March 23rd through July 6th, SOCS orders generated has increased at a rate of 12% per week. (See SOCS Orders Generated Graph)

IV Support Organization

A. Force Sizing / Forecast Feedback Loop

In Phase I, (Quick Results)

- An activity based force-sizing model was developed.

Phase II, (Main Installation)

- Defined and began tracking key forecast indicators by Resale, UNE and Complex.
- Changes made to Order Tracking System to provide more definition to types of LSRs being processed.

B. Project Schedule

In Phase I, (Quick Results)

- Defined what a Project Schedule should be, developed format and defined Key events.

Phase II, (Main Installation)

- Project Schedule developed with appropriate level of detailed activities to focus the actions of the support organization and better insure they are working on the appropriate items.
- Schedule dates have been developed to better communicate expectations and priorities.
- Structured weekly staff meetings have been installed with status reports and status to schedule. It also gives them the ability to get assistance on items that may be in danger of missing scheduled due dates.

C. Capabilities

In Phase I, (Quick Results)

- The Hopper concept was developed to enable artificial work to be input in order to test capabilities.

Phase II, (Main Installation)

- The Hopper has been installed into the LCSC operations and has provided the ability to not only tests the departmental theoretical capabilities but also the individual Service Representative capabilities.
- Current staffing and demonstrated performance place the LCSC capabilities at 2065 LSRs per day. In the month of June, 23% of the work force was either in training, absent or on vacation, **therefore the true tested capability of 1590 LSRs per day is more than twice the current level of work sent in by the CLECs**. (See Capacity Graph)

- The current level of processing stands at 742 per day (June Average). In June, 10% of the LSRs processed were test (Hopper) orders.

V. Training and Development

A. Selection & Screening Process

In Phase I, (Quick Results)

- Definition of skill requirements was defined and appropriate testing determined and installed to screen for these entry-level skills.

Phase II, (Main Installation)

- The expectations of a functional Service Representative were defined. A site visit for all new LCSC candidates will include a review of performance expectations (Quality and Efficiency).

B. Content of course material and testing

In Phase I, (Quick Results)

- Developed comprehension tests to validate learning process and instituted some changes in the delivery and content of course material.

Phase II, (Main Installation)

- Developed work simulation evaluation using the Hopper to appraise Service Representative's capabilities (Quality and Efficiency). Creating a Modular Training agenda for Single Line Resale (DOE) that will reduce training time from six weeks to two weeks. For a few who do not pass the work simulation, there will be a follow up instruction for three days. All the modules have comprehension testing. The comprehension testing will be administered prior to the training and after the module has been delivered.
- Modular Training Agendas need to be prepared for the other order types next.
- LEO training module format, content, and delivery has taken place. LEO Module developed to increase capacity of LCSC to handle AT&T volume received through LEO. From beginning to end, the development of the module through the delivery of all Atlanta personnel took three weeks.
- Results of LEO training in Atlanta:
  - Prior to training in late May, the Work in Process bucket contained 217 PONS. After training on July 3rd, the Work in Process bucket contained 46 PONS, only 4 of which required management attention.
  - Percent of AT&T LSRs processed within 24 hours improved 7%, (89% to 95%). (See AT&T FOC's under 24 hours chart)
  - LSRs per hour improved 89%. (0.90 to 1.70 LSRs per Hour). (See AT&T LSRs per hour chart)

PHASE III (Adjust and Follow up)

- All Phase III items are in process.
- Phase III Key Events:
  - Formalize system procedures developed and installed.
  - Implement Service Representative Continuous Development Process
  - Develop CLEC evaluation method.
  - Further increase LCSC capabilities.
  - Develop compliance audits.

BELLSOUTH - LCSC
ATLANTA, GA

SUMMARY OF FINDINGS AND APPROACH

STATUS GREEN - COMPLETED
- IN PROGRESS
RED - IN PROGRESS

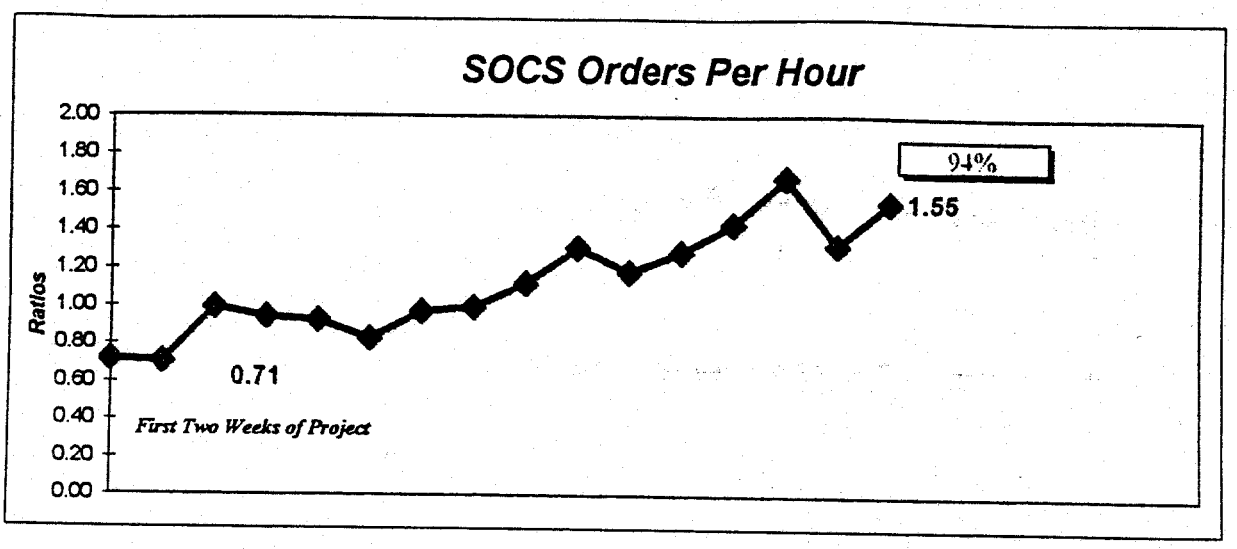
Date Updated: June 20, 1997 Week 14 of 22

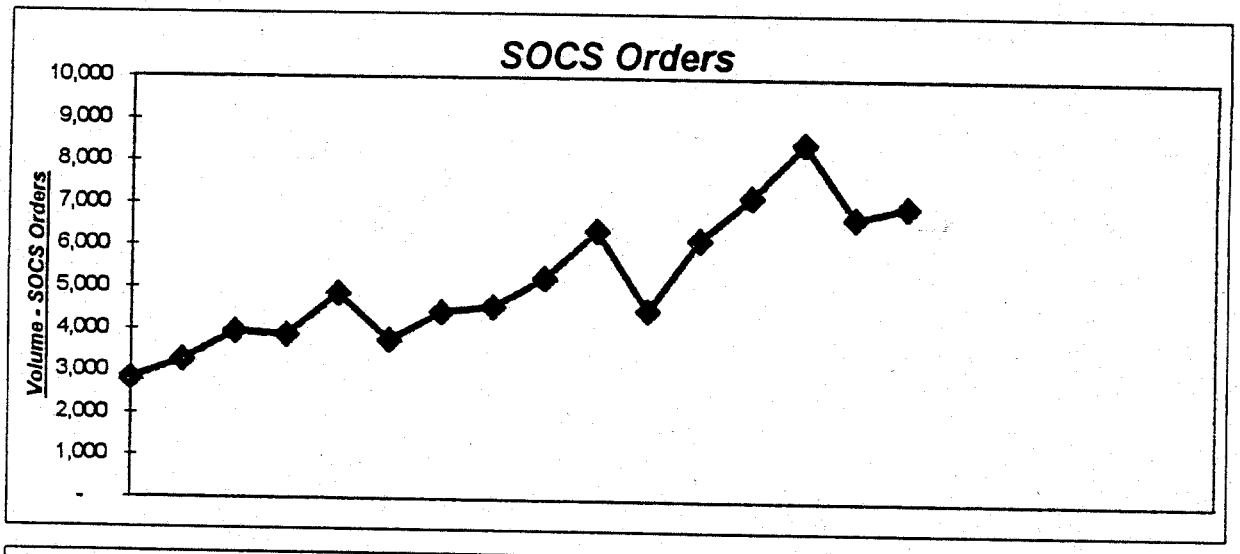
AREAS	FINDINGS	PROPOSALS	PHASES FOR DELIVERABLES		
			QUICK RESULTS PHASE I	MAIN INSTALLATION PHASE II	ADJUST & FOLLOW-UP PHASE III
MGMT. OPERATING SYSTEM (MOS)	ELEMENTS EXITS, BUT REQUIRES UPGRADES.	DESIGN AND INSTALL ELEMENTS	[illegible]	[illegible]	UPGRADE FORECAST FORMALIZE PROCEDURES
WORK PROCESS	NEEDS BETTER DEFINITION, AND SIMPLER NEEDS TO INTERNALIZE UP-GRADES	INSTALL PREDICTABILITY OF EXECUTION AND KNOW HOW TO REPEAT PROCESS	[illegible]	[illegible]	ALIGN PROCESS FLOWS AND PROCEDURES INSTALL PROCESS WITH LCSC MGMT
EMPLOYEE SKILLS	INCOMPLETE TRAINING - DELIVERY & CONTENT LACKS ON THE FLOOR SUPPORT AND EVALUATION	FILL THE GAPS IN TRAINING DELIVER FUNCTIONAL REPS	[illegible]	[illegible]	IMPLEMENT COACHING AND DEVELOPMENT PROCEDURES IDENTIFY AND SCHEDULE REMEDIAL TRAINING REQUIREMENTS
MANAGEMENT BEHAVIOR	LACKS STRUCTURED PARTICIPATION	DEVELOP BEHAVIOR MODEL EVALUATE AND INSTALL	[illegible]	[illegible]	INSTALL CONTINUOUS DEVELOPMENT PROGRAM FOCUS ON PERFORMANCE
MANAGEMENT ATTITUDES	PASSIVE IN ASSIGNMENT / FOLLOW UP	PROACTIVE ENGAGEMENT	[illegible]	[illegible]	INSTALL WEEKLY TEAM MEETINGS EMPLOYEE INVOLVMENT IN PROBLEM SOLVING
QUALITY / SERVICE	NO EFFECTIVE MEASURES	DEVELOP TESTING PROCESS DEVELOP REPORTS	[illegible]	[illegible]	IMPROVE FIRST TIME QUALITY TO 85% DEVELOP CLEC EVALUATION METHOD
LABOR UTILIZATION	DOCUMENTED 15 - 39% LABOR WASTED	REDUCE LOST TIME THROUGH TRAINING AND SUPERVISORY INTERVENTION	[illegible]	[illegible]	TIE RE'S AND PERFORMANCE FACTORS TO FORCE SIZING MODELS TEST MAXIMUM CAPABILITY THROUGH HOPPER ORDERS.
GOALS AND STRATEGIES	LACKS SYNERGY AND INTEGRATED PLAN	DEFINE THE OBJECTIVES AND MEASURES IMPROVE SYNERGY-SUPPORT & OPERATIONS	[illegible]	[illegible]	MONITOR ATTAINMENT TO GAINS IN PERFORMANCE. MONITOR QUALITY AND SERVICE OBJECTIVES RESULTS

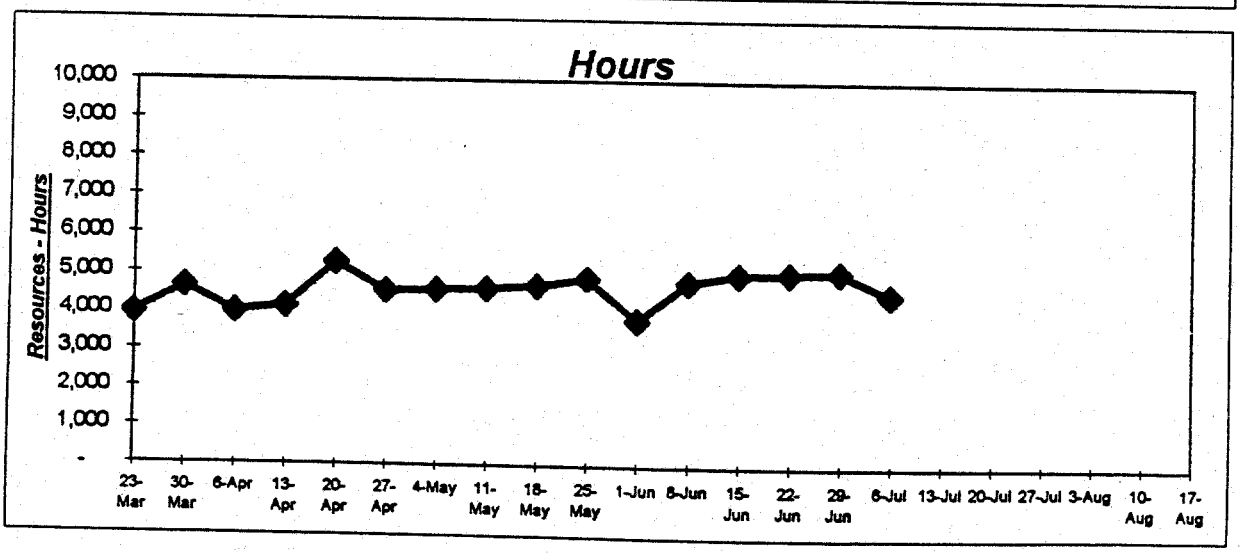
SUMMARY			
COMPLETE	100%	100%	0%
BEHIND SCHEDULE	0%	0%	0%
NOT STARTED	0%	0%	0%

BellSouth
LCSC

Performance Trends



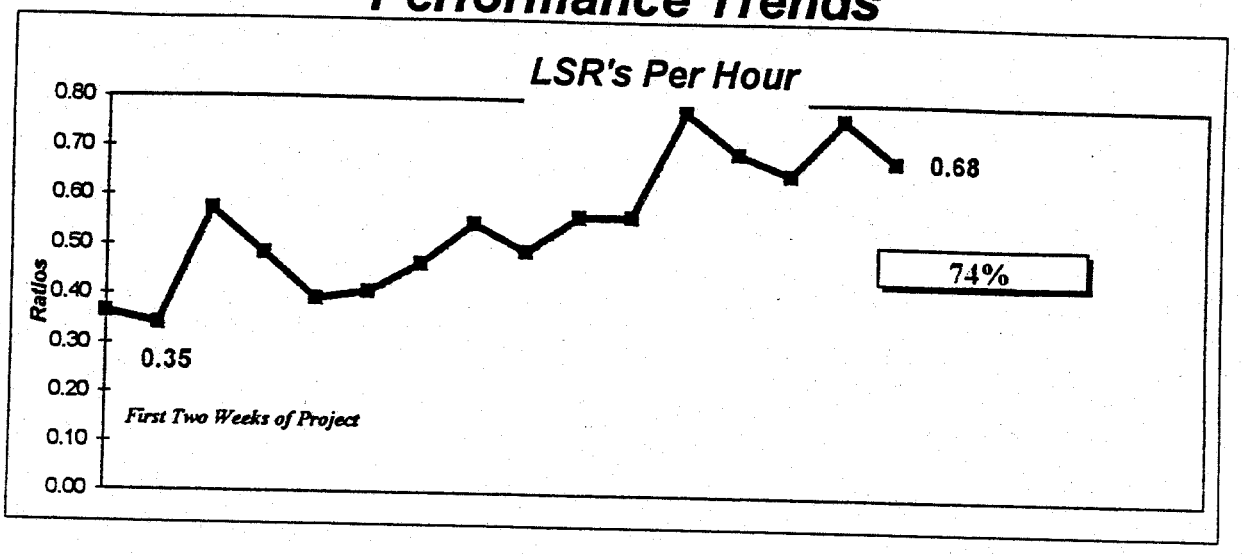


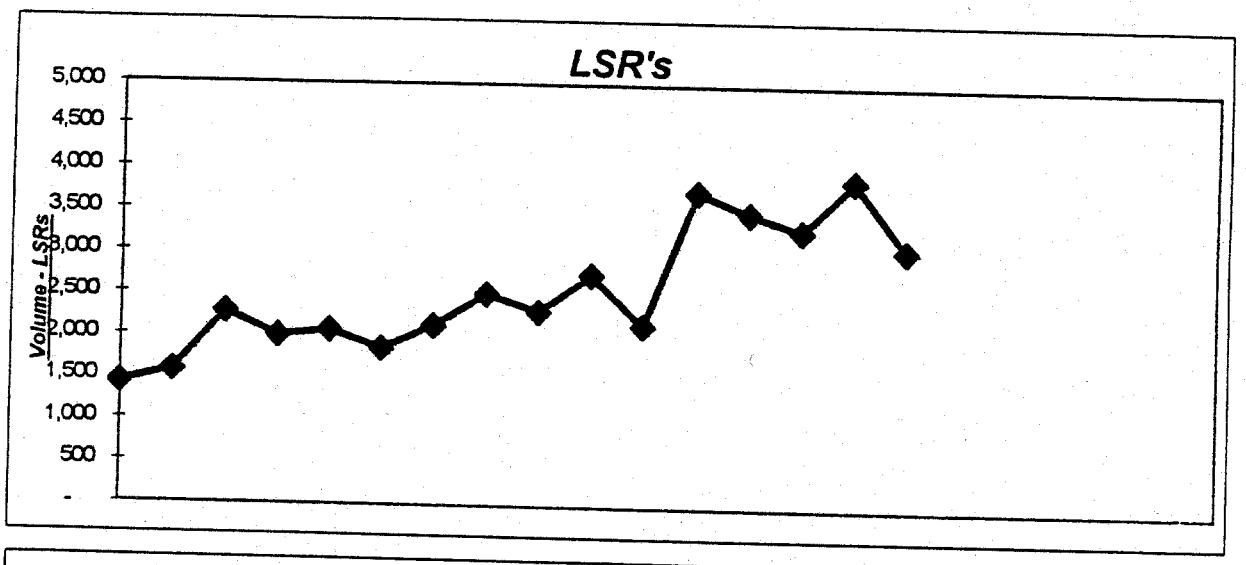


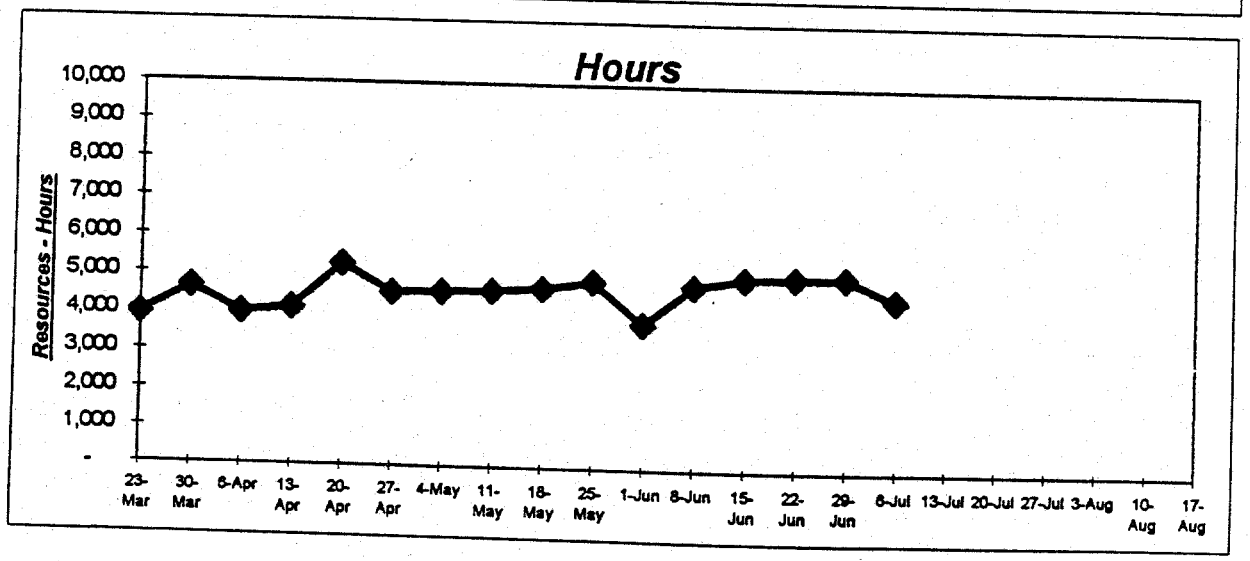
Source:
LSR's - LON Report from Ron Moore
Hours - MTR Report from James Saville

BellSouth
LCSC

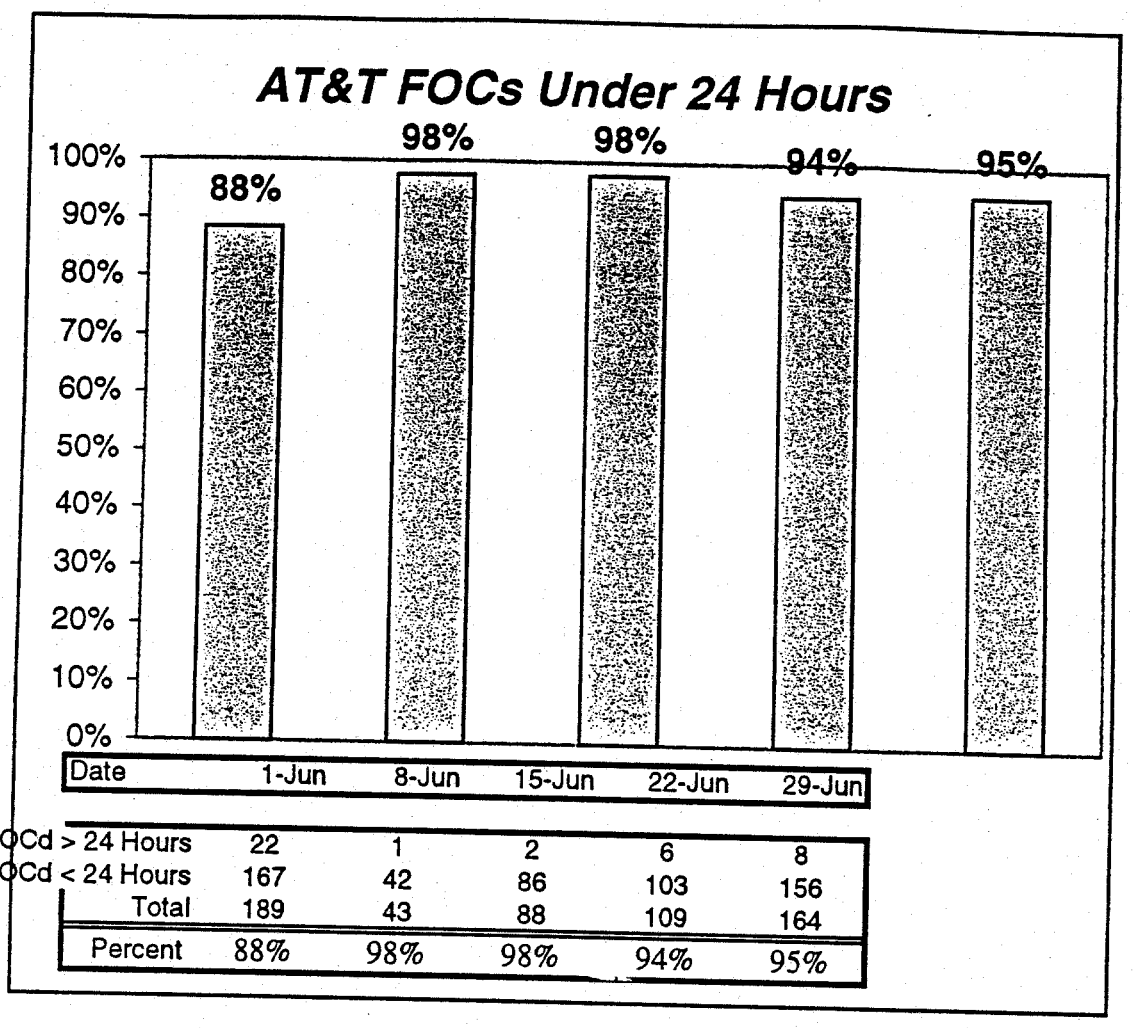
Performance Trends



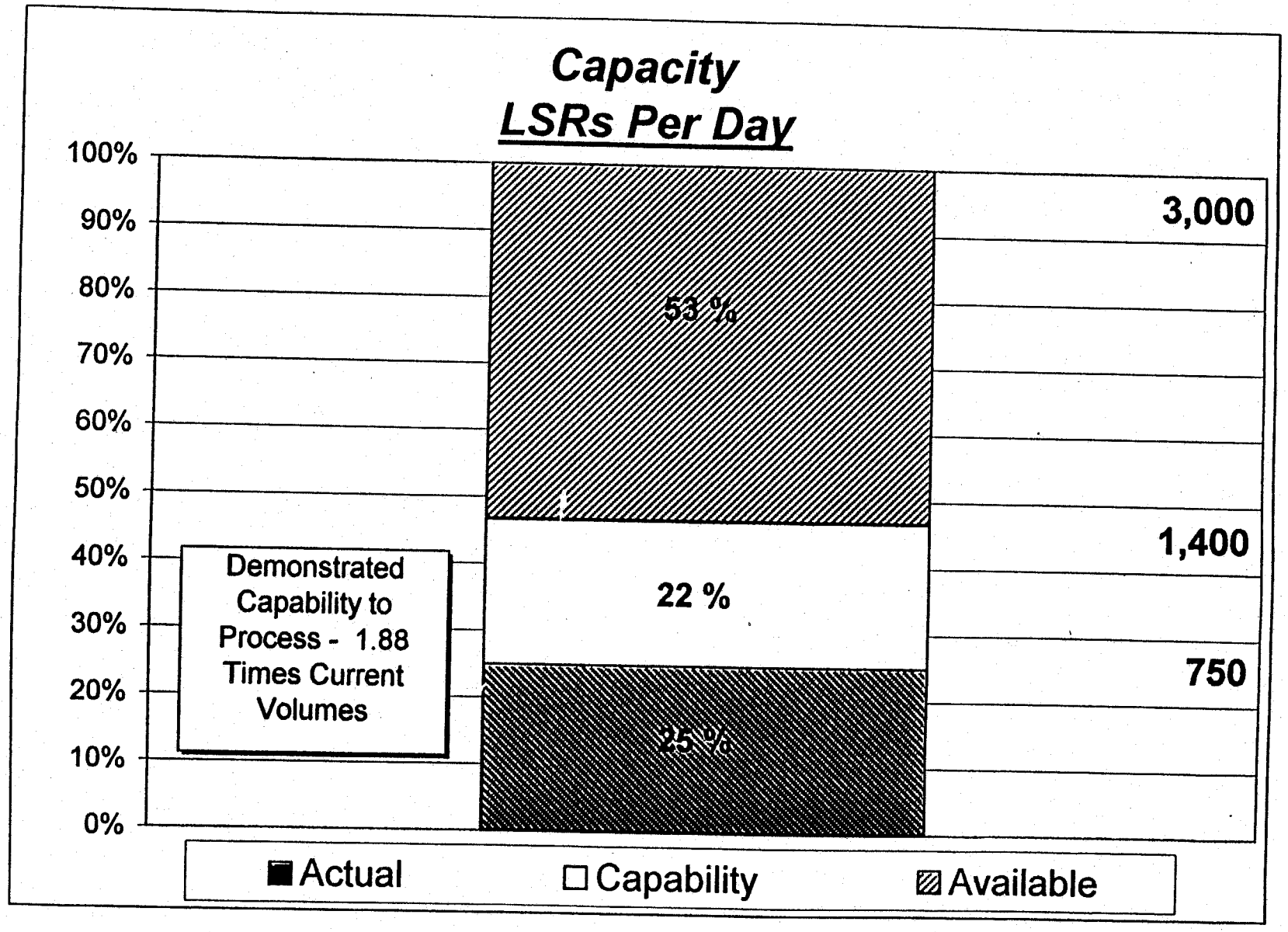




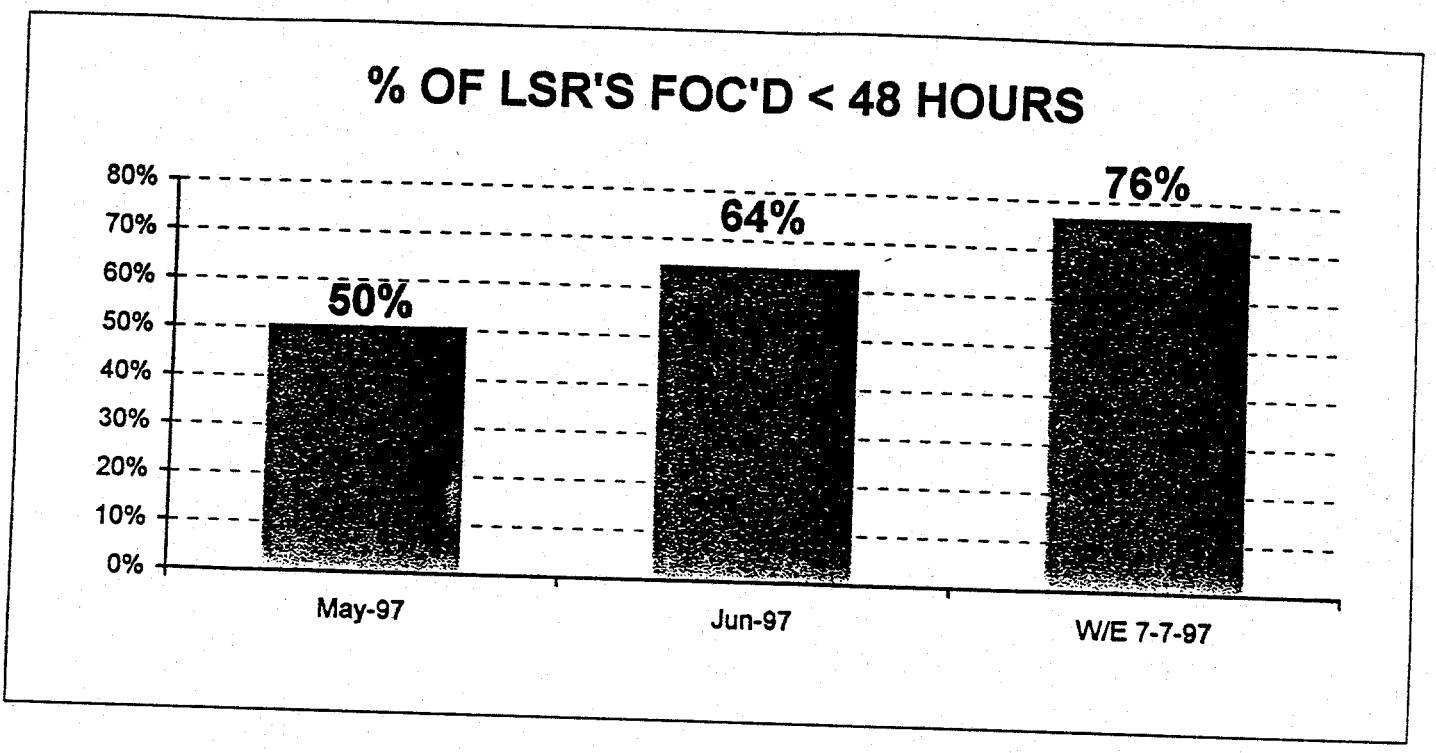
Source:
LSR's - LON Report from Ron Moore
Hours - MTR Report from James Saville

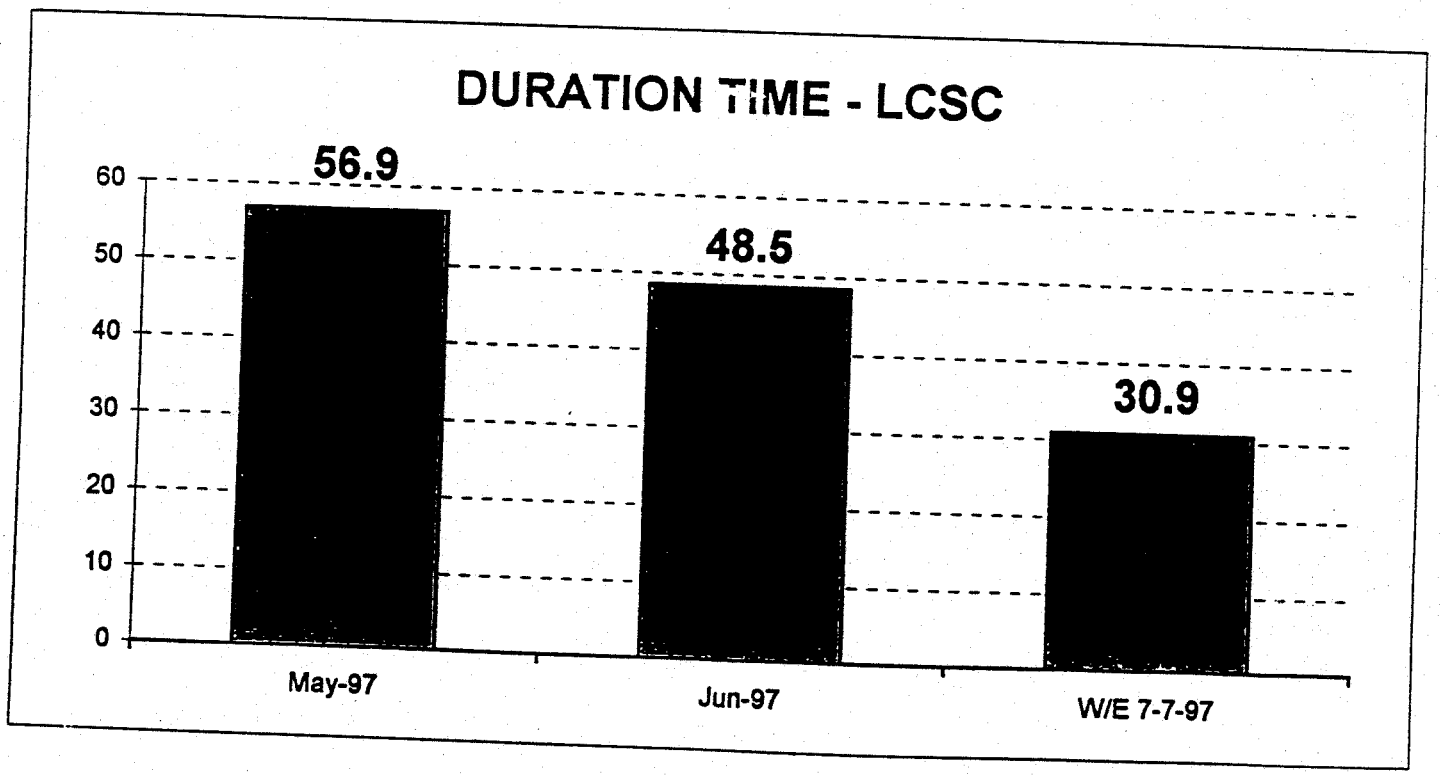


FOCd > 24 Hours	22	1	2	6	8
FOCd < 24 Hours	167	42	86	103	156
Total	189	43	88	109	164
Percent	88%	98%	98%	94%	95%

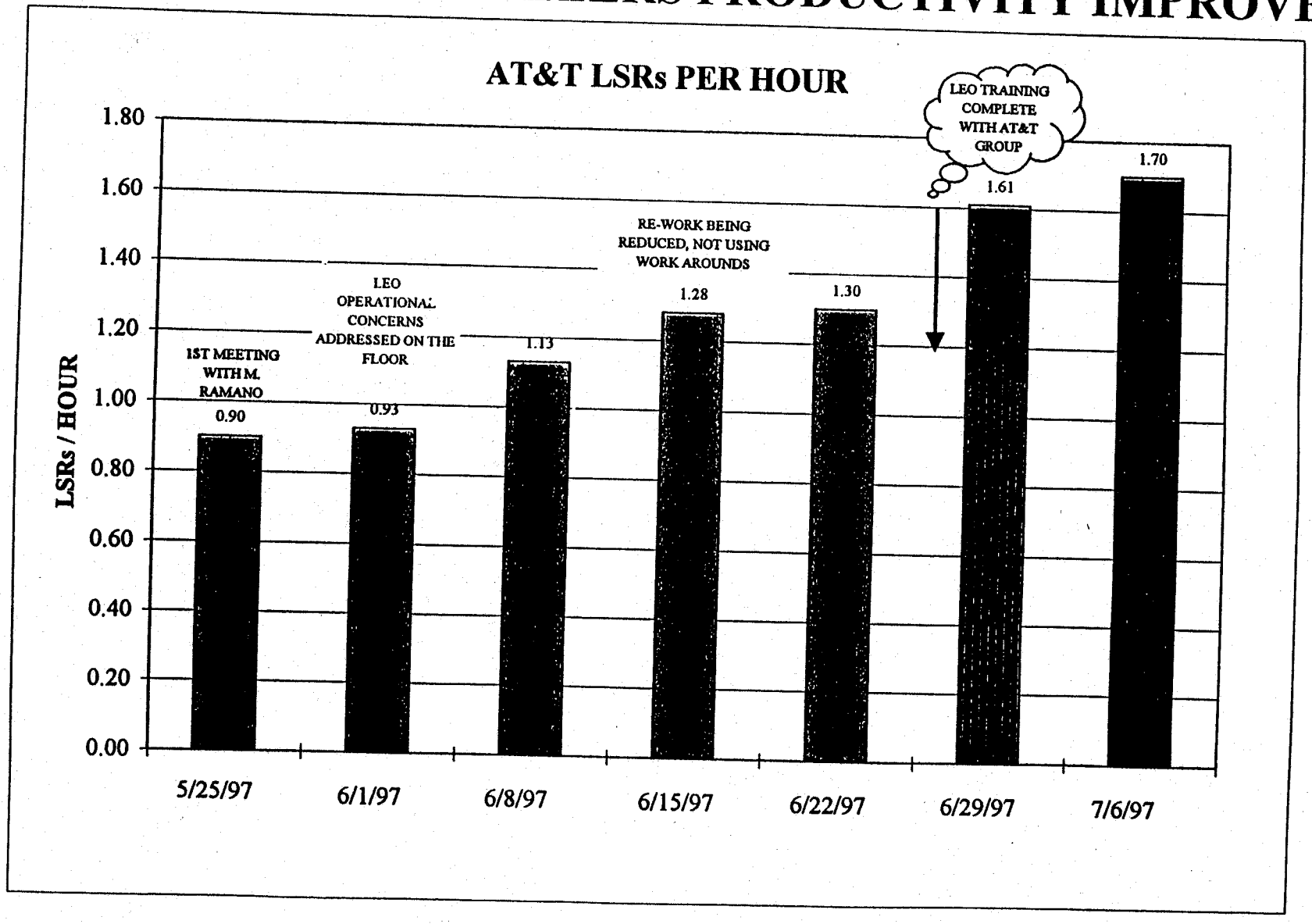

Capacity
LSRs Per Day
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
53 %
22 %
25 %
3,000
1,400
750
Demonstrated Capability to Process - 1.88 Times Current Volumes
Actual
Capability
Available

SERVICE INDICATORS





AS WE RESOLVE BARRIERS PRODUCTIVITY IMPROVES



BellSouth Telecommunications, Inc.
Room 4428
675 West Peachtree Street N.E.
Atlanta, Georgia 30375

404 927-7150
Fax 404 420-8291
Internet: Ernest.L.Bush
@bridge.bellsouth.com

Ernest L. Bush
Assistant Vice President –
Regulatory Policy & Planning

SN91081223

August 12, 1997

To: All Competitive Local Exchange Carriers

Subject: Enhanced Service Providers (ESPs) Traffic

The purpose of this letter is to call to your attention that our interconnection agreement applies only to local traffic. Although enhanced service providers (ESPs) have been exempted from paying interstate access charges, the traffic to and from ESPs remains jurisdictionally interstate. As a result, BellSouth will neither pay, nor bill, local interconnection charges for traffic terminated to an ESP. Every reasonable effort will be made to insure that ESP traffic does not appear on our bills and such traffic should not appear on your bills to us. We will work with you on a going forward basis to improve the accuracy of our reciprocal billing processes. The ESP category includes a variety of service providers such as information service providers (ISPs) and internet service providers, among others.

On December 24, 1996, the Federal Communications Commission (FCC) released a Notice of Proposed Rule Making (NPRM) on interstate access charge reform and a Notice of Inquiry (NOI) on the treatment of interstate information service providers and the Internet, Docket Nos. 96-262 and 96-263. Among other matters, the NPRM and NOI addressed the information service provider's exemption from paying access charges and the usage of the public switched network by information service providers and internet access providers.

Traffic originated by and terminated to information service providers and internet access providers enjoys a unique status, especially call termination. Information service providers and internet access providers have historically been subject to an access charge exemption by the FCC which permits the use of basic local exchange telecommunications services as a substitute for switched access service. The FCC will address this exemption in the above-captioned proceedings. Until any such reform affecting information service providers and internet access providers is accomplished, traffic originated to and terminated by information service providers and internet access providers is exempt from access charges. This fact, however, does not make this interstate traffic "local", or subject it to reciprocal compensation agreements.

Please contact your Account Manager or Marc Cathey (205-977-3311) should you wish to discuss this issue further. For a name or address change to the distribution of this letter, contact Ethylyn Pugh at 205-977-1124.

Sincerely,

E. L. Bush

Service Quality Measurements

ASSOCIATION FOR LOCAL TELECOMMUNICATIONS SERVICES (ALTS)

December 9, 1997

Version 1.0

Prepared for:

Richard J. Metzger
Association for Local Telecommunications Services, Inc.
888 17th Street, NW
Suite 900
Washington, DC 20006
202-969-ALTS

Prepared by:

TK Consulting
Tricia Keene, President
Box D
Harvard, MA 01451
(home 978-456-8146)
(office 781-768-5779)

Service Quality Measurements

Table of Contents

Introduction	Page 3
Executive Overview:	Page 5
Network Performance (NP)	Page 6
Emergency Services (ES)	Page 7
Collocation Provisioning (CP)	Page 9
Formula Quick Reference Guide	*Page 10*
Measurement Detail:	Page 12
Ordering and Provisioning (OP)	Page 13
Customer Desired Due Dates INP (Interim Number Portability) Coordinated Orders	
Network Performance (NP)	Page 16
Emergency Services (ES)	Page 18
Collocation Provisioning (CP)	Page 26
Appendix A: Reporting Dimensions	*Page 28*
Appendix B: Glossary	*Page 29*

Service Quality Measurements

Introduction

On August 8, 1996, the Federal Communications Commission released its First Report and Order in CC Docket No. 96-98 establishing regulations to implement the requirements of the Telecommunications Act of 1996. 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". This latter document began to structure the basic tenets for Service Parity, Performance Measurement, Electronic Interfaces, Systems Integrity Notification of Change, and Standards Adherence.

On July 30, 1997, the Association for Local Telecommunications Services (ALTS) submitted reply comments to the Federal Communications Commission (FCC), supporting the work of the LCUG group and requesting expedited rulemaking on the "Implementation of the Local Competition Provisions in the Telecommunications Act of 1996".

Through subsequent sub-committee work, LCUG has developed a "comprehensive list of potential measurements" to address ILEC (Incumbent Local Exchange Carrier) OSS (Operation Support System) performance in the areas of pre-ordering, ordering and provisioning, maintenance and repair, network performance, unbundled elements, operator services and directory assistance, system performance, service center availability, and billing. SQMs (Service Quality Measurements) goals have been established to provide "a nondiscrimination standard in the absence of directly comparative (actual) ILEC results" which the ILECs have been reluctant or unwilling to share.

ALTS fully supports the work done by the LCUG, but also recognizes that its CLEC membership may have somewhat differing needs. Therefore, ALTS has been working with a sub-committee of LCUG, as well as representatives from its own membership to form a WIPS (Workgroup on ILEC Performance Standards). The WIPS charter is to ensure that critical measurement needs are available for its membership in either the LCUG document, or the complementary ALTS document contained herein. It is not the intent of the WIPS to design an entirely new document, but merely to accept and support the concepts and measurements described in the LCUG SQM document, yet supplement those measurement categories that are of special interest to ALTS Membership. Indeed, sections of the following document are lifted directly out of the latest LCUG SQM Version 6.1, dated September 26, 1997, to reinforce the WIPS desire to build a common performance measurement foundation, rather than reinvent a new one.

See LCUG SQM document version 6.1 dated September 26,1997
See Petition for Expedited Rulemaking (including Appendices A & B) by LCI International Telecom Corp. and Competitive Telecommunications Association (CompTel) dated May 30, 1997

Service Quality Measurements

Introduction

A basic requirement for the ALTS Service Quality Measurements (SQM) document is to adhere as much as possible to the format of LCUG Version 6.1. Therefore, as the ALTS addendum items are discussed, portions of the LCUG have been described as directly applicable. At the same time, it is clear to the ALTS membership that some issues, such as Network Performance, Emergency Services, and Collocation Provisioning need to be further defined and developed for measurement purposes. Overall, the ALTS document accomplishes the following:

- Recognizes, accepts and supports the basic measurement foundation established in the LCUG Version 6.1
- Modifies those LCUG sections, such as Order Provisioning, to include proposed ALTS measurements. For example, in the case of Order Provisioning, ALTS adds measures, within the LCUG framework, to consider Customer Desired Due Dates Met, and Interim Number Portability Coordinated Orders.
- Describes addendum items that complement LCUG direction, yet offer a new dimension to more clearly satisfy ALTS membership requirements.

The LCUG Version 6.1 "Measurement Plans" description and "Business Rules" described in the LCUG document Introduction will apply to the ALTS SQM document, as well. These include comments and definitions related to the following:

- Test for Parity
- Benchmarking Study Requirements
- Reporting Expectations and Report Format
- Delivery of Reports and Data
- Geographic Reporting
- Verification and Auditing
- Adaptation

Service Quality Measurements

Executive Overview

This Executive Overview section:

- Acts as an addendum to the LCUG Executive Overview
- Provides a summary of the detailed requirements
- Enables a quick overview and understanding of the proposed ALTS measurements
- Summarizes the Business Implications associated with each measurement
- Accommodates a target audience who has a need to know about the measurements, but not the specific details

Executive Overview:	Page 5
Network Performance	Page 6
Emergency Services	Page 7
Collocation Provisioning	Page 9

Executive Overview

Network Performance (NP)

Function:	
Network Interconnection Performance	
Business Implications:	
• The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNEs are employed, will be heavily influenced by the underlying quality of the ILEC performance • Interconnection with the ILEC network, whether for facilities or equipment, needs to be provided at a level of quality that is equal to that which the ILEC provides itself, a subsidiary, an affiliate, or any other party • The quality of CLEC service to customers is directly dependent on adequacy of trunking capacity at the ILEC	
Measurements:	**Results Detail:**
• Percent Trunk Blockage	• By end office to access tandem trunk group • By final trunk group

Service Quality Measurements

Executive Overview

Emergency Services (ES)

Function:	
Timeliness of Updating the Database	
Business Implications:	
• ILECs historically "own" and control the 911 databases, which CLECs provide input to for their customers • Timely update of the 911/E911 database for customer location, telephone numbers, and selective router can indeed become a "life and death" situation as customers attempt to reach emergency help dialing 911/E911 • CLECs can not offer Local Exchange Service without 911/E911 capability	
Measurements:	**Results Detail:**
• Mean Database Update Interval • Percent Updates Completed within 24 Hours	• By order update to include customer location and number • By order update to include selective router for proper dispatch center

Function:	
Accuracy of Database	
Business Implications:	
• Accurate update of the 911/E911 database for customer location, telephone numbers, and selective router can indeed become a "life and death" situation as customers attempt to reach emergency help dialing 911/E911	
Measurements:	**Results Detail:**
• Percent Database Accuracy	• By order update for Customer location, telephone number • By selective router

Function:	
Provisioning of 911/E911 Trunks	
Business Implications:	
• Customer service reaching 911/E911 is of critical importance • CLEC Customers need to be able to access the ILEC 911/E911 office on the first try due to the nature of their emergency situations • CLECs cannot offer Local Exchange Service without 911/E911 capability	
Measurements:	**Results Detail:**
• Mean interval to provision 911 trunks • Percent trunks completed within 15 days • Percent Trunk blockage	• By trunks added • Trunks measured every half-hour for peg count, overflow and usage. • Reported on a Busy Hour basis.

Service Quality Measurements

Executive Overview

Emergency Services (ES)

Function:	
System availability to the MSAG (Master Street Access Guide)	
Business Implications:	
• The 911/E911 capability works properly when, after having dialed "911", a customer calling into the Dispatch Center, can accurately have their telephone number associated with the correct street address, and thus receive dispatched help quickly • CLECs need the addresses contained in the MSAG under the jurisdiction of the ILEC, to be able to associate the correct address with each telephone number • Fast response time in obtaining MSAG information is important in order that the appropriate 911/E911 databases can be updated promptly and accurately	
Measurements:	**Results Detail:**
• Percent MSAG system availability	• By MSAG interface

Service Quality Measurements

Executive Overview

Collocation Provisioning (CP)

Function:	
Physical and Virtual Collocation commitments Met	
Business Implications:	
• Due to the natural evolution of local telephone services over the years, ILECs own, rent, or lease buildings in most cities and towns. Many of these buildings house ILEC Central Office switches and equipment, giving them an advantage in the immediate marketplace. These same buildings often have extra space, due to technology compressing the size of equipment over time. • In order to be able to compete and to install necessary equipment to do so, CLECs need access to space available in ILEC buildings and Remote locations • ILECs need to respond in a timely fashion to CLEC requests • To serve its own customers in a timely fashion, CLECs need to be able to count on ILECs meeting commitments for Physical and Virtual Collocation	
Measurements:	**Results Detail:**
• Mean response to request interval • Percent responses received within 5 business days • Percent of Physical Commitments Met • Percent of Virtual Commitments Met	• By request • By Central Office

Service Quality Measurements

Formula Quick Reference

	Measurement Description by Business Process:	Measurement Formula:
	Network Performance	
NP-2	Percent Trunk Blockage	**Percent Trunk Blockage = [(Busy Hour Overflow Count) / (Busy Hour Peg Count) During Report Period] x 100**
	Emergency Services	
ES-1	Mean Database Update Interval	**Mean Database Update Interval = ∑[(Completion Date&Time)-(Update Submission Date&Time)]/(Count of Updates Completed in Reporting Period)**
ES-2	Percent Updates Completed within 24 Hours	**Percent Updates Completed within 24 Hours = [(Count of Updates Completed within 24 Hours)/(Count of Updates Completed in Reporting Period)] x 100**
ES-3	Percent Database Accuracy	**Percent Database Accuracy = [(Count of Updates Completed w/o error) / (Count of Updates Completed)] x 100**
ES-4	Mean Interval to Provision 911/E911 trunks	**Mean Interval to Provision 911/E911 Trunks = ∑[(Completion Date and Time) – (Trunk Order Submission Date and Time)]/(Number of 911/E911 Trunks Completed in Reporting Period**
ES-5	Percent trunks completed within 15 days	**Percent Trunks Completed within 15 Days = [(Count of Trunks completed within 15 Days)/(Count of Trunks Completed in Reporting Period)] x 100**
ES-6	Percent Trunk Blockage	**Percent Trunk Blockage = [(Busy Hour Overflow Count)/ (Busy Hour Peg Count) during Report Period] x 100**
ES-7	Percent MSAG System Availability	**Percent MSAG System Availability = [(Hours MSAG is Available to CLECs During Reporting Period)/(Number of Hours MSAG was Scheduled to be Available During Reporting Period)] x 100**

Service Quality Measurements

Formula Quick Reference

	Collocation Provisioning	
CP-1	Mean Response to Request Interval	**Mean Response to Request Interval = Σ[(Request Response Date&Time) – (Request Submission Date&Time)]/(Count of Requests Submitted in Reporting Period)**
CP-2	Percent Responses Received within 5 Business Days	**Percent Responses Received within 5 Business Days = [(Count of Responses received within 5 Business Days)/(Count of Requests Submitted in Reporting Period)] x 100**
CP-3	Percent Physical Commitments Met	**Percent Physical Commitments Met = [(Count of Physical Commitments Met)/(Count of Physical Commitments in Reporting Period)] x 100**
CP-4	Percent Virtual Commitments Met	**Percent Virtual Commitments Met = [(Count of Virtual Commitments Met)/(Count of Virtual Commitments in Reporting Period)] x 100**

Service Quality Measurements

Measurement Detail

The Measurement Detail section:

- Acts as an addendum to the LCUG Measurement Detail
- Provides explicit detail information for each measurement
- Provides business reasons for the measurement, required data elements, analogs to the existing ILEC business function and comparative results suggestions
- Is targeted at those individuals who need to know and understand the detail categories and measurement methodologies

Measurement Detail:	Page 12
Ordering and Provisioning (OP)	Page 13
Network Performance (NP)	Page 16
Emergency Services (ES)	Page 18
Collocation Provisioning (CP)	Page 26
Appendix A: Reporting Dimensions	*Page 28*
Appendix B: Glossary	*Page 29*

Service Quality Measurements

Measurement Detail

Ordering and Provisioning (OP)

Function:	Order Completion Intervals
Business Implications:	In order to be successful in the marketplace, CLECs must be capable of delivering service in time frames equal to or better than what the ILEC delivers for comparable service configurations. Likewise, when the CLEC commits to a due date for service delivery, the customer plans for service availability have been established and the customer will be dissatisfied if the requested service or feature is not delivered when promised. The "average completion interval" measure monitors the time required by the ILEC to deliver integrated and operable service components requested by the CLEC, regardless of whether service resale or unbundled network elements are employed. When the service delivery interval of the ILEC is measured for comparable services, then conclusions can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers. The "orders completed on time" measure monitors the reliability of ILEC commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customer. In addition, when monitored over time, the "average completion interval" and "percent completed on time" may prove useful in detecting developing capacity issues. *The "Percent Customer Desired Due Date Met" measures the ILEC performance against what the CLEC customer requested versus the ILEC commitment made based on the ILECs own internal requirements which do not necessarily consider customer needs. The "Average Completion for INP Coordinated Orders" that involve Interim Number Portability (INP), and the "Percent of INP Coordinated Orders with Disconnection, Loop Provisioning, and NP done within 5 minutes of Each Other" monitor the quality of work done by the ILEC when physical connections and software updates must be completed at the same time to prevent customer outage and poor service. CLEC ability to receive quality Number Portability work is critical to their ability to compete in the marketplace.*
Measurement Methodology:	**Average Completion Interval = Σ [(Completion Date & Time) - (Order Submission Date & Time)]/(Count of Orders Completed in Reporting Period)** **Percent Orders Completed on Time = [(Count of Orders Completed within ILEC Committed Due Date) / (Count of Orders Completed in Reporting Period)] x 100** *Percent Customer Desired Due Date Met = [(Count of Orders that met the Customer Desired Due Date)/ (Count of Orders Completed in Reporting Period)] x 100* *Average Completion for INP Coordinated Orders = Σ[(Completion Date and Time) – (Order Submission Date & Time)] /(Count of Orders Completed in Reporting Period)* *Percent of INP Coordinated Orders with Disconnection, Loop Provisioning, and NP done within 5 minutes of Each Other = [(Count of INP Coordinated Orders with Disconnection, Loop Provisioning, and NP done within 5 minutes of each other)/(Count of INP Coordinated Orders with Disconnection, Loop Provisioning, and NP completed in Reporting Period)] x 100*

Service Quality Measurements

Measurement Methodology:	**For CLEC Results:** The actual completion interval is determined for each order processed during the reporting period. The completion interval is the elapsed time from the ILEC receipt of a syntactically correct order from the CLEC to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each order is accumulated for each reporting dimension (see below). The accumulated time for each reporting dimension is then divided by the associated total number of orders completed within the reporting period. The percentage of orders completed on time is determined by first counting, for each specified reporting dimension, both the total numbers of orders completed within the reporting interval and the number of orders completed by the committed due date (as specified on the initial FOC returned to the CLEC). For each reporting dimension, the resulting count of orders completed no later than the committed due date is divided by the total number of order completed with the resulting fraction expressed as a percentage. **For ILEC Results:** The ILEC computation is identical to that for the CLEC with the clarifications noted below. **Other Clarifications and Qualification:** • The elapsed time for an ILEC order is measured from the point in time when the ILEC customer service agent enters the order into the ILEC order processing system until the date and time reported by the ILEC installation personnel log actual completion of all work necessary to permit service initiation, whether or not the ILEC initiates customer billing at that point in time. • Results for the CLECs are captured and reported at the order level (e.g., unique PON). • The Completion Date is the date upon which the ILEC issues the Order Completion Notice to the CLEC. • If the CLEC initiates a supplement to the originally submitted order and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the order submission date and time will be the date and time of the ILEC receipt of a syntactically correct order supplement. • No other supplemental order activities will result in an update to the order submission date and time used for the purposes of computing the order completion interval. • See "Order Status" metric sheet for discussion of ILEC analogs receipt of a syntactically correct *order* and return of a valid completion notice. • Elapsed time is measured in hours and hundredths of hours rounded to the nearest tenth of an hour. • Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays.

Reporting Dimensions:	**Excluded Situations:**
• Service - Standard Service Groupings (See Appendix A) • Activity - Standard Order Activities (See Appendix A) Geographic Scope	• Canceled orders • Initial Order when supplemented by CLEC • ILEC Orders associated with internal or administrative use of local services

Service Quality Measurements

Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • CLEC Order Number • Order Submission Date • Order Submission Time • Order Completion Date • Order Completion Time • Service Type • Activity Type • Geographic Scope	• Report Month • Average Order Completion Interval • Standard Error for the Order Completion Interval • Service Type • Activity Type • Geographic Scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
	• Unless otherwise noted, the order completion interval for installations that do not require a premise visit and do not require anything beyond software updates is 1 business day.
	• Unless otherwise noted, the order completion intervals for installations that involve a premise visit or physical work is three business days.
	• Installation Interval Exceptions:
	  • *The installation interval for INP Coordinated Orders with Disconnection, Loop Provisioning, and NP requires that all of these activities be completed within 5 minutes of each other.*
	  • UNE Platform (at least DS0 loop + local switching + common transport elements) installation interval is 1 business day whether or not premise work is required.
	  • The installation interval for unbundled loops is always 1 business day.
	  • UNE Channelized DS1 (DS1 unbundled loop + multiplexing) installation interval is within 2 business days.
	  • Unbundled Switching Element installation interval is within 2 business days
	  • DS0/DS1 Dedicated Transport installation interval is within 3 business days
	  • All other Dedicated Transport installation interval is within 5 business days.
	• The installation interval for all orders involving only feature modification is 5 hours, *unless otherwise noted.*
	• *Unless otherwise noted*, Order completion interval for all disconnection orders is 1 business day.

Note: Pages 13-15 have been directly modified from the LCUG document Version 6.1. Changes are noted in Underlined Italics.

Service Quality Measurements

Measurement Detail

Network Performance (NP)

Function:	Network Interconnection Performance
Business Implications:	The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNEs are employed, will be heavily influenced by the underlying quality of the ILEC performance. Interconnection with the ILEC network, whether for facilities or equipment, needs to be provided at a level of quality that is equal to that which the ILEC provides itself, a subsidiary, an affiliate, or any other party. The quality of CLEC service to customers is directly dependent on adequacy of trunking capacity within the ILEC network, and between the ILEC network and the CLEC network.
Measurement Methodology:	**Percent Trunk Blockage = [(Busy Hour Overflow Count)/(Busy Hour Peg Count) during the Reporting Period] x 100** **For CLEC Results:** This metric is computed at the end of the reporting period. It looks at the busiest hour during the reporting period as defined by the highest peg count (call attempts on the trunk group). It then determines for that hour the count of overflow (those call attempts that were blocked due to inadequate trunking, trunks turned down due to maintenance, or other Network failures). It then computes the percentage of blocking for that busy hour. Percentage of blocking for trunk groups is monitored from the CLEC to the ILEC end office, CLEC to ILEC local tandem, and CLEC to ILEC Access tandem. **For ILEC Results:** This metric is computed at the end of the reporting period. It looks at the busiest hour during the reporting period as defined by the highest peg count (call attempts on the trunk group). It then determines for that hour the count of overflow (those call attempts that were blocked due to inadequate trunking, trunks turned down due to maintenance, or other Network failures). It then computes the percentage of blocking for that busy hour. Percentage of blocking for trunk groups is monitored from ILEC end office to ILEC end office, ILEC end office to local tandem, and ILEC end office to access tandem. **Other Clarifications and Qualifications:** Trunk Group sizing is based on the Engineering criteria of "Grade of Service" and often refers to the "Poisson Tables" to quantify levels of service (such as, P.01 GOS which translates into 1 in 100 blocked calls, or 1% blockage).

Reporting Dimensions:	Excluded Situations:
• Grade of Service (See Appendix A) • Geographic Scope	• None

Service Quality Measurements

Data Retained Relating to CLEC Experience:	Data Retained Relating to ILEC Performance:
• Report Month • Reporting Dimension • Trunk Group Type • Trunk Group Designation Identifying "from and to" Points • Geographic Scope	• Report Month • Reporting Dimension • Trunk Group Type • Trunk group Designation Identifying "from and to" Points • Geographic Scope
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then results related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • End office to End office .5% blockage • End office to Local tandem .5% blockage • End office to Access Tandem .5% blockage • Final trunk groups 1% blockage

Service Quality Measurements

Measurement Detail

Emergency Services (ES)

Function:	Timeliness of Updating the Database
Business Implications:	CLECs are committed to providing emergency services to their customers. ILECs historically "own" and control the 911 databases, which CLECs provide input to for their customers. Timely update of the 911/E911 database for customer location and telephone numbers included in the Automatic Location Identifier (ALI), is necessary in order that emergency services can be promptly dispatched to the proper location should an emergency occur. In addition, the selective router that determines which dispatch center is associated with each customer, must also be updated by the ILEC. Timeliness of these updates can indeed become a "life and death" situation as customers attempt to reach emergency help dialing 911/E911. For the aforementioned reasons, as well as the fact that States require CLECs to offer 911/E911 capability, it is important that ILEC Emergency Services databases be promptly updated to reflect CLEC customer information.
Measurement Methodology:	**Mean Database Update Interval = Σ[(Completion Date&Time) - (Update Submission Date&Time))]/(Count of Updates Completed in Reporting Period)** **Percent Updates Completed within 24 Hours = [(Count of Updates Completed within 24 Hours)/(Count of Updates Completed in Reporting Period)] x 100** **For CLEC Results:** The actual completion interval is determined for each update processed during the reporting period. The completion interval is the elapsed time from the ILEC receipt of a syntactically correct update from the CLEC to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each update is accumulated for each reporting dimension (see below). The accumulated time for each reporting dimension is then divided by the associated total number of updates completed within the reporting period. The percentage of updates completed on time is determined by first counting, for each specified reporting dimension, both the total numbers of updates completed within the reporting interval and the number of updates completed by the committed due date (as specified on the initial FOC returned to the CLEC). For each reporting dimension, the resulting count of updates completed no later than the committed due date is divided by the total number of updates completed with the resulting fraction expressed as a percentage. **For ILEC Results:** The ILEC computation is identical to that for the CLEC with the clarifications noted below.

Measurement Methodology:	**Other Clarifications and Qualification:** • The elapsed time for an ILEC update is measured from the point in time when the ILEC customer service agent enters the order into the ILEC order processing system until the date and time reported by the ILEC that 911/E911 updates are completed. • Results for the CLECs are captured and reported at the update level by Reporting Dimension (see below). • The Completion Date is the date upon which the ILEC issues the Update Completion Notice to the CLEC. • If the CLEC initiates a supplement to the originally submitted update and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the update submission date and time will be the date and time of the ILEC receipt of a syntactically correct update supplement. • No other supplemental update activities will result in a change to the update submission date and time used for the purposes of computing the update completion interval. • Elapsed time is measured in hours and hundredths of hours rounded to the nearest tenth of an hour. • Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays.
Reporting Dimensions: • Customer address • Customer telephone number • Customer Selective Router • Geographic Scope	**Excluded Situations:** • Updates Canceled by the CLEC • Initial update when supplemented by CLEC • ILEC updates associated with internal or administrative use of local services
Data Retained Relating to CLEC Experience: • Report Month • CLEC Update Number • Update Submission Date • Update Submission Time • Update Completion Date • Update Completion Time • Reporting Dimension • Geographic Scope	**Data Retained Relating to ILEC Performance:** • Report Month • Average Update Completion Interval • Reporting Dimension • Geographic Scope
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • The update interval is always within 24 hours.

Service Quality Measurements

Measurement Detail

Function:	Accuracy of Database
Business Implications:	Due to the emergency nature of dealing with 911/E911 databases, the business implications of ensuring that databases be both updated promptly and updated accurately, are similar. CLECs are committed to providing emergency services to their customers. ILECs historically "own" and control the 911 databases, which CLECs provide input to for their customers. Timely and accurate update of the 911/E911 database for customer location and telephone numbers included in the Automatic Location Identifier (ALI), is necessary in order that emergency services can be promptly dispatched to the proper location should an emergency occur. In addition, the selective router that determines which dispatch center is associated with each customer, must also be updated by the ILEC. Timeliness and accuracy of these updates can indeed become a "life and death" situation as customers attempt to reach emergency help dialing 911/E911. For the aforementioned reasons, as well as the fact that States require CLECs to offer 911/E911 capability, it is important that ILEC Emergency Services databases be accurately updated to reflect CLEC customer information.
Measurement Methodology:	**Percent Database Accuracy = [(Count of Updates Completed w/o error)/(Count of Updates Completed)] x 100** **For CLEC Results:** For each update completed during the reporting period, the original update that the CLEC sent to the ILEC is compared to the customer address and telephone number reflected in the database following completion of the update in the ALI by the ILEC. In addition, the "selective router" must be updated by the ILEC at the same time, to ensure that the correct dispatch center is entered for each telephone number. .An update is "completed without error" if all updates and changes (as determined by comparing the original and the post update completion, and the Selective Router table) completely and accurately reflect the activity specified on the original and supplemental CLEC updates and proper selective router. "Total number of updates completed" refers to update completions received by the CLEC from the ILEC for each reporting dimension identified below. **For ILEC Results:** Same computation as for the CLEC with the clarifications noted below. **Other Clarifications and Qualification:** • **Update Supplements** - If the CLEC initiates any supplements to the originally submitted update, for the purposes of reflecting changes in customer requirements, then the cumulative effect of the initial update and all the supplemental updates will be determined by comparison of the pre- and post update completions. • **Completion Notices** - To the extent that the ILEC supplies a completion notice containing sufficient information to perform validation of database update accuracy, then the Completion Notice information can be utilized in lieu of the comparison of the "before" and "after" views. Use of the completion notice for this purpose would need to be at the mutual agreement of the ILEC and the CLEC. • **All Updates** - The comparison is between the CLEC update and the database as it existed before and after completion.

Service Quality Measurements

Measurement Methodology:	• Sampling may be utilized to establish database update accuracy provided the results produced are consistent with the reporting dimensions specified, the sample methodology is disclosed in advance and reflects generally accepted sampling methodology, and the sampling process may be audited by the CLEC.

Reporting Dimensions:	**Excluded Situations:**
• Customer Address • Customer Telephone number • Customer Selective Router • Geographic Scope	• Updates canceled by the CLEC • Initial update when supplemented by CLEC • ILEC updates associated with internal or administrative use of local services
Data Retained Relating to the CLEC Experience:	**Data Retained Relating to ILEC Performance:**
• Report Month • CLEC Update Number • Percent database update accuracy • Reporting Dimension • Geographic Scope	• Report Month • Percent database update accuracy • Reporting Dimension • Geographic Scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: Completed CLEC updates, by reporting dimension, are accurate no less than 99.9% of the time.

Measurement Detail

Function:	Provisioning of 911/E911 Trunks
Business Implications:	CLECs cannot offer Local Exchange Service without a 911/E911 capability. In order for CLEC customers to be able to access the ILEC 911/E911, ILEC office trunk facilities need to be installed in a timely fashion. They also need to be provided in a quantity to minimize the risk of trunk blockage, which could prevent critical emergency call attempts from reaching 911. CLEC Customers need to be able to access the ILEC 911/E911 office on the first try due to the nature of their emergency situations.
Measurement Methodology:	**Mean Interval to Provision 911/E911 Trunks = ∑[(Completion Date and Time) – (Trunk Order Submission Date and Time)]/(Number of 911/E911 Trunks Completed in Reporting Period** **Percent Trunks Completed within 15 Days = [(Count of Trunks completed within 15 Days)/(Count of Trunks Completed in Reporting Period)] x 100** **Percent Trunk Blockage = [(Busy Hour Overflow Count)/ (Busy Hour Peg Count) during Report Period] x 100** **For CLEC Results:** The "Mean Interval to Provision 911/E911 Trunks" monitors how long it takes the ILEC to add trunks, utilized by CLEC customers, to improve capacity incoming to the ILEC 911/E911 office. The actual completion interval is determined for each trunk added during the report period. The completion interval is the elapsed time from receipt of a request from the CLEC (or from creation of the trunk order by the ILEC, if self-initiated), until return of a valid completion notification to the CLEC. The accumulated time is then divided by the associated total number of 911/E911 incoming trunks added within the report period. The "Percent Trunks Completed within 15 days" monitors the ILEC ability to respond within 15 days to add trunks, utilized by CLEC customers to access the ILEC 911/E911 office. The percentage of trunks added in 15 days is determined by first counting, both the total numbers of 911/E911 trunks completed within the reporting interval and the number of 911/E911 trunks completed within 15 days. (as specified on the on the completion notification returned to the CLEC). The resulting count of trunks completed no later than 15 days is divided by the total number of 911/E911 trunks completed with the resulting fraction expressed as a percentage.

Service Quality Measurements

Measurement Methodology:	The "Percent (911/E911) Trunk Blockage" monitors overflow situations during the busiest hour of the Reporting Period for those trunk groups accessed by CLEC customers to reach the ILEC 911/E911 office. This metric is computed at the end of the reporting period. It looks at the busiest hour during the reporting period as defined by the highest peg count (call attempts on the trunk group). It then determines for that hour the count of overflow (those call attempts that were blocked due to inadequate trunking, trunks turned down due to maintenance, or other Network failures). It then computes the percentage of blocking for that busy hour. Percentage of blocking for trunk groups is monitored from the CLEC to the ILEC 911/E911 office. **For ILEC Results:** the ILEC computation is identical to that for the CLEC with the clarifications noted below. • Elapsed time is measured in days, hours and hundredths of hours rounded to the nearest tenth of an hour. • Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays. • Percentage of blocking for trunk groups is monitored from the ILEC end office to ILEC 911/E911 office and from the ILEC tandem to the ILEC 911/E911 office.

Reporting Dimensions:	**Excluded Situations:**
• 911/E911 Incoming Trunk Adds • 911/E911 Incoming Trunk Groups • Grade of Service (see Appendix A)	• None
Data Retained Relating to CLEC Experience:	**Data Retained Relating to ILEC Performance:**
• Report Month • Reporting Dimensions • 911/E911 Trunk Order Submission Date • 911/E911 Trunk Order Submission Time • 911/E911 Trunk Order Completion Date • 911/E911 Trunk Order Completion Time • Trunk Group Designation Identifying "to and from " points • Geographic Scope	• Report Month • Average 911/E911 Trunk Order Completion Interval • Reporting Dimensions • Geographic Scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • 911/E911 incoming trunk adds completed within 15 days • Trunk blockage on 911/E911 incoming trunk groups at .5% or less

Service Quality Measurements

Measurement Detail

Function:	System Availability to the MSAG (Master Street Access Guide)
Business Implications:	The 911/E911 capability works properly when, after having dialed "911", a customer calling into the Dispatch Center, can accurately have their telephone number associated with the correct street address, and thus receive dispatched help quickly. CLECs need the addresses contained in the MSAG, under the jurisdiction of the ILEC, to be able to associate the correct address with each telephone number. Fast response time in obtaining MSAG information is important in order that the appropriate 911/E911 databases can be updated promptly and accurately.
Measurement Methodology:	**Percent MSAG System Availability = [(Hours MSAG is Available to CLECs During Reporting Period)/(Number of Hours MSAG was Scheduled to be Available During Reporting Period)] x 100** **For CLEC Results:** The total "number of hours MSAG was scheduled to be available" is the cumulative number of hours (by date and time on a 24 hour clock) over which the ILEC planned to offer and support CLEC access to ILEC OSS functionality during the reporting period. The ILEC must provide a minimum advance notice of one reporting period regarding availability plans and such plans must be interface-specific. If scheduled availability is not provided with at least one report period advance notice then the default availability for the subsequent reporting period will be seven days per week, 24 hours per day. "Hours Functionality is Available" is the actual number of hours, during scheduled available time, that the ILEC gateway or interface is capable of accepting CLEC transactions or data files for processing in the gateway / interface and MSAG OSS(Operation Support System). The actual time available is divided by the scheduled time available and then multiplied by 100 to produce the "Percent MSAG system availability" measure. **For ILEC Results:** The "available time" and "scheduled available time" is gathered for the MSAG ILEC OSS during the report period. The MSAG ILEC OSS availability is computed based upon the weighted average availability. That is, the available time for the MSAG is accumulated over the report period and then divided by the summation of the scheduled available time for the MSAG. **Other Clarifications and Qualifications:** • Parity exists if the CLEC "Percent MSAG System Availability " is equal to or better than ILEC MSAG System Availability. • "Capability of accepting" must have a meaning consistent with the ILEC definition of "down time" , whether planned or unplanned, for internal ILEC systems having a comparable potential for customer impact. • Time is measured in hours and tenths of hours rounded to the nearest tenth of an hour.

Service Quality Measurements

Reporting Dimensions:	Excluded Situations:
• Business Periods (8:00AM to 8:00PM local time versus Off-Hours 8:00PM to 8:00AM, weekends and Holidays) • Geographic Scope	• None
Data Retained Relating to CLEC Experience:	**Data Retained Relating to ILEC Performance:**
• Report Month • Scheduled Hours Available • Actual Hours Available • Percent MSAG CLECAvailability	• Report Month • Scheduled Hours Available • Actual Hours Available • Percent MSAG ILEC Availability
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: ● Less than 0.1% of unplanned down time, by interface, during either business period .

Service Quality Measurements

Measurement Detail

Collocation Provisioning (CP)

Function:	Physical and Virtual Collocation Commitments Met
Business Implications:	Due to the natural evolution of local telephone services over the years, ILECs own, rent, or lease buildings in most cities and towns. Many of these buildings house ILEC Central Office switches and equipment, giving them an advantage in the immediate marketplace. These same buildings often have extra space, due to technology compressing the size of equipment over time. In order to be able to compete and to install necessary equipment to do so, CLECs need access to space available in ILEC buildings or remote locations. ILECs need to respond in a timely fashion to CLEC requests. Delays will prevent the CLEC from serving customers, and thereby threaten to prevent meaningful competition in the marketplace.
Measurement Methodology:	**Mean Response to Request Interval = ∑[(Request Response Date&Time) – (Request Submission Date&Time)]/(Count of Requests Submitted in Reporting Period)** **Percent Responses Received within 5 Business Days = [(Count of Responses received within 5 Business Days)/(Count of Requests Submitted in Reporting Period)] x 100** **Percent Physical Commitments Met = [(Count of Physical Commitments Met)/(Count of Physical Commitments in Reporting Period)] x 100** **Percent Virtual Commitments Met = [(Count of Virtual Commitments Met)/(Count of Virtual Commitments in Reporting Period)] x 100** **For CLEC Results:** The response interval for each space request is determined by computing the elapsed time from the ILEC receipt of a space request from the CLEC, to the time the ILEC returns the requested information to the CLEC. Elapsed time is accumulated for each space request, consistent with the specified reporting dimension, and then divided by the associated total number of space requests received by the ILEC during the report period. The "Percent Responses Received within 5 Business Days" is determined by first counting, for each specified reporting dimension, both the number of space request responses (via FOCs, Firm Order Confirmation Notices) received within 5 business days, and the number of space requests submitted in the reporting period. For each reporting dimension, the resulting count of space responses received within 5 business days, is divided by the number of space requests submitted in the reporting period and expressed as a percentage.

Service Quality Measurements

Measurement Methodology:	The "Percent Physical Commitments Met" is determined by first counting, for each specified reporting dimension, both the number of commitments met, and the number of commitments made (via FOCs) in the reporting period. For each reporting dimension, the resulting count of commitments met, is divided by the number of commitments made in the reporting period and expressed as a percentage. The same methodology applies to "Percent Virtual Commitments Met". **For ILEC Results:** The ILEC computation is identical to that for the CLEC with the clarifications noted below: **Other Clarifications and Qualifications:** • Elapsed time is measured in days and hours.

Reporting Dimensions:	**Excluded Situations:**
• FOC for Request of Collocation Space • FOC Commitment for Construction start • FOC Commitment for Interconnection to ILEC • By ILEC Central Office or Remote location • Geographic Scope	• CLEC cancellations
Data Retained Relating to CLEC Experience:	**Data Retained Relating to ILEC Performance:**
• Report Month • Request Identifier (e.g., unique tracking number) • Request receipt by ILEC, date and time • Request type (per reporting dimension) • Response Date and Time • Commitments made for Physical or Virtual Collocation Construction start • Commitments Met for Physical or Virtual Collocation Construction start • Commitments made for Physical or Virtual ILEC Collocation Interconnection • Commitments Met for Physical or Virtual ILEC Collocation Interconnection • Geographic Scope	• Report Month • Request type (per reporting dimension) • Mean response interval • Geographic scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Requests for space should be responded to within 5 business days. • Commitments Met should be equal to or better than 98%.

Measurement Detail
Appendix A: Reporting Dimensions

Standard Service Groupings:	Add to LCUG list: • ISDN Basic Rate (BRI) • ISDN Primary Rate (PRI) • Unbundled DS3 Loop • Network Interface Device (NID) • Direct Inward Dialing (DID) • RCF (Remote Call Forwarding) for Ported Numbers • Signaling System 7 (SS7)
Standard Order Activities:	Add to LCUG list: • Interim Number Portability (INP)
Grade of Service:	• Interoffice Trunk Groups • Final Trunk Groups • Tandem Trunk Groups • End Office Trunk Groups • 911/E911 Incoming Trunk Groups

Measurement Detail
Appendix B: Glossary

Add to LCUG Document Glossary:

Completion:	A "completion" is the transaction that the ILEC sends to the CLEC to inform the CLEC that a requested order has been completed. It means that all necessary work associated with an order or work request is done to meet customer requirements. This will include ensuring that Intercept Announcements and all feature changes have been tested and activated.
Grade of Service:	Trunk group sizing is based on the Engineering criteria of "Grade of Service" and often refers to the mathematical "Poisson Tables" to quantify levels of Service (such as, P.01 GOS which equates to 1 in 100 "blocked calls", or 1% blockage).

Service Quality Measurements

LOCAL COMPETITION USERS GROUP (LCUG)

SERVICE QUALITY MEASUREMENTS (SQM)

September 26th, 1997
Membership: AT&T, Sprint, MCI, LCI, WorldCom

Version 6.1

Service Quality Measurements
Table Of Contents

Introduction	*Page 3*
Business Rules	*Page 5*
Executive Overview:	Page 7
Pre-Ordering (PO)	Page 8
Ordering and Provisioning (OP)	Page 8
Maintenance and Repair (MR)	Page 10
General (GE)	Page 12
Billing (BI)	Page 13
Operator Services and Directory Assistance (OS, DA)	Page 14
Network Performance (NP)	Page 15
Interconnect / Unbundled Elements and Combos (IUE)	Page 16
Formula Quick Reference Guide	Page 17
Measurement Detail:	Page 20
Pre-Ordering (PO)	Page 21
Ordering and Provisioning (OP)	Page 23
Maintenance and Repair (MR)	Page 33
General (GE)	Page 41
Billing (BI)	Page 45
Operator Services and Directory Assistance (OS, DA)	Page 49
Network Performance (NP)	Page 51
Interconnect / Unbundled Elements and Combos (IUE)	Page 52
Appendix A: Reporting Dimensions	*Page 56*
Appendix B: Glossary	*Page 58*

Service Quality Measurements
Introduction

Background:

On August 8, 1996, the Federal Communications Commission released its First Report and Order (the Order) in CC Docket No. 96-98 (Implementation of the Local Competition Provisions of the Telecommunications Act of 1996). The Order establishes regulations to implement the requirements of the Telecommunications Act of 1996. Those regulations are intended to enable potential competitive local exchange carriers (CLECs) to enter and compete in the local telecommunications markets. One requirement found to be "absolutely necessary" and "essential" to successful entry is that the incumbent local exchange carriers (ILECs) provide nondiscriminatory access to their operations support systems (OSSs). Many variations of interim OSS GUIs (graphic user interfaces), and electronic gateways have been or are being offered by the ILECs. These interim systems have not provided the capability for the CLECs to provide the same customer experience for their customer as compared to what 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 not, to date, been satisfactory. The service delivery problems exist regardless whether total service resale or unbundled elements are utilized. Final solutions for application-to-application real time system interfaces are evasive because of the complexity, the diversity of committed implementation schedules and lack or inconsistent use 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 contained in the document are: Service Parity, Performance Measurement, Electronic Interfaces, Systems Integrity Notification of Change, and Standards Adherence. Each of these are significant to ensure CLEC customers can receive at least equal levels of service to those the ILEC provides to its own customers. The LCUG group indicated that is was essential that a plan be developed to measure the ILECs performances 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 with a charter to address measurements and metrics. The subcommittee jointly developed a comprehensive list of potential measurements which was developed and shared among the team members for review. Each committee member researched an assigned measurement group for the purpose of proposing consolidation and other modifications. The subcommittee discussed each measurement and considered existing regulatory requirements (minimum service standards) as well as good business practices in arriving at the recommended measurement and extent of detail to be reported. The service quality measurement (SQM) goals, or benchmark levels of performance, were established to provide a nondiscrimination standard in the absence of directly comparative ILEC results. Establishing precise benchmark level was difficult because the ILECs have been reluctant to share actual results. The goals, therefore, were based upon best of class and/an assessment of the necessary performance to support a meaningful opportunity for CLECs to compete. The SQM goals may change if the ILECs share historical and/or self report current results.

Measurement Plans:

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

Service Quality Measurements

Introduction

It is essential that the CLECs be able to determine that they are receiving at least equal treatment to that ILECs provide to their own retail operations or their local service affiliates. Benchmarks and performance standards that are voluntarily adopted by the CLECs and ILECs, or ordered by commissions, need to clearly demonstrate that new service providers are receiving nondiscriminatory treatment.

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

Service Quality Measurements
Business Rules

Test for Parity:

ILEC Reports Results For Own Local Operations:
Both the average (mean) result and the variance of the measurement result for the ILEC and the CLEC should be compared to establish that the CLEC result is no worse than the ILEC's result.

ILEC Results Are Not Reported Or Results Are Incomplete:
The mean result for CLEC must be compared and a determination made that the CLEC result is no worse than the benchmark performance level. The benchmark performance to be employed in the comparison is the result produced via special study by an ILEC (as described below) or, in the absence of such a study result, the LCUG default performance benchmarks.

Benchmarking Study Requirements:

A special study may be optionally utilized by the ILEC to establish the benchmark performance level whenever a reasonable ILEC retail analog does not exist. When the ILEC performs a benchmarking study, it must be based upon equivalent experiences of that ILEC and conform to the following minimum requirements: (1) a benchmark result is provided for each reporting dimension described for the measurement; (2) the mean, standard error, and number of sample points are disclosed for each benchmark result; (3) the study process and benchmark results may be subjected to independent audit; (4) update to the benchmark result will be submitted whenever changes may reasonably be expected to impact the study results or six months has elapsed since the conduct of the prior study, whichever occurs earlier. Unless directly ordered by the appropriate regulatory commission, no ILEC benchmark will be utilized in lieu of an LCUG benchmark without mutual agreement of the CLECs impacted by use of the benchmark

Reporting Expectations and Report Format:

CLEC results for the report month are to be shown in comparison to the ILEC result for the same period with an indication, for each measurement result, where the CLEC result is lesser in quality compared to the ILEC (based upon the test for parity described in the preceding). Such detailed results will be reported only to the CLEC unless written permission is provided to do otherwise. Furthermore, reporting to the individual CLECs should include, for each measure, a representation of the dispersion around the average (mean) of the measured results for the reporting period (e.g. percent of 1-4 lines installed in the 1st day, 2nd day, 3rd day, and > 10 days, etc.) In addition to providing the preceding detailed results, the ILEC must also supply, to each interested CLEC, a report showing the ILEC performance for each measure in comparison to both CLEC industry in aggregate and the performance delivered to any affiliate(s) of the ILEC.

Delivery of Reports and Data:

Reports are to be made available to CLEC by the 5th scheduled business day following the close of the calendar report month. If requested by the CLEC, data files of raw data are to be transmitted by the ILEC to the CLEC on the 5th scheduled business day pursuant to mutually acceptable format, protocol and transmission media.

Geographic Reporting:

Measurement data should be reported on a natural geographic area that allows prudent operational management decisions to be made and does not obscure actual performance levels. Presently ILECs report at levels as discrete as indiviual exchanges (Central Office) to as aggregated as the Region level. The recommended default level of reporting is the MSA although further detail should be required where it improves the ability to make meaningful comparisons..

Service Quality Measurements
Business Rules

Verification and Auditing:

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

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

Adaptation:

Technology, market conditions and industry guidelines/standard continue to evolve. LCUG reserves the right to modify the content of this document, adding, deleting or making modification, as necessary to reflect such changes.

Service Quality Measurements
Executive Overview

This Executive Overview section:

- Provides a summary of the detailed requirements
- Enables a quick overview and understanding of the proposed LCUG measurements
- Summarizes the Business Implications associated with each measurement
- Accommodates a target audiences who have a need to know about the measurements but not the specific details

Executive Overview:	Page 7
Pre-Ordering (PO)	Page 8
Ordering and Provisioning (OP)	Page 8
Maintenance and Repair (MR)	Page 10
General (GE)	Page 12
Billing (BI)	Page 13
Operator Services and Directory Assistance (OS, DA)	Page 14
Network Performance (NP)	Page 15
Interconnect / Unbundled Elements and Combos (IUE)	Page 16
Formula Quick Reference Guide	Page 17

Service Quality Measurements
Executive Overview

Pre-Ordering (PO)

Function:	
Average Response Interval for Pre-Ordering Information	
Business Implications:	
• The CLEC customer service agent must establish such basic facts as availability of desired features, likely service delivery intervals, the telephone number to be assigned and the validity of the street address while the customer (or potential customer) is on the phone • It is critical that the CLEC be perceived as equally competent, knowledgeable and fast as an ILEC customer service agent • This measure is designed to monitor the time required for CLECs to obtain the pre-ordering information necessary to establish and modify service • Comparison to the ILEC results allow conclusions whether an equal opportunity exists for the CLEC to deliver a comparable customer experience (compared to the ILEC) when a retail customer calls the CLEC with a service inquiry	
Measurements:	**Results Detail:**
• Average Response Interval for Pre-Ordering Information	• Major Pre-ordering Query Type

Ordering and Provisioning (OP)

Function:	
Order Completion Intervals	
Business Implications:	
• When the CLEC commits to a due date for service delivery, the customer plans for service availability at that point and will be dissatisfied if the requested service or feature is not delivered when promised • The "average completion interval" measure monitors the time required by the ILEC to deliver integrated and operable service components requested by a CLEC, regardless of whether services resale or unbundled network elements are employed • When the service delivery interval of the ILEC is measured for comparable services, then conclusion can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers • The "average completion interval" and "percent completed on time" may prove useful in detecting developing capacity issues	
Measurements:	**Results Detail:**
• Mean Completion Interval • Percent Orders Completed on Time	• By Major Service Family and Order Type

Service Quality Measurements
Executive Overview

Function:	
Order Accuracy	
Business Implications:	
• Customers expect that their service provider will deliver precisely the service ordered and all the features specified • This measurement monitors the accuracy of the provisioning work performed by the ILEC in response to CLEC orders	
Measurements:	**Results Detail:**
• Percent Order Accuracy	• By Major Service Family

Function:	
Order Status	
Business Implications:	
• When a customers calls their service providers, they expect to be able to promptly get the information regarding the progress on their order(s) • When changes must be made, such as to the expected delivery date, customers expect that they will be immediately notified so that they may modify their own plans • The order status measurements monitor, when compared to the ILEC result, that the CLEC has timely access to order progress information so that the customer may be updated or notified, early on, when changes and rescheduling are necessary	
Measurements:	**Results Detail:**
• Mean Reject Interval • Mean FOC Interval • Mean Jeopardy Interval • Mean Completion Interval • Percent Jeopardies Returned	• By Status Type and Order Type

Function:	
Held Orders	
Business Implications:	
• Customers expect that work will be completed when promised • There must be assurances that the average period that CLEC orders are held, due to a delayed completion, is no worse for the CLEC when compared to ILEC orders	
Measurements:	**Results Detail:**
• Mean Held Order Interval • Percent Orders Held ≥ 90 Days • Percent Orders Held ≥ 15 Days	• By Major Service Family and Reason for Hold

Service Quality Measurements
Executive Overview

Maintenance and Repair (MR)

Function:	
Time To Restore	
Business Implications:	
• Customers expect prompt restoral of service to the normal operating parameters whenever troubles are detected • The longer the time required to correct a service problem, the greater the customer dissatisfaction	
Measurements:	**Results Detail:**
• Mean Time to Restore	• By Major Service Family and Trouble Type

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

Function:	
Frequency of Troubles (Troubles per 100 Lines)	
Business Implications:	
• Customers demand high quality service performance from their supplier and differentials in performance are quickly recognized throughout the market place • When measured for both the ILEC and CLEC and compared, this measure can be used to establish that CLECs are not competitively disadvantaged, compared to ILEC, as a result of experiencing more frequent incidents of trouble reports • Disparity in this measure may indicate differences in the underlying quality of the network components supplied	
Measurements:	**Results Detail:**
• Trouble Rate	• By Major Service Family and Trouble Type

Service Quality Measurements
Executive Overview

Function:	
Estimated Time To Restore Met	
Business Implications:	
• When customers experience trouble on working services, they naturally expect the services to be restored within the time frame promised • When this measure is collected for the ILEC and CLEC and then compared, it can be used to establish that CLECs are receiving equally reliable (as compared to the ILEC operations) estimates of the time required to complete service repairs	
Measurements:	**Results Detail:**
• Percentage of Customer Troubles Resolved Within Estimate	• By Major Service Family and Trouble Type

Service Quality Measurements
Executive Overview

General (GE)

Function:
Systems Availability
Business Implications:
• Access to essential business functionality, supported by OSS of the ILEC, is absolutely essential to CLEC operations • This measure monitors that such OSS functionality is at least as accessible to the CLEC as to the ILEC

Measurements:	**Results Detail:**
• Percent System Availability	• By Function Interface

Function:
Center Responsiveness
Business Implications:
• When CLECs experience operational problems dealing with ILEC processes or interfaces, prompt support by the ILEC is required in order to assure that the CLEC customers are not adversely impacted • Any delay in responding to CLEC center requests for support (e.g., request for a vanity telephone number) will, in turn, adversely impact the CLEC retail customer who may be holding on-line with the CLEC customer service agent • This measure, when gathered for both the CLEC and ILEC, supports monitoring that ILEC handling of support calls from CLECs is at least as responsive as for calls by ILEC retail customers seeking assistance (e.g., calling the business office of the ILEC or call the ILEC to report service repair issues)

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

Service Quality Measurements
Executive Overview

Billing (BI)

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

Function:	
Accuracy of Billing Records	
Business Implications:	
• The accuracy of billing records affects the accuracy of the billing ultimately delivered to local service customers, whether retail service or exchange access service customers • Billing for the elements from which CLEC services are constructed must be validated to assure that only correct charges are paid	
Measurements:	**Results Detail:**
• Percent Invoice Accuracy • Percent Usage Accuracy	• By Type of Usage (End User Direct Bill, End User Alternately Billed, or Access) or By Type of Invoice (TSR or UNE)

Service Quality Measurements
Executive Overview
Operator Services and Directory Assistance (OS, DA)

Function:
Speed To Answer
Business Implications:
• In order to assure that an unjustified competitive advantage is not created for the ILEC, the speed of answer delivered to CLEC retail customers, when the ILEC provides Operator Services or Directory Services on behalf of the CLEC, must be no slower than the speed of answer that the ILEC delivers to its own retail customers of equivalent local services

Measurements:	**Results Detail:**
• Mean Time to Answer	• Operator Services and Directory Service Separately Reported Detailed, for eeach Service by Machine and Human Answer Time

Service Quality Measurements
Executive Overview
Network Performance (NP)

Function:	
Network Performance Parity	
Business Implications:	
• The perceived quality of CLEC retail services, particularly when either ILEC services are resold or UNE combinations are employed, will be heavily influenced by the underlying quality of the ILEC network performance • Customers experience the quality of the service provider each time services are used	
Measurements:	**Results Detail:**
• Network Performance Parity	• Transmission Quality • Speed Of Connection • Reliability

Service Quality Measurements
Executive Overview
Interconnect / Unbundled Elements and Combos (IUE)

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

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

Service Quality Measurements
Formula Quick Reference

	Measurement Description By Business Process:	Measurement Formula:
	Pre-Ordering (PO)	
PO-1	Average Response Interval for Pre-Ordering Information	**Average Response Interval = Σ[(Query Response Date & Time) - (Query Submission Date & Time)]/(Number of Queries Submitted in Reporting Period**
	Ordering and Provisioning (OP)	
OP-1	Average Completion Interval	**Average Completion Interval = Σ[(Completion Date & Time) - (Order Submission Date & Time)]/(Count of Orders Completed in Reporting Period)**
OP-2	Percent Orders Completed on Time	**Percent Orders Completed on Time = (Count of Orders Completed within ILEC Committed Due Date) / (Count of Orders Completed in Reporting Period) x 100**
OP-3	Percent Order Accuracy	**Percent Order Accuracy = (Σ Orders Completed w/o Error) / (ΣOrders Completed) x 100**
OP-4	Mean Reject Interval	**Mean Reject Interval = Σ[(Date and Time of Order Rejection) - (Date and Time of Order Acknowledgment)]/(Number of Orders Rejected in Reporting Period)**
OP-5	Mean FOC Interval	**Mean FOC Interval = Σ[(Date and Time of Firm Order Confirmation) - (Date and Time of Order Acknowledgment)]/(Number of Orders Confirmed in Reporting Period)**
OP-6	Mean Jeopardy Interval	**Mean Jeopardy Interval = Σ[(Date and Time of Committed Due Date for the Order) - (Date and Time of Jeopardy Notice)]/(Number of Orders Jeopardized in Reporting Period)**
OP-7	Mean Completion Interval	**Completion Interval = Σ[(Date and Time of Notice of Completion Issued to the CLEC) - (Date and Time of Work Completion by ILEC)]/(Number of Orders Completed in Reporting Period)**
OP-8	Percent Jeopardies Returned	**Percent Jeopardies Returned = (Number of Orders Jeopardized in Reporting Period)/(Number of Orders Confirmed in Reporting Period)**
OP-9	Mean Held Order Interval	**Mean Held Order Interval = Σ(Reporting Period Close Date - Committed Order Due Date) / (Number of Orders Pending and Past The Committed Due Date) for all orders pending and past the committed due date**
OP-10	Percent Orders Held ≥ 90 Days	**(# of Orders Held for ≥ 90 days) / (Total # of Orders Pending But Not Completed) x 100**
OP-11	Percent Orders Held ≥ 15 Days	**(# of Orders Held for ≥ 15 days) / (Total # of Orders Pending But Not Completed) x 100**

Service Quality Measurements
Formula Quick Reference

	Maintenance and Repair (MR)	
MR-1	Mean Time to Restore	**Mean Time To Restore = Σ[(Date and Time of Ticket Closure)-(Date and Time of Ticket Creation)] / (Count of Trouble Tickets Closed in Reporting Period)**
MR-2	Repeat Trouble Rate	**Repeat Trouble Rate = (Count of Service Access Line Generating More Than One Trouble Within a Continuous 30 Day Period) / (Number of Reports in the Report Period) x 100**
MR-3	Trouble Rate	**Trouble Rate = (Count of Initial & Repeated Trouble Reports in the Current Period) / (Number of Service Access Line in Service at End of the Report Period) x 100**
MR-4	Percentage of Customer Troubles Resolved Within Estimate	**Percentage of Customer Troubles Resolved Within Estimate = (Count of Customer Troubles Resolved By The Quoted Resolution Time and Date) / (Count of Customer Troubles Tickets Closed) x 100**
	General (GE)	
GE-1	Percent System Availability	**% System Availability = [(Hours Functionality is Available to CLECs During Report Period) / (Number of Hours Functionality was Scheduled to be Available During the Period)] x 100**
GE-2	Mean Time to Answer Calls	**Mean Time to Answer Calls = Σ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered by Center)**
GE-3	Call Abandonment Rate	**Call Abandonment Rate = (Count of Calls Terminated Before Answer During the Reporting Period)/(Count of All Calls Placed in Queue During the Reporting Period)**
	Billing (BI)	
BI-1	Mean Time to Provide Recorded Usage Records	**Mean Time to Provide Recorded Usage Records ={ Σ[(Data Set Transmission Date)-(Date of Message Recording)]}/(Count of All Messages Transmitted in Reporting Period)**
BI-2	Mean Time to Deliver Invoices	**Mean Time to Deliver Invoices = Σ[(Invoice Transmission Date)-(Date of Scheduled Bill Cycle Close)]/(Count of Invoices Transmitted in Reporting Period)**
BI-3	Percent Invoice Accuracy	**Percent Invoice Accuracy = [(Number of Invoices Delivered in the Reporting Period that Have Complete Information, Reflect Accurate Calculations and are Properly Formatted) / Total Number of Invoices Issued in the Reporting Period)] x 100**
BI-4	Percent Usage Accuracy	**Percent Usage Accuracy = [(Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)] x 100**

Service Quality Measurements
Formula Quick Reference

	Operator Services and Directory Assistance (OS, DA)	
OS/DA-1	Mean Time To Answer	**Mean Time To Answer =[Σ(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered on Behalf of CLECs in Reporting Period)**
	Network Performance (NP)	
NP-1	Network Performance Parity	**Network Performance Parity = Σ(Network Performance Parameter Result)/(Number of Tests Conducted)**
	Interconnect / Unbundled Elements and Combos (IUE)	
IUE-1	Function Availability	**Function Availability[1] = (Amount of Time[2] a Functionality is Useable[1] by a CLEC in a Specified Period)/(Total Time[2] Functionality Was Intended to Be Useable)** **Notes:** **1. These measure may also be expressed in the negative, that is, in term of unavailability.** **2. In some instances, rather than time, the availability will be express in terms of transactions executed successfully compared to transactions attempted.**
IUE-2	Timeliness of Element Performance	**Timeliness of Element Performance = (Number of Times Functionality Executes Successfully Within the Established Timeliness Standard)/(Number of Times Execution of Functionality was Attempted)**

Service Quality Measurements
Measurement Detail

The Measurement Detail section:

- Provides explicit detail information for each measurement
- Provides business reasons for the measurement, required data elements, analogs to the existing ILEC business function and comparative results suggestions
- Is targeted at those individuals who need to know and understand the detail categories and measurement methodologies

Measurement Detail:	Page 20
Pre-Ordering (PO)	Page 21
Ordering and Provisioning (OP)	Page 23
Maintenance and Repair (MR)	Page 33
General (GE)	Page 41
Billing (BI)	Page 45
Operator Services and Directory Assistance (OS, DA)	Page 49
Network Performance (NP)	Page 51
Interconnect / Unbundled Elements and Combos (IUE)	Page 52
Appendix A: Reporting Dimensions	*Page 56*
Appendix B: Glossary	*Page 58*

Service Quality Measurements
Measurement Detail

Pre-Ordering (PO)

Function:	**Average Response Interval for Pre-Ordering Information**
Business Implications:	As an initial step of establishing service, the customer service agent must establish such basic facts as availability of desired features, likely service delivery intervals, the telephone number to be assigned, the current products and features the customer has, and the validity of the street address. Typically, this type of information is gathered from supporting OSS while the customer (or potential customer) is on the telephone with the customer service agent. Because pre-ordering activities are the first tangible contact that a customer may have with a CLEC, it is critical that the CLEC be perceived as equally competent, knowledgeable and fast as and ILEC customer service agent. This measure is designed to monitor the time required for CLECs to obtain the pre-ordering information necessary to establish and modify service. Comparison to the ILEC results allow conclusions whether an equal opportunity exists for the CLEC to deliver a comparable customer experience (compared to the ILEC) when a retail customer calls the CLEC with a service inquiry.
Measurement Methodology:	**Average Response Interval = Σ[(Query Response Date & Time) - (Query Submission Date & Time)]/(Number of Queries Submitted in Reporting Period)** **For CLEC Results:** The response interval for each pre-ordering 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 type, consistent with the specified reporting dimension, and then divided by the associated total number of query received by the ILEC during the reporting period. **For ILEC Results:** The ILEC computation is identical to that for the CLEC with the clarifications noted below. **Other Clarifications and Qualification:** • The elapsed time for an ILEC query is measured from the point in time when the ILEC customer service agent submits the request for identical or similar information into the ILEC OSS until the time when the ILEC OSS returns the requested information to the ILEC customer service agent. • As additional pre-ordering functionality is established by industry, for example with respect to unbundled network elements, the reporting dimensions may be expanded. • Elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second • Elapsed time is to be measured through automated rather than manual monitor and logging. • The ILEC service agent entry of a request for pre-ordering information (to the ILEC OSS) is considered to be the equivalent of the ILEC receipt of a query from the CLEC. • The ILEC OSS return of information, whether in hard copy or by display on the ILEC service agent's terminal is considered equivalent to the return of requested information to the CLEC.

Service Quality Measurements
Measurement Detail

Reporting Dimensions:	**Excluded Situations:**
• Pre-Ordering Query Types (See Appendix A) Geographic Scope	• None
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • Query Identifier (e.g., unique tracking number) • Query Receipt Date by ILEC • Query Receipt Time by ILEC • Query Type (per reporting dimension) • Data Response Date • Data Response Time • Geographic Scope	• Report Month • Query Type (per reporting dimension) • Mean response interval • Standard error of the mean response interval • Geographic Scope
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Other than a query when 30 or more telephone numbers are requested, the response interval will be less than or equal 2 seconds for 98% of the CLEC's queries received by the ILEC during the reporting period and no query will take more than 5 seconds. • For queries requesting 30 or more telephone numbers, the response interval is never to exceed two hours.

Service Quality Measurements
Measurement Detail
Ordering and Provisioning (OP)

Function:	**Order Completion Intervals**
Business Implications:	In order to be successful in the marketplace, CLECs must be capable of delivering service in time frames equal or better than what the ILEC delivers for comparable service configurations. Likewise, when the CLEC commits to a due date for service delivery, the customer plans for service availability has been established and the customer will be dissatisfied if the requested service or feature is not delivered when promised. The "average completion interval" measure monitors the time required by the ILEC to deliver integrated and operable service components requested by the CLEC, regardless of whether services resale or unbundled network elements are employed. When the service delivery interval of the ILEC is measured for comparable services, then conclusion can be drawn regarding whether or not CLECs have a reasonable opportunity to compete for customers. The "orders completed on time" measure monitors the reliability of ILEC commitments with respect to committed due dates to assure that CLECs can reliably quote expected due dates to their retail customer. In addition, when monitored over time, the "average completion interval" and "percent completed on time" may prove useful in detecting developing capacity issues.
Measurement Methodology:	**Average Completion Interval = Σ [(Completion Date & Time) - (Order Submission Date & Time)]/(Count of Orders Completed in Reporting Period)** **Percent Orders Completed on Time = (Count of Orders Completed w/o ILEC Committed Due Date) / (Count of Orders Completed in Reporting Period) x 100** **For CLEC Results:** The actual completion interval is determined for each order processed during the reporting period. The completion interval is the elapsed time from the ILEC receipt of a syntactically correct order from the CLEC to the ILEC's return of a valid completion notification to the CLEC. Elapsed time for each order is accumulated for each reporting dimension (see below). The accumulated time for each reporting dimension is then divided by the associated total number of orders completed within the reporting period. The percentage of orders completed on time is determined by first counting, for each specified reporting dimension, both the total numbers of orders completed within the reporting interval and the number of orders completed by the committed due date (as specified on the initial FOC returned to the CLEC). For each reporting dimension, the resulting count of orders completed no later than the committed due date is divided by the total number of order completed with the resulting fraction expressed as a percentage. **For ILEC Results:** The ILEC computation is identical to that for the CLEC with the clarifications noted below. **Other Clarifications and Qualification:** • The elapsed time for an ILEC order is measured from the point in time when the ILEC customer service agent enters the order into the ILEC order processing system until the date and time reported by the ILEC installation personnel log actual completion of all work necessary to permit service initiation, whether or not the ILEC initiates customer billing at that point in

Service Quality Measurements
Measurement Detail

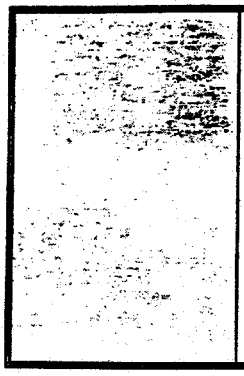
	time. • Results for the CLECs are captured and reported at the order level (e.g., unique PON). • The Completion Date is the date upon which the ILEC issues the Order Completion Notice to the CLEC. • If the CLEC initiates a supplement to the originally submitted order and the supplement reflects changes in customer requirements (rather than responding to ILEC initiated changes), then the order submission date and time will be the date and time of the ILEC receipt of a syntactically correct order supplement. • No other supplemental order activities will result in an update to the order submission date and time used for the purposes of computing the order completion interval. • See "Order Status" metric sheet for discussion of ILEC analogs receipt of a syntactically correct and return of a valid completion notice. • Elapsed time is measured in hours and hundredths of hours rounded to the nearest tenth of an hour. • Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays.

Reporting Dimensions:	**Excluded Situations:**
• Service - Standard Service Groupings (See Appendix A) • Activity - Standard Order Activities (See Appendix A) • Geographic Scope	• Canceled orders • Initial Order when supplemented by CLEC • ILEC Orders associated with internal or administrative use of local services
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • CLEC Order Number • Order Submission Date • Order Submission Time • Order Completion Date • Order Completion Time • Service Type • Activity Type • Geographic Scope	• Report Month • Average Order Completion Interval • Standard Error for the Order Completion Interval • Service Type • Activity Type • Geographic Scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
	• Unless otherwise noted, the order completion interval for installations that do not require a premise visit and do not require anything beyond software updates is 1 business day.
	• Unless otherwise noted, the order completion intervals for installations that involve a premise visit or physical work is three business days.
	• Installation Interval Exceptions:
	  • UNE Platform (at least DS0 loop + local switching + common transport elements) installation interval is 1 business day whether or not premise work is required.
	  • The installation interval for unbundled loops is always 1 business day.

Service Quality Measurements

Measurement Detail

	• UNE Channelized DS1 (DS1 unbundled loop + multiplexing) installation interval is within 2 business days. • Unbundled Switching Element installation interval is within 2 business days • DS0/DS1 Dedicated Transport installation interval is within 3 business days • All other Dedicated Transport installation interval is within 5 business days. • The installation interval for all order involving only feature modification is 5 hours. • Order completion interval for all disconnection orders is 1 business day.

Service Quality Measurements
Measurement Detail

Function:	**Order Accuracy**
Business Implications:	Customers expect that their service provider will deliver precisely the service ordered and all the features specified. Any service provider that is unreliable, with respect to fulfilling orders, will not only generate ill-will with customers where errors are made, but will also incur higher cost due to rework and processing of customer complaints. This measurement monitors the accuracy of the provisioning work performed by the ILEC, in response to CLEC orders. When the ILEC provide the comparable measure for its own operation then it is possible to know if provisioning work performed for CLECs is at least as that performed by the ILEC for its own retail local service operations.
Measurement Methodology:	**Percent Order Accuracy = (Σ Orders Completed w/o Error) / (ΣOrders Completed) x 100** **For CLEC Results:** For each order completed during the reporting period, the original account profile and the order that the CLEC sent to the ILEC are compared to the services and features reflected upon the account profile as it existed following completion of the order by the ILEC. An order is "completed without error" if all service attribute and account detail changes (as determined by comparing the original and the post order completion account profile) completely and accurately reflect the activity specified on the original and supplemental CLEC orders. "Total number of orders completed" refers to order completions received by the CLEC from the ILEC for each reporting dimension identified below. **For ILEC Results:** Same computation as for the CLEC with the clarifications noted below. **Other Clarifications and Qualification:** • **Order Supplements -** If the CLEC initiates any supplements to the originally submitted order, for the purposes of reflecting changes in customer requirements, then the cumulative effect of the initial order and all the supplemental orders will be the compared with differences determined by comparison of the pre- and post order completion account profiles. • **Completion Notices -** To the extent that the ILEC supplies a completion notice containing sufficient information to perform validation of the order accuracy, then the Completion Notice information can be utilized in lieu of the comparison of the "before" and "after" account profiles. Use of the completion notice for this purpose would need to be at the mutual agreement of the ILEC and the CLEC. **All Orders -** The comparison is between the CLEC order and the account profile as it existed before and after order completion. • **Service Profile -** If a sample is employed for this measurement, then the ILEC should also be prepared, if requested, to provide the percentage distribution of order activity types represented within each service type for both the ILEC and CLEC sample. Sampling may be utilized to establish order accuracy provided the results produced are consistent with the reporting dimensions specified, the sample methodology is disclosed in advance and reflects generally accepted sampling methodology, and the sampling process may be audited by the CLEC.

Service Quality Measurements

Measurement Detail

Reporting Dimensions:	**Excluded Situations:**
• Service - Standard Service Groupings (See Appendix A)	• Orders canceled by the CLEC • Order Activities of the ILEC associated with internal or administrative use of local services.
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • Percentage Order Accuracy • Service Type • Geographic Scope	• Report Month • Percentage Order Accuracy • Service Type • Geographic Scope
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Completed CLEC orders, by reporting dimension, are accurate no less than 99% of the time.

Service Quality Measurements
Measurement Detail

Function:	**Order Status**
Business Implications:	When a customer calls their service provider, they expect to get information promptly regarding the progress on their order(s). Likewise, when changes must be made, such as to the expected delivery date, customers expect that they will be immediately notified so that they may modify their own plans. A service provider that cannot fulfill such expectations will generate customer dissatisfaction. Lengthy delays in exchange of status information will result in the delay of other customer affecting activities: Inside wiring activity is often not confirmed until the firm order confirmation is returned, and customer billing will not be initiated until the CLEC receives the order completion notice, to cite two examples of impact. The order status measurements monitor, when compared to the ILEC result, that the CLEC has timely access to order progress information so that the customer may be updated or notified, early on, when changes and rescheduling are necessary. Furthermore, the "% jeopardies returned" measure for the CLEC, when reported in comparison to the ILEC result, will gauge whether initial commitments to the CLEC for order processing are at least as reliable as the commitments the ILEC makes for its own operations.
Measurement Methodology:	Order status intervals measure the elapsed time necessary to provide a notice to the CLEC that an "unexpected" condition has been encountered when processing an order. Order status includes notification of order rejection due to violation of order content or syntax requirements, confirmation of order acceptance, jeopardy of an order due to the inability to complete work as originally committed and work completion notification. The interval required to supply each of these four preceding major categories of status must be separately monitored and reported. **Reject Interval = Σ[(Date and Time of Order Rejection) - (Date and Time of Order Acknowledgment)]/(Number of Orders Rejected in Reporting Period)** 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. The time measurement stops when the ILEC returns a rejection notice to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of rejected orders associated with the particular service and order type. **FOC Interval = Σ[(Date and Time of Firm Order Confirmation) - (Date and Time of Order Acknowledgment)]/(Number of Orders Confirmed in Reporting Period)** Interval for Return of a 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. The time measurement stops when the ILEC returns a valid firm order confirmation to the CLEC. The elapsed time is accumulated by order type with the resulting accumulated time then divided by the count of orders associated with the particular service and order type. **Jeopardy Interval = Σ[(Date and Time of Committed Due Date for the Order) -**

(Date and Time of Jeopardy Notice)]/(Number of Orders Jeopardized in Reporting Period)

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

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

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

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

Percentage Jeopardies Returned is the percentage of total orders processed for which the ILEC notifies the CLEC that the work will not be completed as committed on the original FOC. The measurement result is derived by dividing the count of jeopardy notices the ILEC issues to the CLEC by the count of FOC returned by the ILEC during the identical period. Both the "Number of Orders Jeopardized in Reporting Period" and "Number of Orders Confirmed in Reporting Period" are utilized in other status measurement computations.

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

Other Clarifications and Qualification:

- When the ILEC processes orders for a CLEC via different interfaces (e.g., ASR and EDI) then the preceding measurement must be computed for each interface arrangement.
- All intervals are measured in hours and hundredths of hour rounded to the nearest hundredth.
- Because this should be a highly automated process, the accumulation of elapsed time continues through off-schedule, weekends and holidays.
- "Syntactically correct" means all fields required to process an order are

	populated and reflect the correct format. • The ILEC service agent's attempt to submit an order for processing by the ILEC OSS is considered equivalent to the ILEC acknowledgment of the CLEC's order. • The ILEC OSS return of any indication to the service agent that an order cannot be processed as submitted is considered equivalent to the ILEC return of a rejection notice to the CLEC. • Return of any information (e.g., order recapitulation) to the ILEC customer service agent that indicates the order can be processed, is the equivalent of the ILEC return of a FOC to the CLEC. • Logging of information in the ILEC OSS, whether manual or automatic, that indicates an order may not be completed by the existing due date, is equivalent of the return of a jeopardy notice to the CLEC regardless of whether or not the ILEC takes action based upon such information. • Automatic logging of work completion and manual logging of work completion, whether input to directly to the ILEC OSS or into an intermediate storage devise, is consider the equivalent of the return of a completion notice to the CLEC.

Reporting Dimensions:	**Excluded Situations:**
• Standard Order Activities (See Appendix A) • Geographic Scope	• Rejection Interval - None • Jeopardy Interval - None • Firm Order Confirmation Interval - None • Completion Notification Interval - None • Percentage Jeopardies Returned - None
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • CLEC Order Number • Order Submission Date • Order Submission Time • Status Type (Rejection, FOC, Jeopardy Type, Completion Notice) • Status Notice Date • Status Notice Time • Standard Order Activity • Geographic Scope	• Report Month • Status Type (Rejection, FOC, Jeopardy Type, Completion Notice) • Average Status interval • Standard error of status interval • Standard Order Activity • Geographic Scope

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

Service Quality Measurements
Measurement Detail

Function:	**Held Orders**
Business Implications:	Customers expect that work will be completed when promised. Therefore, when delays occur in completing CLEC orders, there must be assurances that the average period that CLEC orders are held, pending a delayed completion, is no worse for the CLEC when compared to ILEC orders.
Measurement Methodology:	**Held Order Interval = Σ(Reporting Period Close Date - Committed Order Due Date) / (Number of Orders Pending and Past The Committed Due Date) for all orders pending and past the committed due date** **For CLEC Results:** This metric is computed at the close of each report period. The held order interval is established by first identifying all 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. For each such order the number of calendar days between the committed completion date and the close of the reporting period is established and represents the held order interval for that particular order. The held order interval is accumulated (by standard service grouping and reason for the order being held, if identified.) The total number of day accumulated in a category is then divided by the number of held orders within the same category to produce the mean held order interval. **(# of Orders Held for ≥ 90 days) / (Total # of Orders Pending But Not Completed) x 100** **(# of Orders Held for ≥ 15 days) / (Total # of Orders Pending But Not Completed) x 100** This "percentage orders held" measure is complementary to the held order interval but is designed to detect orders continuing in a "non-completed" state for an extended period of time. Computation of this metric utilizes a subset of the data accumulated for the "held order interval" measure. All orders, for which the "held order interval" equals or exceeds 90 (or 15) days, are counted by service type. The total number of pending and past due orders for the same service type are counted (as was done for the held order interval) and divided into the count of orders held past 90 (or 15) days. **For ILEC Results:** Same computation as for the CLEC with the clarifications provided below.. **Other Clarifications and Qualification:** • The "held order" measure established by some state commissions as part of minimum service standards is analogous to this proposed measure but, because it is typically limited to monitoring only those orders held because of facility shortages, needs to be expanded to include all reasons that an order is past due. • **Order Supplements** - If the CLEC initiates a supplement to the originally submitted order for the purpose of reflecting changes in customer requirements, then the due date returned on the FOC will be the basis for the preceding calculations. No other supplemental order activities will result in an update to the committed due date. • See "Order Status" measurement definitions for discussion of the ILEC analog to a completion notice.

Service Quality Measurements
Measurement Detail

	• The held order interval is measured in calendar rather than business days.

Reporting Dimensions:	**Excluded Situations:**
• Service - Standard Service Groupings (See Appendix A) • Reason for Hold (no facilities, no equipment, workload, other) • Geographic Scope	• Any orders canceled by the CLEC will be excluded from this measurement. • Order Activities of the ILEC associated with internal or administrative use of local services
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • CLEC Order Number • Committed Due Date • Order Submission Date • Service Type • Hold Reason • Geographic Scope	• Report Month • Average Held Order Interval • Standard Error for Average Held Order. Interval • Service Type • Hold Reason • Geographic Scope

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

Service Quality Measurements
Measurement Detail

Maintenance and Repair (MR)

Function:	**Time To Restore**
Business Implications:	Customers expect prompt restoral of service to the normal operating parameters whenever troubles are detected. The longer the time required to correct a service problem, the greater the customer dissatisfaction. This measure, when collected for both the CLEC and ILEC and compared, monitors that CLEC maintenance requests at least as quickly as ILEC maintenance requests.
Measurement Methodology:	**Mean Time To Restore = Σ[(Date and Time of Ticket Closure)-(Date and Time of Ticket Creation)] / (Count of Trouble Tickets Closed in Reporting Period)** **For CLEC Results:** The restoral interval for resolution of customer requested maintenance and repair is the elapsed time, measured in hours and tenths of hours, measured from the CLEC 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 by service type and trouble disposition for the reporting period. The accumulated time is divided by the count of maintenance tickets reported as resolved by the ILEC (by service type and trouble disposition and cause) during the report period. **For ILEC Results:** Same computation as for the CLEC. **Other Clarifications and Qualification:** • This measure is analogous to the Out Of Service Measure of the ILEC with the exception that all trouble causes are monitored and that the average time to restore is reported rather than a comparison to a target (the same underlying data is required for both computations) • Elapsed time is measured on a 24 hour day, seven days a week basis. The time is measured in hours and hundredths of hours rounded to the nearest hundredth hour. • Multiple reports for the same customer service are treated as separate incidents. • "Restore" means to return to the normally expected operating parameters for the service regardless of whether or not the service, at the time of trouble ticket creations, was operated in a degraded mode or was completely unusable. • A trouble ticket or trouble report is any record (whether paper or electronic) by the ILEC for the purpose of monitoring action and disposition of a service repair or maintenance situation. • ILEC acceptance of a trouble by the call receipt agent is considered equivalent to the CLEC logging or submitting a trouble to the ILEC. • The ILEC closure of a trouble ticket (whether automatic or manual) is considered equivalent to returning a trouble resolution notice to the CLEC.

Reporting Dimensions:	**Excluded Situations:**
• Service - Standard Service Groupings (See Appendix A) • Disposition and Cause (See Appendix A) • Geographic Scope	• Trouble tickets that are canceled at the CLEC request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests that a ticket be "held open" for monitoring.

Service Quality Measurements
Measurement Detail

	• Subsequent Reports (additional reports on an already open ticket).
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • CLEC Ticket # • Ticket Submission Time • Ticket Submission Date • Ticket Completion Time • Ticket Completion Date • Service Type • WTN or CKTID (a unique identifier for elements combined in a service configuration) • Disposition and Cause • Geographic Scope	• Report Month • Average Restoral Interval • Standard Error for the Average Restoral Interval • Service Type • Disposition and Cause • Geographic Scope
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Out of Service conditions where dispatch is required: •≥90% resolved within 4 hours •≥95% resolved within 8 hours •≥99% resolved within 16 hours • Out of Service conditions where no dispatch is required: •≥85% resolved within 2 hours •≥95% resolved within 3 hours •≥99% resolved within 4 hours • ≥ all other troubles resolved within 24 hours

Service Quality Measurements
Measurement Detail

Function:	**Frequency of Repeat Troubles**
Business Implications:	Customers are keenly aware of the effectiveness of repair activities. First time troubles are sufficiently annoying and disruptive. When the trouble recurs within a short time frame it is even more dissatisfying. This measurement, when gathered for both the ILEC and CLEC can establish whether or not CLECs are competitively disadvantaged (vis-à-vis the ILEC) as a result of experiencing more frequent occurrence of customer troubles not being resolved in the first attempt to repair the trouble. Differences in this measure may indicate that the CLEC is receiving inferior maintenance support in the initial resolution of troubles or, in the alternative, it may indicate that the network components supplied are of inferior quality.
Measurement Methodology:	**Repeat Trouble Rate = (Count of Service Access Line Generating More Than One Trouble Within a Continuous 30 Day Period) / (Number of Reports in the Report Period) x 100** **For CLEC Results:** The repeat trouble rate measure is computed by accumulating the number of instances where a trouble ticket is submitted by a CLEC to the ILEC for a service arrangement that had at least one prior trouble ticket any time in the 30 calendar days preceding the creation of the current trouble ticket. The number of repeat troubles are accumulated for the reporting period by service type. The count of repeat troubles, by service type, is divided by the count of initial trouble reports (by service type) received during the report period. **For ILEC Results:** Same computation as for CLECs. **Other Clarifications and Qualification:** • No trouble types excluded (for example, trouble dispositions of "no access" are included) • Unbundled loops or UNE combination involving and unbundled loops are considered a "service access line". • The "same service arrangement" means a trouble report being reported for the same telephone number or the same circuit identifier. • The trouble resolution need not be identical between the repeated reports for the incident to be counted as a repeated trouble.

Reporting Dimensions:	**Excluded Situations:**
• Service - Standard Service Groupings (See Appendix A) • Disposition and Cause (See Appendix A) • Geographic Scope	• Trouble tickets that are canceled at the CLEC request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests that a ticket be "held open" for monitoring. • Subsequent trouble report(s) on a maintenance ticket that has (have) not been reported as resolved (or closed)

Service Quality Measurements

Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • CLEC Ticket # • Ticket Submission Time • Ticket Submission Date • Ticket Completion Time • Ticket Completion Date • Service Type • WTN or CKTID (a unique identifier for elements combined in a service configuration) • Disposition and Cause • Geographic Scope	• Report Month • % repeat trouble • Service Type • Disposition and Cause • Geographic Scope

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Less than 1% of trouble reports, by service type, experience a repeat report, regardless of the trouble disposition, within a 30 day period.

Service Quality Measurements
Measurement Detail

Function:	**Frequency of Troubles (Troubles per 100 lines)**
Business Implications:	Customers demand high quality of service performance from their supplier and differentials in performance are quickly recognized throughout the market place. Poor performance is difficult to overcome and may require lengthy periods of sustained superb performance in order to re-establish a product image that has been tarnished. When measured for both the ILEC and CLEC and compared, this measure can be used to establish that CLECs are not competitively disadvantaged, compared to ILEC, as a result of experiencing more frequent incidents of trouble reports. Disparity in this measure may indicate differences in the underlying quality of the network components supplied.
Measurement Methodology:	**Trouble Rate = (Count of Initial & Repeated Trouble Reports in the Current Period) / (Number of Service Access Line in Service at End of the Report Period) x 100** **For CLEC Results:** The frequency of trouble metric is computed by accumulating, by standard service grouping and disposition and cause, the total number of maintenance tickets logged by a CLEC (with the ILEC) during the reporting period. The resulting number of tickets for each disposition and cause is accumulated within each standard service grouping, is divided by the total number of "service access lines" existing for the CLEC at the end of the report period. **For ILEC Results:** Same calculation as for the CLEC with the clarifications provided below. **Other Clarifications and Qualification:** • This measure is frequently a minimum service standard required by state commissions for monitoring ILEC performance. • There are no trouble types that are excluded from this measurement. • Unbundled loops or UNE combinations involving unbundled loops would be counted as a "service access line". • See the "Time to Restore" measurement for a discussion of the ILEC equivalent of "trouble tickets" and "trouble logging".

Reporting Dimensions:	**Excluded Situations:**
• Standard Service Groupings (See Appendix A) • Disposition and Cause (See Appendix A) • Geographic Scope	• Trouble tickets that are canceled at the CLEC request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests a ticket be "held open" for monitoring.

Service Quality Measurements
Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • CLEC Ticket # • Ticket Submission Time • Ticket Submission Date • Ticket Completion Time • Ticket Completion Date • Service Type • WTN or CKTID (a unique identifier for elements combined in a service configuration) • Disposition and Cause • Geographic Scope	• Report Month • Trouble Rate • Service Type • Disposition and Cause • Geographic Scope
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Less than 1.5% of lines, by service type, experience a trouble in a report period.	

Service Quality Measurements
Measurement Detail

Function:	**Estimated Time To Restore Met**
Business Implications:	When customers experience trouble on working services, they naturally expect the services to be restored within the time frame promised. When such commitments are not fulfilled, an already unsatisfactory condition, in the customer's eyes, becomes even worse. When this measure is collected for the ILEC and CLEC and then compared, it can be used to establish that CLECs are receiving equally reliable (as compared to the ILEC operations) estimates of the time required to complete service repairs.
Measurement Methodology:	**Percentage of Customer Troubles Resolved Within Estimate = (Count of Customer Troubles Resolved By The Quoted Resolution Time and Date) / (Count of Customer Troubles Tickets Closed) x 100** **For CLEC Results:** The computation of the measure is as follows: The quoted repair completion date and time is compared to the actual repair date and time (ticket closure as defined in Time to Restore metric). In each instance where the actual repair date and time is on or before the initially provided estimated or quoted date and time to restore, the count of "troubles resolved within estimate" is incremented by one for the relevant "service type" and "disposition and cause". The resulting count is divided by the total number of troubles resolved (for the consistent service type - disposition and cause), for the report period, where a estimated interval was provided or a standard interval existed. **For ILEC Results:** Same as for CLEC. **Other Clarifications and Qualification:** • The ILEC analog for this measure is derived by comparing the actual date and time of ILEC trouble ticket closure compared to the projected trouble clearance date and time established through the ILEC agent's on-line interaction with the work management system of the ILEC, regardless of whether or not the ILEC currently quotes this information to its retail customer. • There are no trouble types that are excluded from this measurement. • See the "Time To Restore" measurement for discussion of analogous ILEC maintenance activities (e.g., trouble resolution). • The "quoted" or "estimated" time to restore is the actual schedule time projection returned by the ILEC work management system or the standardized repair interval that the ILEC uses for its own operations when equivalent service arrangements are involved. • If the ILEC supplies only the estimated repair interval, then the estimated date and time of repair is determined by adding the repair interval to the date and time that the CLEC logged the repair request with the ILEC.

Reporting Dimensions:	**Excluded Situations:**
• Service - Standard Service Groupings (See Appendix A) • Disposition and Cause (see Appendix A) • Geographic Scope	• Trouble tickets that are canceled at the CLEC request • ILEC trouble reports associated with administrative service • Instances where the CLEC or an ILEC customer requests a ticket be "held open" for monitoring.

Service Quality Measurements
Measurement Detail

Function:	**Center Responsiveness**
Business Implications:	When CLECs experience operational problems dealing with ILEC processes or interfaces, prompt support by the ILEC is required in order to assure that the CLEC customers are not adversely impacted. Any delay in responding to CLEC center requests for support (e.g., request for a vanity telephone number) will, in turn, adversely impact the CLEC retail customer who may be holding on-line with the CLEC customer service agent. This measure, when gathered for both the CLEC and ILEC, monitors that ILEC handling of support calls from CLECs is at least as responsive as for calls by ILEC retail customers seeking assistance (e.g., calling the business office of the ILEC or call the ILEC to report service repair issues).
Measurement Methodology:	**Mean Time to Answer Calls = Σ [(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered by Center)** **Call Abandonment Rate = (Count of Calls Terminated Before Answer During the Reporting Period)/(Count of All Calls Placed in Queue During the Reporting Period)** **For CLEC Results:** Speed of answer (mean time to answer calls) and call abandonment rates are monitored through the call management technology utilized to distribute calls to ILEC agents supporting CLEC activities (i.e., call receipt personnel staffing ILEC support centers intended for CLEC use). Results for each measure are to be provided separately for each center handing CLEC inquiries. If centers deployed by the ILEC support multiple functions (e.g., both maintenance and provisioning) then the results for each function supported should be separately reported, if feasible. Speed of Answer is determined by measuring and accumulating the elapsed time from the entry of a CLEC call into the ILEC call management system until the CLEC call is transferred to the ILEC personnel assigned to handling CLEC calls for assistance. The elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second. The Call Abandonment Rate is also monitored through the call management technology for the CLEC service agents. The number of calls received by the call distribution system is counted for the reporting period, regardless whether the call actually is transferred to an agent for processing. In addition, a count is accumulated of all calls received into the call distribution system that are subsequently terminated by the calling party or due to equipment failure before transfer to the service agent for processing. This call termination may occur at any point (e.g., the call may be within an Automatic Call Distributor, within a Voice Response Unit, in an answer queue, or at any other point in the call management system.) **For ILEC Results:** Both Speed of Answer and Call Abandonment Rate, as it relates to the ILEC, will be measured in an identical manner as described for the CLEC. The results for the ILEC business office operations and its repair bureau operations should be separately accumulated, computed and retained. Where call receipt for such operations are commingled and inseparable, then only a single results for each

Service Quality Measurements

Measurement Detail

Data Retained Relating To CLEC Experience:	Data Retained Relating To ILEC Performance:
• Report Month • CLEC Ticket # • Ticket Submission Time • Ticket Submission Date • Ticket Completion Time • Ticket Completion Date • Service Type • WTN or CKTID (a unique identifier for elements combined in a service configuration) • Disposition and Cause • Geographic Scope	• Report Month • Percentage of Customer Troubles Resolved Within Estimate • Service Type • Disposition and Cause • Geographic Scope

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

Service Quality Measurements
Measurement Detail

General (GE)

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

Service Quality Measurements

Measurement Detail

Reporting Dimensions:	**Excluded Situations:**
• Interface type offered for each functional area (See Appendix A) • Business Period (8:00AM to 8:00PM local time versus 8:00PM to 8:00AM , weekends and holidays)	• None
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • Interface Type (Identifies each unique interface available to CLECs) • Scheduled Hour Available • Actual Hours Available	• Report Month • Functionality Identification • % Availability of Functionality
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Less than 0.1% of unplanned down time, by interface type, during either business period .

measure will be generated and serve as the comparative result for both the CLEC repair support and the CLEC provisioning support results.

Other Clarifications and Qualification:

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

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

Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Month • Center Type • Mean Speed of Answer • Standard Error for Mean Speed of Answer • Call Abandonment Rate	• Month • Center Type • Mean Speed of Answer • Standard Error for Mean Speed of Answer • Call Abandonment Rate

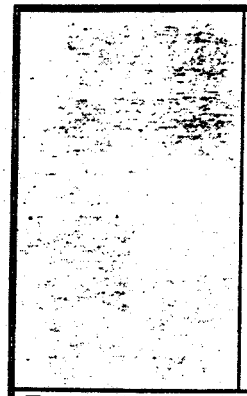
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according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

Service Quality Measurements
Measurement Detail

Billing (BI)

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

Service Quality Measurements
Measurement Detail

	close date of the retail customer bill cycle to the production of the customer bill in electronic format (i.e., bill is ready for printing) appropriate for delivery to retail customers regardless whether or not such a distribution is immediately undertaken. • Mean time to deliver usage records is to be reported separately for end user usage, access related usage. • Alternately billed usage (e.g., bill-to-third party, collect, credit card usage processed through CMDS), although commingled on the daily usage feeds to the CLEC, is to be monitored separately from the directly billed usage with respect to timeliness because of the different and more time consuming settlements and clearing process associated with such usage.

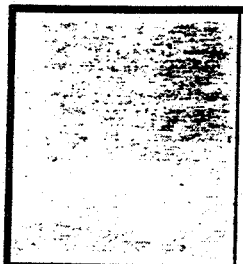
Reporting Dimensions:	**Excluded Situations:**
• End user usage records • Access usage records • Alternately billed usage records • Wholesale Bill Invoices (TSR) • Unbundled Element Invoices (UNE)	• Any usage records or invoices rejected due to formatting or content errors.
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Monthly • Record Type or Invoice Type • Mean Delivery Interval • Standard Error of Delivery Interval	• Report Month • Record Type or Invoice Type • Mean Delivery Interval • Standard Error of Delivery Interval

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete:
	• For usage records, separately for access usage and end user usage:
	  • Greater than 99.9% records received within 24 hours or usage recording
	  • All usage is received within 48 hours of usage recording
	• Greater than 99.95% of services resale invoices received within 10 calendar days of bill cycle close
	• Greater than 99.95% of wholesale (UNE) invoices received within 10 calendar days of bill cycle close.

Service Quality Measurements
Measurement Detail

Function:	Accuracy of Billing Records
Business Implications:	The accuracy of billing records affects the accuracy of the billing ultimately delivered to local service customers, whether retail service or exchange access service customers. Billing for the elements from which CLEC services are constructed must be validated to assure that only correct charges are paid. This validation is necessary to assure that the cost structure for services is not inflated. Furthermore, charges such as "time and material" related charges may be on the invoice and need to be promptly passed on to customers (by CLECs) to avoid dissatisfaction regarding the timeliness of CLEC billing and to minimize customer inquiries on late billing. Fair competition requires that the accuracy of billing records (both usage and invoices) delivered by the ILEC to the CLEC must provide CLECs with the opportunity to delivery bills at least as accurate as those delivered by the ILEC. Producing and comparing this measurement result for both the ILEC and CLEC allows a determination as to whether or not parity exists.
Measurement Methodology:	**Invoice Accuracy = [(Number of Invoices Delivered in the Reporting Period that Have Complete Information, Reflect Accurate Calculations and are Properly Formatted) / Total Number of Invoices Issued in the Reporting Period)] x 100** **Usage Accuracy = [(Number of Usage Records Delivered in the Reporting Period That Reflected Complete Information Content and Proper Formatting) / (Total Number of Usage Records Transmitted)] x 100** **For CLEC Results:** The completeness of content, accuracy of information and conformance of formatting will be determined based upon the terms of the individual CLEC interconnection agreements with the ILECs. The ILEC will establish a quality control process that is disclosed to CLECs and that is no less rigorous than the most rigorous quality monitoring established in the ILEC billing service contracts for long distance service providers. The quality monitoring process must be disclosed in advance and process auditing must be permitted. The records and invoices delivered by the ILEC must simultaneously meet the standards relating to content, accuracy and formatting in order to be counted as accurate. Each of the above measurements, is expressed as a ratio (expressed as a percentage) of accurate records (or invoices) to the total records (or invoices) delivered. **For ILEC Results:** The results computation for the ILEC is identical to that described for the CLECs. The usage accuracy determination is based upon comparison of the usage records, following conversion to the EMR (or equivalent) format as compared to the internally established content and formatting requirements. Likewise, the accuracy measure for invoice delivery will be based upon a statistically reliable comparison of ILEC invoices to the content, calculation methodology and formatting standards of the ILEC. Separate comparisons are to be made for retail service invoices and access invoices with the results compared to wholesale (TSR) and UNE invoices, respectively. **Other Clarifications and Qualification:** • The usage accuracy measure identified here is similar to the type of measures that the ILEC commonly has instituted in service contracted established with long distance service suppliers who use ILEC billing

Service Quality Measurements
Measurement Detail

	services. • The wholesale invoice accuracy identified here is analogous to the measures contained within the Billing Quality Assurance Programs that the ILECs have with IXCs for monitoring access billing quality. If a sampling process is used to monitor accuracy, then the study results must be reconfirmed no less than quarterly

Reporting Dimensions:	**Excluded Situations:**
• End user usage records • Access usage records • Alternately billed usage records • Wholesale Bill Invoices (TSR) • Unbundled Element Invoices (UNE)	• None
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • Record or Invoice Type (per Reporting Dimensions) • Accuracy	• Report Month • Record or Invoice Type (per Reporting Dimensions) • Accuracy

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

Service Quality Measurements
Measurement Detail

Operator Services and Directory Assistance (OS, DA)

Function:	**Speed To Answer**
Business Implications:	In order to assure that an unjustified competitive advantage is not created for the ILEC, the speed of answer delivered to CLEC retail customers, when the ILEC provides Operator Services or Directory Services on behalf of the CLEC, must be no slower than the speed of answer that the ILEC delivers to its own retail customers of equivalent local services.
Measurement Methodology:	**Mean Time To Answer =[Σ(Date and Time of Call Answer) - (Date and Time of Call Receipt)]/(Total Calls Answered on Behalf of CLECs in Reporting Period)** **For CLEC Results:** Speed of answer and call abandonment rates are monitored through the call management technology used to distribute calls to ILEC agents supporting CLEC activities (i.e., call receipt personnel staffing Directory Assistance or Operator Service Positions). Speed of Answer is determined by measuring and accumulating the elapsed time from the entry of a CLEC retail customer call into the ILEC call management system queue until the CLEC retail customer call is transferred to the ILEC personnel assigned to handling CLEC calls for assistance (whether DA or OS). The elapsed time is measured in seconds and tenths of seconds rounded to the nearest tenth of a second. **For ILEC Results:** Identical measures as described for the CLEC with the clarification provided below. **Other Clarifications and Qualification:** • This measure is directly analogous to speed of answer minimum service standards established within many states. • Results may be reported for the CLEC industry in aggregate. • See the "Center Responsiveness" measurement for the treatment of the situation where ILEC call management technology cannot measure speed of answer on a call basis from receipt to answer.

Reporting Dimensions:	**Excluded Situations:**
• Operator Services in Aggregate • Directory Assistance • Processing Method (human versus machine processes)	• Call abandoned by customers prior to answer by the ILEC OS or DA operator
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Month • Call Type (OS or DA) • Mean Speed of Answer • Standard Error for Mean Speed of Answer	• Month • Call Type (OS or DA) • Mean Speed of Answer • Standard Error for Mean Speed of Answer

Service Quality Measurements

Measurement Detail

Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • More than 90% of call involving answer by a "live" agent, separately for OS and DA services, are answered within 10 seconds. • All calls involving answer by a Voice Response Unit, separately for OS and DA services, are answered within 2 seconds.

Service Quality Measurements
Measurement Detail

Network Performance (NP)

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

Reporting Dimensions:	**Excluded Situations:**
• Transmission Quality (See Appendix A) • Speed of Connection (See Appendix A) • Reliability (See Appendix A)	• None
Data Retained Relating To CLEC Experience:	**Data Retained Relating To ILEC Performance:**
• Report Month • Reporting Dimension • Mean Performance Result • Standard Error of Mean Performance • Number of Data Points • Geographic scope	• Report Month • Reporting Dimension • Mean Performance Result • Standard Error of Mean Performance • Number of Data Points • Geographic scope

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

Service Quality Measurements
Measurement Detail

Interconnection/Unbundled Elements and Combinations (IUE)

Function:	**Availability of Network Elements**
Business Implications:	As CLECs use individual elements as well as element combinations to deliver unique services, it is essential that the UNE functionality operate properly due to the crucial role played by such elements in providing quality retail services. This measure monitors individual network element or element combinations, that do not have an apparent retail analog, to assure that CLECs have a meaningful opportunity to compete through access to and use of element (or combination) functionality.
Measurement Methodology:	**Function Availability[1] = (Amount of Time[2] a Functionality is Useable[1] by a CLEC in a Specified Period)/(Total Time[2] Functionality Was Intended to Be Useable)** Notes: **1. These measure may also be expressed in the negative, that is, in term of unavailability.** **2. In some instances, rather than time, the availability will be express in terms of transactions executed successfully compared to transactions attempted.** **For CLEC Results:** Availability will be measured for each unique UNE functionality (or combination of UNEs) that deliver a unique functionality that does not have a reasonable retail service analog. The number of times that the functionality executes properly will be shown in comparison to the number of times that the execution of the functionality was requested or initiated. Availability can apply to both physical and logical (e.g., database) elements. Physical element availability (e.g., links to databases, dedicated transport, etc.) will typically be expressed as the % of time that the functionality is useable compared to the total time in the period being observed. "Useable" will typically means that, when monitored, the element indicates readiness to operate (e.g., an electrical (or equivalent) continuity is detected, expected signaling is returned, etc.). Logical element availability will typically be expressed in terms of the number of transactions successfully executed (e.g., successful database updates, success query responses) compared to the number of transactions attempted. Illustrative examples of availability measures are shown below • A-link: minutes unavailable per year • D-link: seconds unavailable per year • databases: percentage of queries receiving a response • databases: percentage of transactions experiencing time-outs • databases: percentage of queries experiencing a return of unexpected values • routing: percentage of calls blocked **For ILEC Results:** Identical measurements are performed where the ILEC employs the same or reasonably comparable functionality. Where such analogs do not exist, the ILEC is expected to establish benchmark performance levels jointly with the CLEC requesting the functionality. **Other Clarifications and Qualification:**

Service Quality Measurements

Measurement Detail

	• The preceding list of elements is illustrative and is not to be considered exhaustive • ILEC failure to provide timeliness performance that is no worse than what its own operations experience when using comparable functionality or, where comparable functionality is not employed, failure to meet or exceed parameters established as result of negotiation with the CLEC, constitutes failure to deliver nondiscriminatory access. • For each element or element combination requested, where a retail analog is not identified, the ILEC is expected to establish both a availability measure and an availability standard (ILEC functional analog or negotiated) unless the CLEC waives its right for such a measure. • Typical databases for which standards are currently expected are AIN, LIDB and 800 Number.
Reporting Dimensions: • By unique UNE or UNE combinations requested by the CLECs	**Excluded Situations:** • None
Data Retained Relating To CLEC Experience: • Month • Element or Element Combination Identification • Result for Agreed Upon Availability Parameter	**Data Retained Relating To ILEC Performance:** • To Be Determined
Performance Standard in Absence of ILEC Results:	If the ILEC does not deliver direct comparative results or the ILEC has not produced benchmark levels based upon a verifiable study of its own operation as agreed to with the CLEC, then result(s) related to the CLEC operation should be provided according to the following levels of performance in order to provide the CLEC with a meaningful opportunity to compete: • Performance Standards in this area are yet to be published.

Service Quality Measurements
Measurement Detail

Function:	Performance of Network Elements
Business Implications:	As CLECs use individual elements (as well as element combinations) to deliver unique services, it is essential that the UNE functionality operates in a timely manner because of the crucial role played by such elements in providing quality retail services. This measure monitors individual network element (or element combinations), that do not have an apparent retail analog, to assure that CLECs are afforded a meaningful opportunity to compete when element (or combination) functionality is utilized.
Measurement Methodology:	**Timeliness of Element Performance = (Number of Times Functionality Executes Successfully Within the Established Timeliness Standard)/(Number of Times Execution of Functionality was Attempted)** **For CLEC Results:** Timeliness will be measured for each unique UNE (or combination of UNEs) that delivers unique. The number of times that the functionality executes properly within the established standard time frame will be accumulated and shown in comparison to the number of times that the execution of the functionality was requested or initiated. Illustrative examples of timeliness measures are shown below: • Database Updates: % completed within 24 hours • Post Dial Delay: % calls routed to CLEC OS platform within 2 seconds **For ILEC Results:** Identical measurements are performed where the ILEC employs the same or reasonably comparable functionality. Where such analogs do not exist, the ILEC is expected to establish benchmark performance levels jointly with the CLEC requesting the functionality. **Other Clarifications and Qualification:** • The preceding list of elements is illustrative and is not to be considered exhaustive • ILEC failure to provide timeliness performance that is no worse than what its own operations experience when using comparable functionality or, where comparable functionality is not employed, failure to meet or exceed parameters established as result of negotiation with the CLEC, constitutes failure to deliver nondiscriminatory access. • For each element (or element combination) requested where a retail analog is not identified, the ILEC is expected to establish both a timeliness measure and a timeliness standard (ILEC functional analog or negotiated) jointly with the requesting CLEC unless that CLEC waives its right for such a measure. • Typical databases for which standards are currently expected are AIN, LIDB and 800 Number. • Comparisons of performance should be based upon the criteria for which the element was engineered. For example, if the element was engineered based upon average busy hour criteria, the comparison should be based upon the CLEC busy hour period (likewise for criteria such as busy day, busy season, or ten high days).

Service Quality Measurements

Measurement Detail

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

Service Quality Measurements
Measurements Detail
Appendix A: Reporting Dimensions

Standard Service Groupings:	• Resold Residence POTS • Resold Business POTS • Resold Residence ISDN • Resold Business 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
Standard Order Activities:	• New Service Installations • Service Migrations Without Changes • Service Migrations With Changes • Local Number Porting • Move and Changes Activities • Feature Changes • Service Disconnects
Pre-Ordering Query Types:	• Due Date Reservation • Feature Function Availability • Facility Availability • Street Address Validation • Service Availability Information • Appointment Scheduling • Customer Service Records • Telephone Number • Rejected of Failed Queries (regardless of type)
Transmission Quality Parameter:	• Subscriber Loop Loss • Signal to Noise Ratio • Idle Channel Circuit Noise • Loop-Circuit Balance • Circuit Notched Noise • Attenuation Distortion

Service Quality Measurements
Measurements Detail
Appendix A: Reporting Dimensions

Speed of Connection Parameters:	• Dial Tone Delay • Post Dial Delay • Call Completion/Delivery Rate
Reliability Parameters:	• Network Incident Affecting >5000 Blocked Calls • Network Incidents Affecting >100,000 Blocked Calls
Disposition and Cause:	• Out of Service No Dispatch • Out of Service With Dispatch • Hold Open for Monitoring • Customer Premise Equipment Trouble (including Inside Wire) • No Trouble Found • Central Office Equipment • Interoffice Facilities • Loop/Access Line • All Other Troubles • No access *"Out of Service" means that the customer has no dial tone.* *"Dispatch" means that ILEC repair personnel must be dispatched to a location outside an ILEC building (to customer premises or other off-site facilities) to resolve the trouble.*

Service Quality Measurements
Measurements Detail
Appendix B: Glossary

A

Abandoned Call:	An abandoned call occurs when the caller hangs up after the call has been delivered, but before the receiving party has answered the call.
Attenuation Distortion:	Attenuation Distortion" should measure the variation in loss at different frequencies across the voice frequency spectrum (200Hz - 3400 Hz).

B

Call Completion Rate	The call completion rate for CLEC customers is determined by calculating the total number of calls placed by CLEC customers that were completed to the calling destination. The number of completed calls is then divided by the total # of call attempts made by CLEC customers during the reporting period.
Call Delivery Rate	The call delivery rate for CLEC customers is determined by calculating the total # of calls received by CLEC customers. This number of delivered calls is then divided by the total # of call attempts received by the ILEC for termination CLEC customers.
Completion:	A "completion" is the transaction that the ILEC sends to the CLEC to inform the CLEC that a requested order has been completed.

D

Data Response:	
Dial Tone Delay:	The "Dial tone delay" is determined for each trial completed during the reporting period by computing the time that transpires from a customer's going off-hook and the receipt of dial tone from the servicing central office. It should be measured in seconds and tenths of seconds. "Post dial delay" for each trial is determined for each trial completed during the reporting period by computing the time that transpires from when the last digit is dialed until a valid response is received by the customer. It should be measured in seconds and tenths of seconds

E

F

FOC	A "FOC" is a Firm Order Confirmation notification, which is the transaction that the ILEC will send to the CLEC to confirm that an order can be completed.

G

H

Held Orders:	"Held orders" are orders that the ILEC has confirmed (an FOC was returned to the CLEC) and that are overdue.

I

Idle Channel Circuit Noise	The idle channel circuit noise for each trial is determined for each trial completed during the reporting month by computing the difference between the noise that exists in the channel when no signals are present and the reference noise. The resulting accumulated idle channel circuit noise for all trials is divided by the total # of trials completed during the reporting period.
Interface:	The "interface" is the ILEC interface that allows the CLEC to access the ILEC system
Internal or Administrative Use:	

J

Jeopardy	A "jeopardy" is a transaction that the ILEC sends to the CLEC to inform the CLEC that a previously FOC'd order cannot be processed as specified in the original FOC.

K

Loop-circuit Balance	"Loops-circuit balance" should be measured in decibels and tenths of decibels above the reference noise. "Attenuation Distortion" should measure the variation in loss at different frequencies across the voice frequency spectrum (200Hz - 3400 Hz). It should be measured from the NID to the switch, and from the switch to the NID. It is measured by subtracting the loss at 1004 Hz from the loss at the frequency of interest, and should be reflected in tenths of decibels.

M

N

Network Incident:	A "Network incident" is an unplanned network occurrence that results in blocked calls

O

P

Post Dial Delay:	"Post dial delay" is the time that transpires from when the last digit is dialed until a valid response is received by the customer

Q

R

Receipt of Order:	
Return of Valid Completion:	

S

Signal to Noise Ratio:	Signal to Noise ratio is the ratio of usable signal being transmitted to the noise or undesired signal.
Subscriber Loop Loss:	The subscriber loop loss is by computing the difference between the strength of the signal as it enters the loop and the strength of the transmitted signal. Signal strength is measured in decibels rounded to the nearest tenth of a decibel. The resulting accumulated decimal strength is divided by the total number of trials completed during the reporting period.
Subsequent Reports:	Customer trouble reports where the customer calls to check on the status of a previous trouble report (initial or repeat) that has not been cleared (closed or resolved) at the time of the call.
Syntax Reject:	A "syntax reject" is the transaction that an ILEC will return to a CLEC when a the CLEC has submitted an order transaction that the ILEC's gateway cannot process due to violation of published rules for formatting or content.
System:	The "system" is the combination of ILEC gateways, communications links, hardware and software that, in combination, is used to perform or support business functions and execute supporting transactions.

T

Troubles	"Troubles" include all reported difficulties with performance of resold services or UNEs, whether the report is the initial or a repeated report, that the CLEC refersto the ILEC repair process/interface for resolution. Subsequent reports are categorized seperately.
Trouble Appointment:	A "trouble appointment" is a commitment made by the ILEC (to CLEC or to customer) to resolve a trouble.
U	
V	
W	
X	
Y	
Z	

	CARRIER TO CARRIER PERFORMANCE STANDARDS AND REPORTS INTERIM GUIDELINES 1/98 - 12/99 BELL ATLANTIC - NEW YORK	BA Measure	CLEC Measure	Performance Score	Standard's Importance Multiple	Weight	Percent Missed Score
	Resale Standards						
	PRE-ORDERING						
	Metric A - Response Time OSS Interface						
1	Customer Service Record	0	0	0	15	2.6%	0.0%
3	Due Date Availability	0	0	0	1	0.2%	0.0%
4	Address Validation	0	0	0	1	0.2%	0.0%
5	Product and Service Availability	0	0	0	1	0.2%	0.0%
6	Telephone Number Availability and Reservation	0	0	0	1	0.2%	0.0%
7	**Metric B - OSS Response Time (Average)**	0	0	0	20	3.5%	0.0%
	CONTACT CENTER AVAILABILITY						
	Metric C - Availability of Centers for CLECS - No Reports	0.0%	0.0%	0	10	1.8%	0.0%
	ORDERING						
	Metric D - Order Confirmation Timeliness						
9	% Order Confirmation within 24 hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
10	% Order Confirmation within 48 hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
12	% Order Confirmation within 72 hours (All Orders >10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
14	% Order Confirmation within 2 hours (Flow-Thru)	0.0%	0.0%	0	15	2.6%	0.0%
	Metric E - Reject Notice Timeliness						
19	% Reject Within 24 Hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
21	% Reject within 48 Hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
23	% Reject within 2 Hours (Flow-Thru)	0.0%	0.0%	0	10	1.8%	0.0%
24	% Reject within 72 Hours (All Orders > 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
	Metric G - Timeliness of Completion Notification						
29	Completion Notification - % On Time	0.0%	0.0%	0	15	2.6%	0.0%
30	**Metric H - % Flow Through Orders**	0.0%	0.0%	0	20	3.5%	0.0%
	PROVISIONING						
	Metric I - Average Offered Interval						
	Metric J - Average Completed Interval						
40	Average Interval Completed - Total - No dispatch	0	0	0	10	1.8%	0.0%
44	Average Interval Completed - Dispatch (1-5 lines)	0	0	0	10	1.8%	0.0%
48	Average Interval Completed - Dispatch (6-9 lines)	0	0	0	5	0.9%	0.0%
49	Average Interval Completed - Dispatch (>10 lines)	0	0	0	5	0.9%	0.0%
50	**Average Interval Completed - Total Dispatch**	0	0	0	20	3.5%	0.0%
51	Average Interval Completed DS0	0	0	0	15	2.6%	0.0%
52	Average Interval Completed DS1	0	0	0	15	2.6%	0.0%
53	Average Interval Completed DS3	0	0	0	15	2.6%	0.0%
	Metric K - % Completed within 5 Days						
56	% Completed within 5 Days (1-5 lines) - Total	0.0%	0.0%	0	15	2.6%	0.0%
	Metric L - % Missed Appointment - Company						
58	**% Missed Appointment - BA - Total**	0.0%	0.0%	0	20	3.5%	0.0%
59	Average Delay Days - Total	0	0	0	10	1.8%	0.0%
61	% Missed Appointment - BA - Dispatch	0.0%	0.0%	0	5	0.9%	0.0%
62	% Missed Appointment - BA - No Dispatch	0.0%	0.0%	0	5	0.9%	0.0%
63	**Metric M - % Missed Appointment - Facilities**	0.0%	0.0%	0	10	1.8%	0.0%
	Metric N - % Installation Troubles within 30 Days						
64	POTS: % Installation Troubles within 30 days	0.0%	0.0%	0	5	0.9%	0.0%
	TROUBLE REPORTING (OSS)						
	Metric O - Response Time OSS Interface						
66	Create Trouble	0	0	0	10	1.8%	0.0%
67	Status Trouble	0	0	0	10	1.8%	0.0%
68	Modify Trouble	0	0	0	10	1.8%	0.0%
69	Request Cancellation of Trouble	0	0	0	10	1.8%	0.0%
70	Trouble Report History (by TN/Circuit)	0	0	0	10	1.8%	0.0%
71	Test (POTS only)	0	0	0	10	1.8%	0.0%
	MAINTENANCE						
	Metric P - Network Trouble Reports						
72	**Network Trouble Report Rate**	0	0	0	20	3.5%	0.0%
74	Network Trouble Report Rate - Loop	0.0%	0.0%	0	1	0.2%	0.0%
75	Network Trouble Report Rate - Central Office	0.0%	0.0%	0	1	0.2%	0.0%
	Metric Q - % Missed Repair Appointments						
76	**% Missed Repair Appointments - Dispatched (Loop)**	0.0%	0.0%	0	20	3.5%	0.0%
77	% Missed Repair Appointments - Not Dispatched (CO)	0.0%	0.0%	0	1	0.2%	0.0%
78	% Missed Repair Appointments - Not Dispatched Total	0.0%	0.0%	0	15	2.6%	0.0%
	Metric R - Mean Time to Repair (time to restore)						
79	*Mean Time to Repair*	0	0	0	15	2.6%	0.0%
80	Mean Time to Repair - Loop Trouble	0	0	0	5	0.9%	0.0%
81	Mean Time to Repair - CO Trouble	0	0	0	5	0.9%	0.0%
	Metric S - % Out of Service > 24 Hours						
82	% Out of Service > 2 hours (blocking)	0.0%	0.0%	0	1	0.2%	0.0%
83	% Out of Service > 4 hours	0.0%	0.0%	0	5	0.9%	0.0%
84	% Out of Service > 12 hours	0.0%	0.0%	0	5	0.9%	0.0%
85	**% Out of Service > 24 Hours**	0.0%	0.0%	0	20	3.5%	0.0%
86	% All Troubles Cleared within 24 hours	0.0%	0.0%	0	10	1.8%	0.0%
87	**Metric T - % Repeat Reports within 30 days**	0.0%	0.0%	0	15	2.6%	0.0%
	BILLING						
	Metric V - Timeliness of Daily Usage Feed						
90	% DUF in 4 Business Days	0.00%	0.00%	0	10	1.8%	0.0%
91	% DUF in 5 Business Days	0.00%	0.00%	0	10	1.8%	0.0%
93	**Metric W - Timeliness of Carrier Bill**	0.0%	0.0%	0	15	2.6%	0.0%

	CARRIER TO CARRIER PERFORMANCE STANDARDS AND REPORTS INTERIM GUIDELINES 1/98 - 12/98 BELL ATLANTIC - NEW YORK	BA Measure	CLEC Measure	Performance Score	Standard's Importance Multiple	Weight	Percent Missed Score
	UNE Standards						
	PRE-ORDERING						
	Metric A - Response Time OSS Interface						
1	Customer Service Record	0	0	0	15	2.6%	0.0%
3	Due Date Availability	0	0	0	1	0.2%	0.0%
4	Address Validation	0	0	0	1	0.2%	0.0%
5	Product and Service Availability	0	0	0	1	0.2%	0.0%
6	Telephone Number Availability and Reservation	0	0	0	1	0.2%	0.0%
7	Metric B - OSS Response Time (Average)	0	0	0	20	3.5%	0.0%
	Metric C - Availability of Centers for CLECS - No Reports	0.0%	0.0%	0	10	1.8%	0.0%
	ORDERING						
	Metric D - Order Confirmation Timeliness						
9	% Order Confirmation within 24 hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
10	% Order Confirmation within 48 hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
12	% Order Confirmation within 72 hours (All Orders >10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
14	% Order Confirmation within 2 hours (Flow-Thru)	0.0%	0.0%	0	15	2.6%	0.0%
	Metric E - Reject Notice Timeliness						
19	% Reject Within 24 Hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
21	% Reject within 48 Hours (N-Mech < 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
23	% Reject within 2 Hours (Flow-Thru)	0.0%	0.0%	0	10	1.8%	0.0%
24	% Reject within 72 Hours (All Orders > 10 lines)	0.0%	0.0%	0	10	1.8%	0.0%
27	Metric F - % Rejects	0.0%	0.0%				
	Metric G - Timeliness of Completion Notification						
29	Completion Notification - % On Time	0.0%	0.0%	0	15	2.6%	0.0%
30	Metric H - % Flow Through Orders	0.0%	0.0%	0	20	3.5%	0.0%
	PROVISIONING						
	Metric I - Average Offered Interval						
	Metric J - Average Completed Interval						
40	Average Interval Completed - Total - No dispatch	0	0	0	10	1.8%	0.0%
44	Average Interval Completed - Dispatch (1-5 lines)	0	0	0	10	1.8%	0.0%
48	Average Interval Completed - Dispatch (6-9 lines)	0	0	0	5	0.9%	0.0%
49	Average Interval Completed - Dispatch (>10 lines)	0	0	0	5	0.9%	0.0%
50	**Average Interval Completed - Total Dispatch**	0	0	0	20	3.5%	0.0%
51	Average Interval Completed DSO	0	0	0	15	2.6%	0.0%
52	Average Interval Completed DS1	0	0	0	15	2.6%	0.0%
53	Average Interval Completed DS3	0	0	0	15	2.6%	0.0%
	Metric K - % Completed within 5 Days						
56	% Completed within 5 Days (1-5 lines) - Total	0.0%	0.0%	0	15	2.6%	0.0%
	Metric L - % Missed Appointment - Company						
58	**% Missed Appointment - BA - Total**	0.0%	0.0%	0	20	3.5%	0.0%
59	Average Delay Days - Total	0	0	0	10	1.8%	0.0%
61	% Missed Appointment - BA - Dispatch	0.0%	0.0%	0	5	0.9%	0.0%
62	% Missed Appointment - BA - No Dispatch	0.0%	0.0%	0	5	0.9%	0.0%
63	Metric M - % Missed Appointment - Facilities	0.0%	0.0%	0	10	1.8%	0.0%
	Metric N - % Installation Troubles within 30 Days						
64	POTS: % Installation Troubles within 30 days	0.0%	0.0%	0	5	0.9%	0.0%
	TROUBLE REPORTING (OSS)						
	Metric O - Response Time OSS Interface						
66	Create Trouble	0	0	0	10	1.8%	0.0%
67	Status Trouble	0	0	0	10	1.8%	0.0%
68	Modify Trouble	0	0	0	10	1.8%	0.0%
69	Request Cancellation of Trouble	0	0	0	10	1.8%	0.0%
70	Trouble Report History (by TN/Circuit)	0	0	0	10	1.8%	0.0%
71	Test (POTS only)	0	0	0	10	1.8%	0.0%
	MAINTENANCE						
	Metric P - Network Trouble Report Rate						
72	**Network Trouble Report Rate**	0	0	0	20	3.5%	0.0%
74	Network Trouble Report Rate - Loop	0.0%	0.0%	0	1	0.2%	0.0%
75	Network Trouble Report Rate - Central Office	0.0%	0.0%	0	1	0.2%	0.0%
	Metric Q - % Missed Repair Appointments						
76	**% Missed Repair Appointments - Dispatched (Loop)**	0.0%	0.0%	0	20	3.5%	0.0%
77	% Missed Repair Appointments - Not Dispatched (CO)	0.0%	0.0%	0	1	0.2%	0.0%
78	% Missed Repair Appointments - Not Dispatched Total	0.0%	0.0%	0	15	2.6%	0.0%
	Metric R - Mean Time to Repair (time to restore)						
79	Mean Time to Repair	0	0	0	15	2.6%	0.0%
80	Mean Time to Repair - Loop Trouble	0	0	0	5	0.9%	0.0%
81	Mean Time to Repair - CO Trouble	0	0	0	5	0.9%	0.0%
	Metric S - % Out of Service > 24 Hours						
82	% Out of Service > 2 hours (blocking)	0.0%	0.0%	0	1	0.2%	0.0%
83	% Out of Service > 4 hours	0.0%	0.0%	0	5	0.9%	0.0%
84	% Out of Service > 12 hours	0.0%	0.0%	0	5	0.9%	0.0%
85	**% Out of Service > 24 Hours**	0.0%	0.0%	0	20	3.5%	0.0%
86	% All Troubles Cleared within 24 hours	0.0%	0.0%	0	10	1.8%	0.0%
87	Metric T - % Repeat Reports within 30 Days	0.0%	0.0%	0	15	2.6%	0.0%
	BILLING						
	Metric V - Timeliness of Daily Usage Feed						
90	% DUF in 4 Business Days	0.00%	0.00%	0	10	1.8%	0.0%
91	% DUF in 5 Business Days	0.00%	0.00%	0	10	1.8%	0.0%
93	Metric W - Timeliness of Carrier Bill	0.0%	0.0%	0	15	2.6%	0.0%

CARRIER TO CARRIER
PERFORMANCE STANDARDS AND REPORTS
INTERIM GUIDELINES 1/98 - 12/98
BELL ATLANTIC - NEW YORK

		BA Measure	CLEC Measure	Performance Score	Standard's Importance Multiple	Weight	Percent Missed Score
	Interconnection Standards						
	PRE-ORDERING						
	Metric A - Response Time OSS Interface						
1	Customer Service Record	0	0	0	0	0.0%	0.0%
3	Due Date Availability	0	0	0	1	0.3%	0.0%
4	Address Validation	0	0	0	0	0.0%	0.0%
5	Product and Service Availability	0	0	0	0	0.0%	0.0%
6	Telephone Number Availability and Reservation	0	0	0	0	0.0%	0.0%
7	**Metric B - OSS Response Time (Average)**	0	0	0	20	6.2%	0.0%
	Metric C - Availability of Centers for CLECS - No Reports	0.0%	0.0%	0	5	1.5%	0.0%
	ORDERING						
	Metric D - Order Confirmation Timeliness						
16	% Firm Order Confirmation > 10 Days	0.0%	0.0%	0	15	4.6%	0.0%
17	Timeliness of Design Layout Record	0	0	0	15	4.6%	0.0%
	Metric E - Reject Notice Timeliness						
26	% Rejects > 10 Business Days	0.0%	0.0%	0	10	3.1%	0.0%
	Metric G - Timeliness of Completion Notification						
29	Completion Notification - % On Time	0.0%	0.0%	0	5	1.5%	0.0%
30	**Metric H - % Flow Through Orders**	0.0%	0.0%	0	20	6.2%	0.0%
	PROVISIONING						
54	**Metric J - Average Completed Interval - Total**	0	0	0	20	6.2%	0.0%
	Metric L - % Missed Appointment - Company						
58	**% Missed Appointment - BA - Total**	0.0%	0.0%	0	20	6.2%	0.0%
59	Average Delay Days - Total	0.0%	0.0%	0	10	3.1%	0.0%
63	**Metric M - % Missed Appointment - Facilities**	0.0%	0.0%	0	10	3.1%	0.0%
64	**Metric N - POTS: % Installation Troubles within 30 days**	0.0%	0.0%	0	15	4.6%	0.0%
	TROUBLE REPORTING (OSS)						
	Metric O - Response Time OSS Interface						
66	Create Trouble	0	0	0	10	1.8%	0.0%
67	Status Trouble	0	0	0	10	1.8%	0.0%
68	Modify Trouble	0	0	0	10	1.8%	0.0%
69	Request Cancellation of Trouble	0	0	0	10	1.8%	0.0%
70	Trouble Report History (by TN/Circuit)	0	0	0	10	1.8%	0.0%
71	Test (POTS only)	0	0	0	10	1.8%	0.0%
	MAINTENANCE						
	Metric P - Network Trouble Report Rate						
72	**Network Trouble Report Rate**	0	0	0	20	6.2%	0.0%
	Metric Q - % Missed Repair Appointments						
78	% Missed Repair Appointments - Not Dispatched Total	0.0%	0.0%	0	10	3.1%	0.0%
79	**Metric R - Mean Time to Repair (time to restore)**	0.0%	0.0%	0	15	4.6%	0.0%
	Metric S - % Out of Service > 24 Hours						
82	**% Out of Service > 2 hours (blocking)**	0.0%	0.0%	0	20	6.2%	0.0%
83	% Out of Service > 4 hours	0.0%	0.0%	0	1	0.3%	0.0%
84	% Out of Service > 12 hours	0.0%	0.0%	0	1	0.3%	0.0%
85	% Out of Service > 24 Hours	0.0%	0.0%	0	1	0.3%	0.0%
86	% All Troubles Cleared within 24 hours	0.0%	0.0%	0	1	0.3%	0.0%
87	**Metric T - % Repeat Reports within 30 Days**	0.0%	0.0%	0	10	3.1%	0.0%
	NETWORK PERFORMANCE						
	Metric U - % Final Trunk Blockage						
88	**% Final Trunk Groups exceeding blocking Design standard**	0.0%	0.0%	0	20	6.2%	0.0%

03/18/98
12:41 AM
File: Intgud6.123
Sheet: Critical Measures

BELL ATLANTIC - NEW YORK
Carrier to Carrier Performance Standards and Reports
CRITICAL MEASURES FOR 271

	RESALE	UNE	INTER-CONNECTION	TOTAL
PRE-ORDERING				
7 Metric B - OSS Response Time (average)	0	0	0	0
PROVISIONING				
NA Physical Co-Location		0		0
50 Average Interval Completed - Total Dispatch	0	0		0
54 Metric J - Average Completed Interval - Total			0	0
58 % Missed Appointment - BA - Total	0	0	0	0
MAINTENANCE				
72 Network Trouble Report Rate	0	0	0	0
76 % Missed Repair Appointments - Dispatched (Loop)	0	0		0
82 % Out of Service > 2 hours (blocking)			0	0
85 % Out of Service > 24 Hours	0	0		0
NETWORK PERFORMANCE				
88 % Final Trunk Groups exceeding blocking design standard			0	0
TOTAL	0	0	0	0