



Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: JULY, 15, 1999

TO: DIRECTOR, DIVISION OF RECORDS AND REPORTING (BAYÓ)

FROM: DIVISION OF COMMUNICATIONS (FAVORS) *CRF*
DIVISION OF AUDITING AND FINANCIAL ANALYSIS (HARVEY, *BH*
VINSON) *CV* *190*
DIVISION OF LEGAL SERVICES (B. KEATING) *AK CB*

RE: DOCKET NO. 981834-TP - PETITION OF COMPETITIVE CARRIERS
FOR COMMISSION ACTION TO SUPPORT LOCAL COMPETITION IN
BELLSOUTH TELECOMMUNICATIONS, INC.'S SERVICE TERRITORY.

DOCKET NO. 960786-TL - CONSIDERATION OF BELLSOUTH
TELECOMMUNICATIONS, INC.'S ENTRY INTO INTERLATA SERVICES
PURSUANT TO SECTION 271 OF THE FEDERAL TELECOMMUNICATIONS
ACT OF 1996.

AGENDA: 07/27/99 - REGULAR AGENDA - PROPOSED AGENCY ACTION -
INTERESTED PERSONS MAY PARTICIPATE

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: NONE

FILE NAME AND LOCATION: S:\PSC\CMU\WP\981834.RCM

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PSC-RECORDS/REPORTING

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CASE BACKGROUND

On December 10, 1998, the Florida Competitive Carriers Association (FCCA), the Telecommunications Resellers, Inc. (TRA), AT&T Communications of the Southern States, Inc. (AT&T), MCI Metro Access Transmission Services, LLC (MCI Metro), Worldcom Technologies, Inc. (Worldcom), the Competitive Telecommunications Association (Comptel), MGC Communications, Inc. (MGC), and Intermedia Communications Inc. (Intermedia) (collectively, "Competitive Carriers") filed their Petition of Competitive Carriers for Commission Action to Support Local Competition in BellSouth's Service Territory. In the Petition, the Competitive Carriers requested the following relief from the Commission:

- (a) Establishment of a generic BellSouth Unbundled Network Element (UNE) pricing docket to address issues affecting local competition;
- (b) Establishment of a Competitive Forum to address BellSouth operations issues;
- (c) Establishment of third-party testing of BellSouth's Operation Support System (OSS);
- (d) Initiation of a rulemaking proceeding to establish expedited dispute resolution procedures applicable to all local exchange carriers (LECs); and
- (e) Provision of such other relief that the Commission deems just and proper.

On December 30, 1998, BellSouth Telecommunications, Inc. (BellSouth) filed a Motion to Dismiss the Petition of the Competitive Carriers for Commission Action to Support Local Competition in BellSouth Service Territory. BellSouth requested that the Commission dismiss the Competitive Carriers Petition with prejudice. On January 11, 1999, the Competitive Carriers filed their Response in Opposition to BellSouth's Motion to Dismiss.

At the March 30, 1999, Agenda Conference, the Commission approved staff's recommendation to deny BellSouth's Motion to

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Dismiss. In addition, the Commission denied the Competitive Carriers' request to initiate a rulemaking proceeding to establish expedited dispute resolution procedures for resolving interconnection agreement disputes. The Commission also directed staff to provide more specific information and rationale for its recommendation on the remainder of the Competitive Carrier's Petition.

On May 26, 1999, the Commission issued Order No. PSC-99-1078-FOF-TP which granted in part and denied in part the petition of the Florida Competitive Carriers Association to support local competition in BellSouth's service territory. Specifically, the Commission established a formal administrative hearing process to address UNE pricing, including UNE combinations and deaveraged pricing of unbundled loops. The Commission also ordered that Commissioner and staff workshops on OSS be conducted concomitantly, in an effort to resolve OSS operational issues. The Commission indicated that the request for third-party testing of OSS systems was to be addressed in these workshops. These workshops were held on May 5-6, 1999. The Commission also ordered a formal administrative hearing to address collocation and access to loop issues, as well as costing and pricing issues.

On May 28, 1999, the Florida Competitive Carriers Association (FCCA) and AT&T Communications of the Southern States, Inc., (AT&T) filed a Motion for Independent Third Party Testing of BellSouth's Operational Support Systems. BellSouth filed its Response to this Motion by the FCCA and AT&T on June 16, 1999. That same day, FCCA and AT&T filed a Supplement to the Motion for Third Party Testing. On June 17, 1999, ACI Corp. (ACI) filed a Motion to Expand the Scope of Independent Third Party Testing. On June 28, 1999, BellSouth responded to the Supplement filed by FCCA and AT&T. On June 29, 1999, BellSouth responded to ACI's Motion to Expand the Scope of Independent Third Party Testing.

This recommendation will address the FCCA/AT&T Motion for Independent Third Party Testing of BellSouth's Operational Support Systems and ACI's Motion to Expand the Scope of Independent Third Party Testing.

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ISSUE 1: Should the Motion for Independent Third Party Testing of BellSouth's Operational Support Systems (OSS), filed by the Florida Competitive Carriers Association (FCCA) and AT&T Communications of the Southern States, Inc. (AT&T), and the Motion to Expand Scope of Independent Third Party Testing of BellSouth's Operational Support Systems, filed by ACI Corp. (ACI), be granted?

RECOMMENDATION: No. The Motion for Independent Third Party Testing of BellSouth's Operational Support Systems filed by the FCCA and AT&T and the Motion to Expand Scope of Independent Third Party Testing of BellSouth's OSS filed by ACI should be denied. Staff recommends that the Commission approve staff's Proposal for Independent Third Party Testing of BellSouth's Operational Support Systems.

The independent nature of the testing entity and the specific, in-depth criteria recommended by staff, will enable the third-party testing to fully address concerns about BellSouth's OSS identified by the Commission in Order No. PSC-97-1459-FOF-TL. Staff recommends, therefore, that the third-party testing be conducted for purposes of both Docket 981834-TP and Docket No. 960786-TL. Thus, if BellSouth's OSS systems pass the third-party testing, then BellSouth should be considered to have remedied the OSS concerns identified by the Commission in Order No. PSC-97-1459-FOF-TL for purposes of the Commission's recommendation to the FCC on any future application by BellSouth for interLATA authority in Florida. Likewise, if only portions of BellSouth's OSS systems pass the third-party testing, then BellSouth should not be required to make any further demonstration to this Commission with regard to those portions.

Staff recommends that all costs for this testing should be borne by BellSouth. However, the selected vendor will report directly to the FPSC Project Manager, and will have no reporting relationship with BellSouth. (FAVORS, HARVEY, VINSON)

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STAFF ANALYSIS

I. FCCA/AT&T Motion

On May 28, 1999, the FCCA and AT&T filed a Motion to initiate an independent third party testing program of the Operational Support Systems provided by BellSouth for Alternative Local Exchange Carriers (ALECs). The FCCA and AT&T state that although it has been more than three years since the passage of the Telecommunications Act of 1996, there is virtually no competition in Florida's local telephone market. (Motion ¶3) They also argue that the deficiency in BellSouth's OSS has been a significant barrier to ALEC entry into the local market on a meaningful and significant basis.

In their Motion, FCCA/AT&T state that all state commissions have struggled to understand the complex technical issues involved with OSS. They further argue that much time has been spent trying to evaluate the performance of BellSouth's OSS on the basis of testimony offered by BellSouth and the ALECs rather than based on the direct, impartial, and knowledgeable examination of the OSS by an independent third party. They state that thorough testing by an independent third party will isolate points where the OSS fail to perform properly and on a nondiscriminatory basis, so that the OSS can be corrected quickly, thereby speeding the competitive process. (Motion ¶6)

FCCA/AT&T believes that a properly designed and executed independent third party test offers four benefits that are particularly important and compel its use in Florida: 1) having an independent third party design and conduct a comprehensive test of BellSouth's OSS will result in finding and fixing problems that would inhibit entry into the local market, thereby jump-starting competition in Florida; 2) the independent third party's evaluation of data obtained during a comprehensive test will give this Commission an objective view of functionality, capacity and performance of these OSS; 3) such testing enables this Commission to assess a broad range of functions for a wide array of transactions; and 4) properly designed third party testing also can provide significant insight regarding operational capabilities for handling large volumes of orders placed by ALECs before real

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Florida customers are used as "guinea pigs" to test the capabilities of BellSouth's OSS to handle the large volumes of actual orders. (Motion ¶9)

BellSouth argues in their Response that the FCCA/AT&T plan would involve a long and arduous series of hearings and debate at each stage of the process that would ensure that bickering would continue for months, if not years, before testing ever got underway. They further state that under the FCCA/AT&T plan, the testing would not end the argument, but would merely provide starting point for more disputes, which would frustrate the chief benefits of third party testing; to quickly identify and fix any problems with BellSouth's OSS so competition would continue to accelerate. (Response ¶2)

BellSouth states that if the Commission desires to proceed with third party testing, it should take full advantage of the extensive fact-gathering and analysis it has already done on this issue, as well as the testing and analysis of BellSouth's OSS currently underway in Georgia. (Response ¶3) BellSouth believes that this Commission must move forward to resolve the issue of the adequacy of BellSouth's electronic ordering processes. They further argue that extensive testing of many of these capabilities is already underway in the Georgia test plan. They state that in Georgia, their OSS will 1) be tested to assess functionality and operational readiness; 2) to evaluate the overall capacity of BellSouth's OSS to handle expected commercial volume of ALEC orders; and 3) to ensure the accuracy of the report, the third party testing will include an independent audit of the ALEC order flow-through calculation submitted by BellSouth in monthly Service Quality Measures (SQM) reports. They state that because BellSouth's wholesale customers in Florida use the very same OSS as BellSouth's wholesale customers in Georgia, the results of the testing will be equally applicable in Florida. FCCA/AT&T argue that the Georgia PSC has ordered a limited test of some aspects of BellSouth's OSS and that the test process is neither independent nor open, in that BellSouth will design the test and select the testers. (Motion ¶8)

Finally, BellSouth argues that the FCCA/AT&T petition is a blueprint for delay and bickering. They state that the FCCA, AT&T,

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BellSouth, or any other interested party would have an opportunity at every stage in the process to delay matters by second guessing the Commission and the third party tester. BellSouth states that the ALECs insistence on having the right to approve and verify at each step suggests that they want the power to delay the process indefinitely and that they do not trust the Commission to supervise the testing objectively or competently. (Response ¶9)

Staff agrees with BellSouth that the amount of ALEC involvement proposed in the FCCA/AT&T petition would create a great deal of conflict and delay in the third party testing proposed by FCCA/AT&T. Staff does not agree, however, that this Commission should use the results of the third party testing currently underway in Georgia and information that has been gathered by Commission staff to determine whether BellSouth's OSS are adequate to facilitate ALEC entry into competition in the local markets. Staff will address its concerns in more detail later in this recommendation, but staff recommends that the Commission deny the FCCA/AT&T Motion for Independent Third Party Testing of BellSouth's OSS.

II. ACI's Motion

In its June 17, 1999, Motion to Expand the Scope of Independent Third Party Testing, ACI requested that the testing proposed by AT&T and FCCA be expanded to also evaluate the ability of ALECs to receive real-time, electronic information about the physical characteristics of the loops, such as: 1) loop length; 2) wire gauge; 3) the presences and number of repeaters, load coils, pair gains, and digital added main lines; 4) the presence of digital loop carrier systems; and 5) the presence, location on the loop and cumulative length of bridge taps on each loop. ACI argues that this information should be available to carriers before they decide whether to order a particular loop.

BellSouth argues that ACI's Motion raises questions beyond the scope of this docket. BellSouth notes that ACI's Motion focuses on high speed data networks and DSL-capable loops. BellSouth argues that these issues are currently before the FCC and that ACI has an opportunity to address its concerns to the FCC. BellSouth does not believe that this is the proper forum for the issues raised by ACI.

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BellSouth notes that the FCCA/AT&T Motion seeks testing of BellSouth's OSS, which means testing of the processes by which BellSouth makes products and services available to ALECS. BellSouth argues that ACI raises, instead, questions about BellSouth's products and services themselves, particularly loops. BellSouth adds that it believes that independent third party testing can provide objective answers to questions raised about BellSouth's OSS, but that issues such as those raised by ACI will only detract from the process.

Staff agrees with BellSouth that the issues raised by ACI appear to pertain more to actual services and products of BellSouth than to how BellSouth's services and products are provisioned to ALECs. As such, staff does not believe that third party testing should be expanded to cover the items identified by ACI.

ACI seeks to require BellSouth to provide more detailed information about the physical characteristics of BellSouth products and services on a "real-time" basis. While staff believes that ACI's request may have merit, staff believes that the issues raised in ACI's motion would be more appropriately addressed through another forum such as an arbitration or complaint proceeding. Staff also agrees with BellSouth that the FCC and Congress are currently considering a number of high-speed data network issues that may have a bearing on the concerns raised by ACI. For all these reasons, staff recommends that ACI's Motion to Expand the Scope of Independent Third Party Testing of BellSouth's OSS be denied.

III. Purpose of OSS Testing

Staff recommends that third-party OSS testing be initiated only for BellSouth's OSS systems in order to address the specific request made by AT&T and FCCA in their May 28, 1999, Motion filed in Docket No. 981834-TP. AT&T and FCCA have not identified problems with any other ILEC's OSS systems and do not seek relief in any other ILEC's territories. It is, therefore, appropriate to commence third-party testing of BellSouth's OSS systems in order to provide, to the extent appropriate, the relief requested by AT&T and FCCA.

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BellSouth argues in its Response that if this Commission decides to proceed with third party testing of its OSS, it should utilize the OSS testing currently underway in Georgia. Staff is concerned about the independence of the testing in Georgia. The New York DPS OSS testing "model" establishes that the Commission should independently select the third party tester and be the client in the engagement. Additionally, the New York model demonstrates that the Commission and the third party tester should jointly develop the master test plan. The Commission staff should play a strong role in monitoring and controlling the testing. This is vital to ensure independence and objectivity. In Georgia however, BellSouth selected the third party tester and serves as the client in the engagement. Also, BellSouth developed or guided the development of the master test plan.

The Georgia OSS testing is very focused, because the Georgia Commission has been deeply involved in the oversight of the development of BellSouth's OSS for three years, through hearings, workshops and monitoring. Additionally, performance measures were formally adopted by the Georgia Commission, which explains why the Georgia review is limited to only the flow through performance measure. The Florida Commission needs assurance that the performance measures currently being employed by BellSouth are adequate and results reported by BellSouth are accurate. Therefore, the FPSC staff is recommending a comprehensive review of performance measures.

The transaction testing which is being conducted in Georgia is limited to the only four analog UNE products which can be ordered electronically. The FPSC staff is recommending that transaction testing of UNEs should not be limited to only those four UNEs that can be ordered electronically, but should include those UNEs which are available to ALECs, and for which a forecasted demand can be determined. Additionally, the Georgia master test plan does not include individual transaction testing of any resale transactions. FPSC staff believes that resale testing is a necessary part of its test plan proposal.

In addition to transaction testing and the performance measure review, staff's proposed test will include a review of the processes associated with BellSouth's establishment and maintenance

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of business relationships with the ALECs. These tests are important in order to provide assurance that processes are in place beyond the time frame of the third party testing.

BellSouth also requests in its Response that the Commission take full advantage of the extensive fact-gathering and analysis that has been done by the FPSC's Division of Research and Regulatory Review. (Response ¶3) The Division of Research and Regulatory Review conducted a preliminary review of BellSouth's operational support systems at the request of the Division of Telecommunications. The purpose of the review was to document BellSouth's degree of compliance with issues identified in Order No. PSC-97-1459-FOF-TL, and to document retail and wholesale operations and interfaces for preordering, ordering, provisioning, maintenance and repair, and billing functions. The work paper documentation and analysis prepared by staff will serve as input to the third party tester in development of the master test plan. The testing recommended in staff's proposal is more detailed, and will build upon the work already performed by the staff review.

IV. Incorporation of Findings in Docket No. 960786-TL

Although AT&T and FCCA did not file their request in Docket No. 960786-TL, the action sought, if implemented by the Commission, will provide sufficient information to allow the Commission to fulfill its consultative role under Section 271 of the Act with regard to BellSouth's provision of OSS systems. Staff believes that third-party testing of BellSouth's OSS systems under the plan staff has recommended may actually provide better, more accurate information about the status of BellSouth's systems than might be obtained through further administrative proceedings on this issue. This is due largely to the independent nature of the testing entity and the specific, in-depth criteria recommended by staff, which will enable the third-party testing to fully address concerns about BellSouth's OSS identified by the Commission in Order No. PSC-97-1459-FOF-TL. Staff recommends, therefore, that the third-party testing be conducted for purposes of both Docket No. 981834-TP and Docket No. 960786-TL. Thus, if BellSouth's OSS systems pass the third-party testing, then BellSouth should be considered to have remedied the OSS concerns identified by the Commission in Order No. PSC-97-1459-FOF-TL for purposes of the Commission's recommendation

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to the FCC on any future application by BellSouth for interLATA authority in Florida. Likewise, if only portions of BellSouth's OSS systems pass the third-party testing, then BellSouth should not be required to make any further demonstration to this Commission with regard to those portions.

V. Separate Determination in Florida

Under Section 271(b) of the Act, a Bell Operating Company (BOC) may provide interLATA services originating in any of its in-region states if the FCC approves the BOC's application for that state. The Act does not specifically require the BOC to make a separate filing in each state in its region. Section 271(d)(2)(B) does, however, require the FCC to consult with the appropriate state commission before making a determination regarding a BOC's entry into the interLATA market in a state. The FCC is required to consult with the state commission to verify whether the BOC has complied with the requirements of Section 271(c). A state commission would be unable to verify that the BOC has, in fact, complied with Section 271(c) without conducting an in-state proceeding to make such a determination. Thus, the Act clearly contemplates that the state commission will conduct state investigatory proceedings in order to fulfill their advisory role under the Act. In addition, the FCC issued procedures for BOCs to follow in applying for 271 authority. Those procedures are set forth in Public Notice, FCC 96-469. Therein, the FCC indicated that among the items the BOC must include in its filing with the FCC is a statement

summarizing the status and findings of the relevant State proceedings (if any) examining the applicant's compliance with section 271 or portions thereof. . . .

In Florida, a Docket has already been opened to fulfill this Commission's consultative role. That Docket, Docket No. 960786-TL, was opened on June 28, 1996, and a hearing was conducted on September 2-10, 1997. Thereafter, the Commission issued Order No. PSC-97-1459-FOF-TL finding that BellSouth was ineligible for Track B, and that there did not appear to be sufficient evidence of a competitive alternative in the residential market. The Commission

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also determined that BellSouth had not met the requirements of "checklist" items 1, 2, 5, 6, 14, and portions of 7. The Commission concluded that BellSouth had met the requirements of checklist items 3, 4, 8, 9, 10, 11, 12, 13, and most of 7. The Commission indicated that BellSouth would not have to re-litigate before the Commission the items that the Commission determined BellSouth had passed. The Commission did, however, clearly contemplate future 271 proceedings in Florida to address the requirements that BellSouth had not met. The Commission stated:

We do find, however, that when BellSouth refiles its 271 case with us, it must provide us with all documentation that it intends to file with the FCC in support of its application.

Order at p. 18. Docket No. 960786-TL remains open to handle this Commission's further consultative duties. Staff emphasizes that without further investigation of BellSouth's compliance with Section 271, the Commission would only be able to fulfill its consultative role by relying on its initial findings set forth in Order No. PSC-97-1459-FOF-TL, issued November 19, 1997.

VI. Staff's Proposal for Independent Third Party Testing of BellSouth's Operational Support Systems

Although staff agrees with the FCCA and AT&T on the need for independent third party testing of BellSouth's OSS, and many items in the FCCA/AT&T proposal for third party testing, staff has put together its own proposal for this testing. Staff believes that the amount of ALEC involvement proposed by FCCA/AT&T in their petition would greatly encumber the testing process due to the potential for conflict. Staff believes that its proposal is more neutral as it provides for a FPSC Project Manager to resolve conflicts that may arise. Staff's proposal is included in this recommendation as Attachment 1.

In developing its proposal, staff recognized that in a Section 271 application, BellSouth is required to demonstrate to the Florida Public Service Commission (FPSC) that it has opened its

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local telecommunications markets to competition, and that a key element of this determination is BellSouth's provision of nondiscriminatory access to its OSS for the resale of its retail telecommunications services and the provision of unbundled network elements (UNEs). Therefore, as mentioned earlier, staff developed its proposal to ensure that the third party testing would provide definitive determination of this Section 271 criteria.

Under staff's proposal, the FPSC will seek a vendor to: (a) develop a comprehensive test plan that will be used to conduct an evaluation of the BellSouth OSS and OSS interface systems used to provide preordering, ordering, provisioning, maintenance and repair, and billing functions to ALECs and (b) to conduct a detailed test of those systems based on the designed test plan. The vendor chosen shall work for and under the direction of a FPSC Project Manager. The scope of the above mentioned test plan will cover:

- OSS interfaces functionality and operational readiness including TAG, EDI, TAFI, ECTA, ODUF, ADUF, EODUF, CRIS and CABS.
- All resale and UNE products and services offered by BellSouth to ALECs
- All four core OSS processes of preordering, ordering and provisioning, maintenance and repair, and billing.
- Adequacy and availability of documentation, including specifications, information and business rules.
- Testing of capacity to ensure that the BellSouth interfaces are designed to accommodate both current and projected demands.
- Adequacy and validity of ALEC and BellSouth Service Quality Measures (SQM) results.

Staff's proposal is divided into three major areas of review. This separation of review areas will help to organize and facilitate testing. The review areas are as follows:

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- Performance Measure Review
- Processes and Procedures Review
- Transaction Validation and Verification Review

Although performance measures are not separately identified in the Section 271 checklist, staff has included testing of performance measures based on the Commission's determination in Order No. PSC-97-1459-FOF-TL, issued November 19, 1997, that BellSouth must establish adequate performance measures. In that Order, the Commission stated that:

It appears that the performance standards and measurements are the avenues by which the existence of nondiscrimination or parity will be established and monitored. To establish the existence of nondiscrimination or parity, an ILEC has to provide a means of comparing its operational performance data to that of a competing carrier.

Order at p. 202. Noting that BellSouth had provided a set of performance standards, the Commission indicated that:

The question, therefore, is whether BellSouth's performance standards and measurements are adequate to detect discrimination as it relates to access to BellSouth's OSS functions, and if so, has the nondiscrimination standard been met.

The Commission found that the standards proposed by BellSouth were not adequate to detect discrimination. Order at pgs. 208-209. In concluding that BellSouth's proposed standards were inadequate, the Commission stated that:

We believe that BellSouth must provide the necessary historical data to facilitate the establishment of initial benchmarks. These initial benchmarks should, at a minimum, address all of the functions listed in the LCUG. Further, we find that BellSouth should

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provide performance measures that are clearly defined, permit comparison with BellSouth retail operations, and are sufficiently disaggregated to permit meaningful comparison. We believe that one way to accomplish this is by mean provisioning intervals. BellSouth should provide statistically valid commercial usage data showing: 1) average installation intervals for resale; 2) average installation intervals for loops; 3) comparative performance information for unbundled network elements; 4) service order accuracy and percent flow through; 5) held orders and provisioning accuracy; 6) bill quality and accuracy; and 7) repeat trouble reports for unbundled network elements. Regardless of the method used, BellSouth must demonstrate from commercial usage data that it performs analogous functions for itself and ALECs in a statistically comparable manner.

Order at p. 212.

Based on these statements by the Commission regarding the importance of performance measures, staff has included performance measures in the proposed testing criteria.

Staff has also proposed that the third party testing take place in two phases. The specific deliverables of each phase are as follows:

Phase 1

The vendor will be expected to provide an initial detailed test plan document, which shall provide a comprehensive plan to test the relevant BellSouth OSS and OSS interfaces required for BellSouth to provide access to OSS functions in conformance with applicable legal requirements. The test plan document should, at a minimum, address the full breadth of issues addressed in

the proposal and the additional detail provided to the vendor by the FPSC once a vendor is selected.

Phase 2

The vendor will be expected to evaluate the ability of an ALEC, with the available documentation and support from BellSouth, to develop OSS interface systems and software for each OSS function and to use such systems and software to provide telecommunications services. The vendor will be expected to perform the tests in full compliance with the test plan produced in Phase 1.

At the end of the test, the vendor will be expected to provide a document that includes a report on the test results. This report should provide the results of the test, per the test plan produced in Phase 1, and should specifically provide detail as to where BellSouth has met the requirements specified in the test plan. The report should describe any differences between the access to OSS functions BellSouth provides itself and that which it provides to ALECs, analyze the operational effect of such differences, and make recommendations to rectify such differences. The report should also discuss the vendor's assessment of the relative ease or complexity of creating the interface with the supplied documentation, any additional support required of and provided by BellSouth to create the interface, the timeliness and level of support provided by after-market support services such as help desks and hot lines, and any additional areas of improvement that would materially reduce the cost, complexity, and time of systems and software development and operation to the pseudo-ALEC or to BellSouth.

In addition to third party testing of BellSouth's OSS, staff will be preparing a specific recommendation pertaining to enforcement mechanisms. Enforcement mechanisms, including penalties, are necessary to ensure service quality provided by BellSouth does not deteriorate once Section 271 approval is obtained.

VII. Proposed Time Frame and Cost Responsibility

Staff has proposed a completion date for this third party testing for April 30, 2000. Because of this time constraint and the aggressive nature of its proposal, staff believes that the contract for this third party testing should be sole-sourced. With the expertise in third party testing that has been gained in New York, Texas and Pennsylvania, staff believes that a vendor can be selected for this testing without going through the formal bidding process. Staff is recommending that the formal contract, once completed, be approved at an Internal Affairs conference.

Staff recommends that all costs for this testing should be borne by BellSouth. However, the selected vendor will report directly to the FPSC Project Manager, and will have no reporting relationship with BellSouth.

VIII. Conclusion

Staff recommends that the Commission deny the Motion for Independent Third Party Testing of BellSouth's OSS filed by the FCCA and AT&T. Staff does not believe that the proposal as outlined in their Motion can be effectively implemented because of the potential for conflict that is inherent in the Motion. Staff also recommends that the Commission deny ACI's Motion to Expand Scope of Independent Third Party Testing. Staff believes that the issues raised by ACI appear to pertain more to actual services and products of BellSouth than to how BellSouth's services and products are provisioned to ALECs.

Staff recommends that the Commission should order third party testing of BellSouth's OSS in accordance with staff's proposal for this testing. Staff believes that its proposal is more comprehensive and more neutral than the testing that is currently underway in Georgia. The costs of this testing should be paid by BellSouth, although the vendor selected will have no reporting relationship with BellSouth. The contract, when completed, shall be approved by this Commission at an Internal Affairs Meeting.

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Finally, staff recommends that if BellSouth successfully passes this independent third party testing of its OSS, BellSouth should be considered to have remedied the concerns identified by the Commission in Order No. PSC-97-1459-FOF-TL for purposes of the Commission's recommendation to the FCC on any future application by BellSouth for interLATA authority in Florida. Likewise, if only portions of BellSouth's OSS systems pass the third party testing, BellSouth should not be required to make any further demonstration to this Commission with regard to those portions.

DOCKET NOS. 981834-TP, 960786-TL

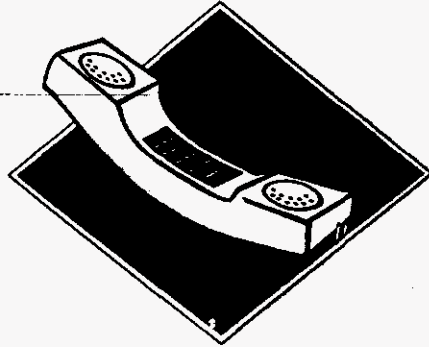
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ISSUE 2: Should these dockets be closed?

RECOMMENDATION: No. Whether or not the Commission approves staff's recommendation in Issue 1, these Dockets should remain open to address the issues raised in FCCA's Petition for Commission Action to Support Local Competition in BellSouth's Service Territory and BellSouth's compliance with Section 271. (B. KEATING)

STAFF ANALYSIS

Whether or not the Commission approves staff's recommendation in Issue 1, these Dockets should remain open to address the issues raised in FCCA's Petition for Commission Action to Support Local Competition in BellSouth's Service Territory and BellSouth's compliance with Section 271.



Staff's Proposal for
**Independent Third-Party Testing
of BellSouth's Operations Support Systems**

July 1999

By Authority of
The State of Florida for
The Public Service Commission
Division of Research and Regulatory Review
Bureau of Regulatory Review

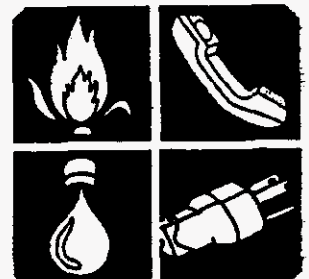


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1.0 EXECUTIVE SUMMARY

1.0 Executive Summary

1.1 Introduction

The 1996 Telecommunications Act (the Act) provided a process for Bell Operating Companies (BOCs) to apply to the Federal Communications Commission (FCC) for authorization to provide interLATA services within the states comprising their operating region. To rule upon such an application, the FCC must determine whether the BOC is in compliance with provisions of Section 271 of the Act. The Act instructs the FCC to consult with the Department of Justice and the applicable state commissions.

Accordingly in a Section 271 application, BellSouth Telecommunications, Inc. (BST) is required to demonstrate to the Florida Public Service Commission (FPSC) that it has opened its local telecommunications markets to competition. A key element of this determination is BST's provision of nondiscriminatory access to its operations support systems (OSS) for the resale of its retail telecommunication services and the provision of unbundled network elements (UNEs). The FCC will evaluate BST's compliance with Section 271 through a two-part inquiry that includes determining if:

- ◆ BellSouth has deployed the necessary systems and personnel to provide sufficient access to each of the OSS functions.
- ◆ The OSS functions BellSouth has deployed are operationally ready as established by performance measures and other evidence of commercial usage.

Compliance with these requirements will allow competitors to obtain preordering information, submit service orders for resold services and unbundled network elements (UNEs), submit trouble reports, and obtain billing information at a level deemed to be nondiscriminatory when compared with BST's retail operations.

The FPSC should seek to retain a consultant(s) to assist in assessing whether BST is meeting these requirements. This document provides parties with a high-level framework of factors that staff wants evaluated in third-party testing of BellSouth's OSS. In addition to third-party testing, the Commission is preparing a specific recommendation pertaining to enforcement mechanisms. Enforcement mechanisms, including penalties, are necessary to ensure services provided by BST do not deteriorate once Section 271 approval is obtained.

1.2 Scope

This document describes staff's proposal to evaluate BST's OSS interfaces and processes that enable Competitive Local Exchange Companies (CLECs) to compete with BST for local telephone

service customers. Test should incorporate steps involved in establishing the relationship as well as performing daily operations. Testing scope shall cover:

- ◆ OSS interfaces functionality and operational readiness including TAG, EDI, TAFI, ECTA, ODUF, ADUF, EODUF, CRIS, and CABS.
- All resale and UNE products and services offered by BST to CLECs.
- ◆ All four core OSS processes of preordering, ordering and provisioning, maintenance and repair, and billing.
- ◆ Adequacy and availability of documentation, including specifications, information and business rules.
- ◆ Testing of capacity to ensure that the BST interfaces are designed to accommodate both current and projected demands.
- Adequacy and validity of CLEC and BST Service Quality Measures (SQM) results.

Staff's proposal is divided into three major areas of review. This separation of review areas will help to organize and facilitate testing.

- ◆ Performance Measure Review
- ◆ Processes and Procedures Review
- ◆ Transaction Validation and Verification Review

Within each of the "review" chapters, the methods and processes to be applied to measure BST's performance are described along with the specific points in the systems and processes where BST performance will be evaluated. The results of the test will be compared against measures and criteria identified by the FPSC and other measures and criteria as deemed appropriate by the FPSC. Chapters 4 through 6 discuss each of the review areas. The testing depicted in these review area chapters parallels the Master Testing Plan of the OSS Evaluation Project prepared by KPMG for the Pennsylvania Public Utilities Commission. The testing done in Pennsylvania was similar to that done in New York, but it incorporated lessons learned from the New York engagement.

1.3 Objective

The overall objective of this document is to provide a high-level framework for testing BellSouth's OSS interfaces and processes. This proposal can be used by a consultant in developing a detailed master test plan. The specific tests should be designed to help the FPSC determine whether BST's provision of access to OSS functionality enables and supports CLEC entry into the local market.

Chapter 2 provides overall guidelines for hiring a vendor to perform third-party testing. Chapter 3 provides a general framework for evaluating OSS summarized in outline form. Chapter 4 describes the evaluation that is necessary of BellSouth's performance measures. Chapter 5 identifies steps needed to review the OSS processes at BellSouth. Chapter 6 describes the transaction validation review that is necessary to ensure the interfaces are operational.

1.4 Assumptions

This section describes the assumptions necessary in the development of the master test plan. The assumptions should include:

- ◆ BST will provide suitable resources in sufficient numbers to assist a consultant(s) with the evaluation effort.
- ◆ BST will provide access to appropriate documentation.
- ◆ BST will provide the necessary resources, facilities, and support to set up and execute the tests (e.g., office space; equipment; identification; security access; customer accounts and addresses; and appropriate company codes).
- ◆ BST will process test transactions as part of normal processing including the provisioning of some orders in scenarios/test cases.
- ◆ BST will provide the facilities required to execute the live scenarios.
- ◆ One or more CLECs will volunteer to participate and provide facilities required to execute those live scenarios necessitating CLEC participation.
- ◆ BST and the CLECs will allow consultant(s) to observe retail and wholesale processes on-site during the evaluation effort.
- ◆ BST and the CLECs will give consultant(s) access to historical data and current operational reports, as needed, to complete the evaluation.
- ◆ BST will allow consultant(s) to inspect algorithms that may have a bearing on parity access.
- ◆ BST will maintain a stable OSS environment for the duration of the evaluation.
- ◆ The consultant(s) will evaluate the documentation, integration support, and interfaces that BST provides CLECs trying to develop and access its OSS.

- ◆ A test transaction generator will be built that evaluates the documentation, integration support, and interfaces that BST provides CLECs.
- ◆ The test transaction generator will maintain a results database.
- ◆ Regulatory, legal, and confidentiality issues or concerns can be resolved without significant impact to either the intent of the tests, the ability to execute the tests, or the schedules for their execution.

1.5 Limitations

The purpose of this section is to describe some limitations of the testing effort. These limitations will be described in terms of what is to be tested and what conclusions can be drawn from the results.

- ◆ In some cases, certain order types, troubles, and processes may not be practically tested by the test transaction generator. Examples include orders with very long interval periods (such as the establishment of collocation arrangements) or high volumes of test provisioning transactions. Accordingly, the test may take the form of an interview, inspection, live orders review, review of historical performance or operational reports, or some other method that will capture the performance of BST with respect to the order types and processes in question. The master test plan will identify the tests that can be executed live and those that must be executed by other means. Long interval tests that prove to have no alternative test methods that foreshorten the test will be referred, with a recommendation for disposition, to the FPSC Project Manager. The FPSC Project Manager will make the final decision regarding the disposition of such tests.
- ◆ Operational, time and resource constraints make it impossible to construct a completely, exhaustive test suite. Significant effort has been expended to clearly portray the scope of the proposed suite, and it is believed this suite does provide both extensive and sufficient coverage. Provision has been made in the plan to amend or extend the test coverage if, in the judgment of the FPSC Project Manager, an amendment or extension is deemed justified.
- ◆ It is not practical or desirable to execute certain live tests that would disrupt service to BST or CLEC customers. An example would be a Maintenance and Repair test that requires an equipment failure. BST performance for these test cases will be evaluated by other means. The master test plan will identify the tests that can be executed live and those that must be executed by other means.

2.0 OSS THIRD-PARTY TESTING PROPOSAL

2.0 OSS Third-Party Testing Proposal

2.1 General

The FPSC will seek a vendor to conduct an independent evaluation of BST operations support systems (OSS). The evaluation will encompass the development of a specific testing plan and execution of that plan. This report serves as the outline for the scope of this project.

Operations support systems are the systems, information, and personnel that support a telecommunications carrier's network elements and services. These systems are essential to a carrier's ability to administer its telecommunications network and provide services to consumers. The Telecommunications Act requires BST to provide CLECs with nondiscriminatory OSS access. Accordingly, BST must put in place appropriate electronic systems and interfaces and related manual processes to allow CLECs to access BST OSS functions and thus, among other things, obtain preordering information, submit service orders for resold services and unbundled network elements (UNEs), obtain provisioning of those orders, submit trouble reports, and obtain billing information. Compliance with these requirements is part of the fourteen-point competitive checklist and thus is a condition of BST entry into the in-region interLATA market.

2.2 Purpose of Testing

The FPSC will seek a vendor to: (a) develop a comprehensive test plan that will be used to conduct an evaluation of the BST OSS and OSS interface systems used to provide preordering, ordering, provisioning, maintenance and repair, and billing functions to CLECs and (b) to conduct a detailed test of those systems based on the designed test plan. The vendor chosen shall work for and under the direction of the FPSC Project Manager.

The project described in this proposal should be divided into two phases. In the first the vendor will develop the test plan, and in the second the vendor will assess the ease or complexity of developing interface software and test BST's OSS and OSS interface systems with test software developed specifically for these tests. Proposed schedules for each of the phases are outlined below. In the response, the vendor should provide a total fixed-price response to Phase 1, and an estimated clear statement of resources for Phase 2 of the project, and should also break out the price for Phase 1 and Phase 2.

2.3 Phase 1

The test plan developed in this phase must be sufficient to allow the FPSC, by reviewing the results of the specified tests of BST's OSS and OSS interfaces, to determine whether BST's

provision of access meets the legal requirements specified by the Telecommunications Act of 1996. The test should determine if OSS functionality enables and supports CLEC entry into the local telecommunications market through the purchase of resold services and UNEs, both singly and in combinations. At a minimum, the test plan should address testing of the functionality of multiple OSS and OSS interfaces in a number of different areas and of the operational readiness of these systems and interfaces, focusing on how each function performs under real-world scenarios. The test plan must also include a mechanism for testing the capacity of BST's OSS systems and interfaces to determine whether they can presently support levels of demand that are reasonably foreseeable in a competitive market or whether they can readily be scaled to do so in the future. In developing the test plan, the vendor will need to consult with the FPSC Project Manager, BST, and CLECs planning to provide local services in Florida, and any other appropriate organizations.

Chapter 3.0 provides a high-level outline of criteria for evaluating OSS and OSS interfaces. While not intended as a comprehensive list, it provides a general background as to the types of factors that must be considered in developing the detailed test plan. The purpose of providing Chapter 3.0 is to provide a framework for understanding the factors that must be addressed in the test plan. Once a vendor is selected, the FPSC will identify a Project Manager and will make its staff available as needed to provide supplemental information and explanation.

The vendor will be responsible for building a pseudo-CLEC, that will simulate the actual operations of a CLEC operating in Florida and using the various OSS systems and interfaces. As described below, the pseudo-CLEC will build the "CLEC interface" associated with each application-to-application interface being tested and will process inquiries and orders through each of the OSS and OSS interfaces being tested. In addition, live orders shall be placed by existing CLECs and tracked by the vendor.

2.4 Phase 2

This aspect of the evaluation will require the vendor to evaluate the ability of a CLEC, with the available documentation and support from BST, to develop interface systems and software to correctly obtain preordering information, submit orders for resold services and UNEs, submit maintenance and repair requests, bill their end users, and use the systems and software it develops to provide telecommunications services to its customers. This evaluation will include a documented assessment of the relative ease or complexity in creating the interface and of after-market support services such as help desks, hot lines, and account management services. This work will be accomplished in conjunction with the pseudo-CLEC, as well as actual CLECs that are willing to participate. During the course of this engagement, the vendor should identify any additional areas of improvement that would materially reduce the cost, complexity, and time of systems and software development to the pseudo-CLEC, CLECs, or BST.

The vendor must develop and perform detailed tests of BST's OSS and OSS interfaces based on the test plan designed in Phase 1. The test evaluation in Phase 2 must be more comprehensive than simply testing the interfaces, themselves, as the vendor will also be required to measure other critical aspects of BST's OSS interfaces, such as documentation and resource support provided to CLECs. During the test, the vendor will be expected to fully document all test results, as well as the detailed test methodology, so that any third party can readily and fully ascertain how the tests were performed and how the results were derived.

2.5 Specific Deliverables

A. Phase 1

The vendor will be expected to provide an initial detailed test plan document, which shall provide a comprehensive plan to test the relevant BST OSS and OSS interfaces required for BST to provide access to OSS functions in conformance with applicable legal requirements. The test plan document should, at a minimum, address the full breadth of issues addressed in this proposal and the additional detail provided to the vendor by the FPSC once a vendor is selected.

Prior to delivery of the final test plan, the FPSC Project Manager will provide the initial test plan document produced by the vendor to BST and to certain CLECs for a two-week comment period. At the end of the comment period, the vendor will be expected to, in consultation with the FPSC Project Manager, revise the test plan, incorporating reasonable recommended changes and additions to the test plan.

B. Phase 2

The vendor will be expected to evaluate the ability of a CLEC, with the available documentation and support from BST, to develop OSS interface systems and software for each OSS function and to use such systems and software to provide telecommunications services. The vendor will be expected to perform the tests in full compliance with the test plan produced in Phase 1.

At the end of the test, the vendor will be expected to provide a document that includes a report on the test results. This report should provide the results of the test, per the test plan produced in Phase 1, and should specifically provide detail as to where BST has met the requirements specified in the test plan. The report should describe any differences between the access to OSS functions BST provides itself and that which it provides to CLECs and analyze the operational effect of such differences, and make recommendations to rectify such differences. The report should also discuss the vendor's assessment of the relative ease or complexity of creating the interface with the supplied documentation, any additional support required of and provided by BST to create the interface, the timeliness and level of support provided by after-market support services such as help desks and hot lines, and any additional areas of improvement that would materially reduce the cost, complexity, and time of systems and software development and operation to the pseudo-CLEC or BST.

The vendor will also be expected to provide a supporting document that describes the underlying approach of the tests, describes the methodology used in each of the tests, and lists the test data and results of each test. This supporting document should provide sufficient detail to allow uninvolved third parties to fully understand how the test results were derived.

2.6 Schedule

The FPSC proposes the following schedule for the implementation of Phases 1 and 2. Vendors may provide their own proposed schedules for Phases 1 and 2, if the vendor feels for any reason that the schedule provided herein is not achievable. If its proposed vendor schedule in the response differs from the schedule herein, the vendor should provide rationale for any such differences.

Vendor Selection	September 1	Vendor selected
Phase I	September 30 October 15 November 15	Initial test plan document due Comments on test plan due Final Phase 1 deliverables due
Phase II	Phase II dates will be set upon the completion of Phase I, with the expectation that Phase II will be completed by April 30, 2000.	

2.7 Proposal Response

Responses must provide a clear demonstration of the vendor's understanding of the objectives and deliverables of this engagement and illustrate the vendor's approach to meeting these objectives in a timely and comprehensive fashion. The following information will be required from the vendor:

- A. Detailed response on how the vendor will meet each of the deliverables described for Phases 1 and 2: The vendor should make reference to how its deliverables will test against criteria similar to those specified in Chapter 3.0. The response must include some estimate of required vendor resources, as well as a work break-down schedule for both Phases 1 and 2.
- B. Details on the engagement team: Vendor must provide name and credentials of the vendor team members who will be involved in both Phase 1 and Phase 2.
- C. Organizational structure for the engagement: The vendor must provide the structure of its resources that will be involved in the implementation. If this structure differs for Phase 1 and Phase 2, two organizational structures should be provided. The vendor should note

which resources in this organizational structure will be dedicated to the project and which resources will be shared. Provide specific personnel that will work on each phase of this project, their expected time commitment, and credentials. These personnel should be available for pre-selection interviews. For any shared resources, the vendor should specify what percentage of that resource's time will be allocated to the project. If the proposal includes personnel from other organizations, a clear statement of roles, responsibilities, and time allocations should be included.

- D. **Price proposal:** The vendor shall provide a not-to-exceed cost in which the cost of professional services and out-of-pocket expenses are separately stated. The proposal must include the current professional fee rates for each individual. The bid shall provide a break-out of the price associated with Phase 1 work and the price associated with Phase 2 work. The vendor should detail any assumptions going into the price bid. The not to exceed price shall be inclusive of all expenses associated with the creation of the deliverables, including travel and incidentals. Payments under the contract will be made according to a negotiated schedule of deliverables, with a significant portion of Phase 1 and 2 payments retained until completion of Phase 2 deliverables. Proposals should identify key milestones for payment.
- E. **Other work:** The vendor shall identify each existing contract or other agreement that it has with BST or BST's affiliates and shall describe any work that it or its affiliates are doing or have done for BST or BST's affiliates in the past two years. The vendor shall also identify and describe any work that it or its affiliates are doing or have done for other telecommunications services providers in the past two years.

3.0 OSS EVALUATION GUIDELINES

3.0 OSS Evaluation Guidelines

3.1 Introduction

The Telecommunications Act of 1996 provides for three modes of competitive entry into local telephone markets: interconnection, unbundled network elements, and service resale. As part of a 271 application to provide long distance service in its region, BST must demonstrate that it supports all three modes of entry through appropriate wholesale support processes, including the critical access to OSS functions. This involves support for preordering, ordering, provisioning, maintenance and repair, and billing.

The standards and analysis for determining whether BST has met this statutory obligation have been articulated and applied in several prior decisions of the Federal Communications Commission and evaluations of the Department of Justice. In summary, the relevant standard regarding unbundled network elements is whether the access provided affords an efficient competitor a meaningful opportunity to compete. Regarding resale, the standard is whether BST provides services and access to CLECs that is equivalent to the service it provides itself. In applying these standards, the FCC and the Department of Justice will consider the functionality of BST systems and the support it provides for them; the operational readiness of the systems; and the performance of those systems.

This chapter seeks to provide a high-level framework of factors that the FPSC wishes to be evaluated. Because it is not realistic to list every function of BST's own systems and thus include everything necessary to make a parity showing, this chapter does not purport to list everything that may be necessary to demonstrate compliance with the relevant legal standards. Rather, its purpose is to provide an overview of the breadth of issues that must be addressed as part of the test plan and testing of BST Florida's OSS and OSS interfaces.

3.2 General Principles

- A. *Industry Standards:* Whether BST has implemented, complies with, and supports applicable industry standards.
 - 1. As to any application area, whether BST has implemented the most recent version of the most recent industry standard(s) within a reasonable period of time.
 - 2. *De Facto Standards:* Whether BST supports interfaces and protocols, that while not adopted by any recognized standards body, have achieved widespread use.

- B. *Application-to-Application Interfaces*: Whether BST provides electronic access to OSS functions via application-to-application interfaces that allow CLECs to tie their OSS directly to BST's OSS via these interfaces. (In numerous instances, BST will be implementing application-to-application interfaces to comply with and support applicable industry standards.)
- C. *Alternative Interfaces*: Whether BST provides alternative electronics interface for accessing key OSS functions.
1. Some CLECs, at least initially, may not maintain their own internal OSS for all OSS functional categories or may find that it is not feasible to tie their OSS to BST's OSS via application-to-application interfaces for some or all OSS functions.
 2. In such situations a graphical user interface (GUI) or other terminal-type interface may be the only viable, nondiscriminatory mechanism for certain CLECs to gain access to BST's OSS.
- D. *Support*: Both with regard to each OSS system and interface offered to CLECs and, more generally, with regard to its support processes generally, whether BST provides detailed and accurate documentation, training, and support.
1. **CLEC Implementation Support**: Whether BST works cooperatively with CLECs at all stages of the development and implementation process, from the development of requirements and specifications to testing and final roll-out.
 2. **Documentation**
 - a. Whether BST provides appropriate documentation for its wholesale support processes, including the following:
 - (1) thorough support documentation regarding the implementation and usage of each of its OSS interfaces, *e.g.*, technical reference manuals and user's guides;
 - (2) specifications for instructing CLECs on how to modify or design their systems to communicate with BST's interfaces and OSS, including full documentation of the Applications Programming Interface (API) for all application-to-application interfaces;

- (3) information necessary to format and process their electronic requests so that these requests flow through the interfaces, the transmission links, and into the legacy systems as quickly and efficiently as possible, including
 - (a) syntactical requirements;
 - (b) internal “business rules”;
 - (c) ordering codes, including universal service ordering codes (“USOCs”) and field identifiers (“FIDs”), used to identify the different services and features used in offering telecommunications services to customers;
 - (d) other information necessary to enable CLECs to “pre-validate” service orders in a manner equivalent to the system edits and other validity checks performed by BST service order negotiation systems for their retail service orders.
- b. Whether BST has an established, documented procedure for keeping its documentation up to date and for disseminating documentation to CLECs.
- c. Whether BST provides an electronic method of disseminating documentation and of notifying CLECs that updated documentation is available.

3. System/Interface Changes & Change Management

- a. Whether BST has an established, documented change management process for controlling and keeping CLECs and any other interested persons informed of changes to its OSS interfaces and the OSS underlying those interfaces.
- b. Whether BST provides an electronic method of disseminating information regarding such changes.
- c. Whenever it updates an OSS interface, whether to support a new release or version of a standard or for other purposes, whether BST maintains backward compatibility for a commercially reasonable period of time.

- d. Whenever it replaces an OSS interface or system, whether BST maintains the obsolete interface or system for a commercially reasonable period of time to provide a transition period for users of that interface or system to move to other interfaces or systems.
4. **Service Center/Help Desk:** Whether BST provides one or more service centers, or “help desks,” that CLECs can contact for support purposes (such as with questions regarding OSS system or interface specifications, other documentation, or usage), whether the centers have appropriate hours of operation, and whether the centers are adequately staffed in terms of the number of persons and their level of expertise.
- E. **Capacity:** Whether BST’s support processes are able to support customers in reasonably foreseeable quantities or at least are scalable to such a level within a minimal time period.
1. “Reasonably foreseeable quantities” means quantities that competitors collectively would ultimately demand in a competitive market where the level of competition was not constrained by any limitations of BST’s interfaces or support processes or by any other factors that BST may influence.
 2. “Minimal time period” means a period that would not artificially limit the growth of competition, *i.e.*, at a pace sufficient “to ensure that a new entrant’s decision to enter the local exchange market in a particular state is based on the new entrant’s business considerations, rather than the availability or unavailability of particular OSS functions,” Michigan Order ¶ 133.
 3. Statements regarding CLEC forecasts and evidence of adequate capacity for those projections are not necessarily sufficient. To the extent that CLEC forecasts were constrained by limitations of BST’s interfaces or support processes or by other impediments to competition, they would not provide a basis for a showing of adequate capacity.
 4. An analysis of these issues should account for and discuss demand for the entire region served by the OSS at issue. Thus, when BST deploys region-wide systems, since the capacity of the system to provide service in any state will necessarily be affected by region wide usage, the analysis should consider its entire region, not merely the particular state for which a 271 application is being filed.
- F. **Performance Measures Results:** Whether the performance measurement results are valid, accurate and adequate.
1. An analysis should be conducted of performance measure results which are derived from the results of third party testing.

2. An additional analysis should be performed of the adequacy and appropriateness of the measures provided in BST's SQM. This analysis should determine whether BellSouth's performance measurement processes and data produce results that provide the Commission with adequate evidence to make an informed decision regarding nondiscriminatory access to its network and to its OSS. .
 - a. Determine whether procedures exist for initially documenting and maintaining performance measurement documentation and conforming to reasonable levels of quality and quality control.
 - b. Determine what supporting documentation exists for performance measures, including calculations, exclusions, performance standards and disaggregation and further that such documentation consistently meets reasonable standards for clarity and completeness.
 - c. Determine whether data calculations comply with the documentation, including any provisions for exempting particular data from calculations and that adequate classification parameters (e.g. for disaggregation of results) are reflected.
 - d. Determine whether data collection (including appropriate sampling) is comprehensive, that appropriate data is entered into the performance measurement calculations and that data excluded from any result calculation is captured and stored with a designation of the reason for exclusion.
 - e. Determine whether detailed documentation exists for procedures to extract data from relevant data stores, whether for BellSouth or CLECs, that operational procedures adhere to the documentation, and that change control procedures are reasonable and fully implemented.
 - f. Determine whether the performance measurement process starts with complete and accurate data.
 - g. Determine whether sufficient documentation exists for describing the data storage, back-up, and retrieval, as well as CLEC access to the data.
 - h. Determine that procedures exist for protecting proprietary information for both detailed data and the results produced for performance measurement reporting and that operational procedures conform to such documentation.
 - i. Determine whether stored and reported performance measurement results are an accurate reflection of the documented methodologies.

- j. Determine whether contents of results match the specified report details represented in BellSouth's SQM.
- k. Determine whether those measures which BellSouth asserts to be "parity by design" are in fact "parity by design".

3.3 Preordering

Preordering is comprised of the systems, processes, and other operational elements associated with BST's support for preordering activities for wholesale services and unbundled network elements. The purpose of the tests will be to evaluate functionality, to evaluate compliance with prescribed measurements, and to provide a basis for comparing this operational area to parallel systems and processes supporting BST's retail operations.

A. Application-to-Application Interfaces

- 1. Whether BST provides and supports an application-to-application interface to its OSS that support preordering functions related to service resale and the provision of network elements.
- 2. Whether a CLEC can readily integrate this application-to-application preordering interface with BST's application-to-application ordering interface so that the CLEC can implement integrated systems for their representatives that provide seamless support of preordering and ordering functions.

B. Industry Standards: Whether BST's preordering interfaces support protocols that will be used in the forthcoming industry standards, CORBA and EDI.

C. Other General Considerations

- 1. *Query Response Times:* Whether BST's preordering interfaces provide preorder response in substantially the same time frames as BST receives such responses internally for similar functions.
- 2. *Data Updates*
 - a. Where BST uses separate databases for responding to BST and CLEC preordering queries, whether the databases used for responding to CLEC queries are updated as frequently as the databases used for responding to BST queries.

- b. Where, instead of providing an application-to-application interface for a particular preordering functions, BST provides a database to the CLEC to load into the CLEC's systems and access internally, whether BST prepares and delivers to CLECs updates to such databases as frequently as it updates the databases used for responding to BST queries.

D. Key Functions

1. *Address verification:* Whether BST provides access to address validation functions and whether responses to CLEC queries contain the same functional information as BST has for its own business (for example, if BST provides building floor information, e.g., third floor, for itself, whether it also provides floor information to CLECs).
2. *Telephone numbers:* Whether BST provides access to telephone number request, telephone number reservation, and telephone number cancellation functions, including whether CLECs have functionality equivalent to what BST provides itself for its retail business (e.g., if BST supports reservation of vanity telephone numbers, whether it also offers this capability to CLECs through the electronic preordering interfaces) and whether BST places any greater restrictions on the number or types of telephone numbers that a CLEC can request or reserve than it places on its own ability to request and reserve telephone numbers.
3. *Customer Service Records (CSR):* Whether BST provides access to functions for accessing CSRs, including whether BST blocks or deletes any portion of the CSR, whether the CSR is provided in parsed or unparsed format, and whether there are any restrictions on the size of a CSR retrievable through an electronic request on a real-time basis.
4. *Service and product availability:* Whether BST provides access to functions that will allow CLECs to determine the services and products that are available to customers at particular locations, including whether BST provides a function for a feature validation request that allows the CLEC to determine what features and services are supported by a given central office switch.
5. *Due-date reservation and appointment scheduling:* Whether BST provides due-date request, due-date reservation, due-date cancellation, and appointment scheduling functions. Whether BST provides non-discriminatory access to due dates and appointment dates, including whether it draws dates for both BST and CLEC orders from the same date pool.

6. *Primary Interexchange Carrier (PIC) list*: Whether BST provides access to the PIC list applicable to a particular switch or telephone number.
 7. *Facility availability*: To the extent that it provides its retail representatives with information regarding the availability of facilities necessary to fill an order, whether BST provides access to functions that give CLECs access to the same information provided to BST retail representatives.
 8. *Primary Interexchange Carrier (PIC)*: Whether BST provides access to a function that identifies the subscriber's current PIC.
 9. *Directory listing*: To the extent that BST subscribers can contact BST representative to verify their directory listings, whether BST provides access to functions that give CLECs access to the same directory listing information that is provided to BST retail representatives.
- E. **Performance Measures**: Appendix A includes staff's recommended performance measures for use in third party testing. This includes the following preordering measures.
1. Average OSS Response Interval
 2. OSS Interface Availability

3.4 Ordering & Provisioning

This domain is comprised of the systems, processes, and other operational elements associated with BST's support for ordering and provisioning activities for wholesale services and unbundled network elements. The purpose of testing will be to evaluate functionality, to evaluate compliance with prescribed measurements, and to provide a basis for comparing this operational area to parallel systems and processes supporting BST's retail operations.

- A. **Application-to-Application Interfaces/Industry Standards**: Whether BST provides and supports a single application-to-application interface to its OSS that:
1. Supports ordering functions related to service resale and the provision of unbundled network elements;
 2. Complies with and supports the applicable ordering standards, presently including the EDI SOSC Version 7.0 EDI specification for ordering of telecommunications services and the OBF Local Services Ordering Guide Version 2.0, which provides the definition for the Local Service Request

(LSR), and the new OBF LSOG Version 3 and TCIF EDI SOSC Version 8;
and

3. Can be readily integrated with the application-to-application preordering interface so that CLECs can implement integrated systems for their representatives that provide seamless support of preordering and ordering functions.

B. Other General Considerations

1. **Alternative Electronic Interface:** Whether BST provides an alternative terminal-type electronic interface, *e.g.*, a Web-based interface, for accessing key ordering functions related to service resale and the provision of network elements and, if so, whether that interface complies with the LSOG guidelines.
2. **Flow-Through:** Whether BST provides mechanized flow-through for the following local service orders:
 1. Orders for services as to which there is flow-through for BST service orders;
 2. Orders for services that are analogous to services as to which there is flow-through for BST service orders, *e.g.*, orders for an end-to-end combination of network elements (the "platform"); and
 3. Orders for individual UNE loops.

C. Key Functions

1. Whether BST provides support, through all ordering interfaces offered, for both total services resale, including vertical features, and the full suite of unbundled network elements, including loops, ports, trunks, E911, directory services, and operator services.
2. Whether BST provides support for migration-as-specified orders, migration-as-is orders, and new service orders.
3. Whether BST provides support for feature changes, service disconnect, service suspend, and move and change activities.

4. **Order Status Functions:**
- a. Whether BST provides electronic order status capabilities, including firm order confirmation (FOC), order completion notification, order jeopardy notification, and order rejection notification.
 - b. Whether BST provides all these electronic notifications through the same single, standards-based application-to-application interface referred to above.
 - c. To the extent that BST's retail representatives are able to interactively query status or other information about an order, whether BST provides CLECs an equivalent capability through its application-to-application and alternative interfaces.
- D. **Performance Measures Review:** Appendix A includes staff's recommended performance measures for use in third party testing. This includes the following ordering and provisioning measures.
1. **Percent Flow-through Service Requests**
 2. **Percent Rejected Service Requests**
 3. **Reject Interval**
 4. **Firm Order Confirmation Timeliness**
 5. **Speed of Answer in Ordering Center**
 6. **Average Completion Interval**
 7. **Held Order Interval Distribution and Mean Interval**
 8. **Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices**
 9. **Percent Missed Installation Appointments**
 10. **Percent Provisioning Troubles within 30 days**
 11. **Coordinated Customer Conversions**
 12. **Average Completion Notice Interval**

3.5 Maintenance & Repair

This domain is comprised of the systems, processes, and other operational elements associated with BST's support for wholesale maintenance and repair activities. Tests associated with this domain will provide a basis for comparing this operational area to parallel systems and processes supporting BST's retail operations.

- A. **Industry Standards/Application-to-Application Interfaces:** Whether BST has implemented, complies with, and supports the standard interface for trouble administration for local services, the T1M1 standard T1.227 and T1.228 and the additional ECIC implementation guidelines for a trouble administration OSS interconnection system.
- B. **Alternative Interface:** Whether BST provides an alternative terminal-type electronic interface, *e.g.*, a Web-based interface, for trouble administration.
- C. **Key Functions**
 - 1. Whether each trouble administration interface allows CLECs to place trouble tickets, close out trouble tickets, and receive status on open troubles.
 - 2. Whether each trouble administration interface allows CLECs to perform tests on the services, such as a mechanized loop test (MLT).
- D. **Performance Measure Review:** Appendix A includes staff's recommended performance measures for use in third party testing. This includes the following maintenance and repair measures.
 - 1. OSS Interface Availability
 - 2. Average OSS Response Interval
 - 3. Average Answer Time - Repair
 - 4. Percent Missed Repair Appointments
 - 5. Customer Trouble Report Rate
 - 6. Maintenance Average Duration
 - 7. Percent Repeat Troubles within 30 days
 - 8. Percent Out of Service > 24 Hours

3.6 Billing

This domain is comprised of the systems, processes and other operational elements associated with BST's support for wholesale billing. Tests associated with this domain will be designed to evaluate BST's compliance to measurement agreements and to ensure adherence to sound management practices.

- A. **Industry Standards:** Whether BST supports CABS format for wholesale bills and EMI/EMR format for message processing.
 - 1. **BST should implement billing interfaces that provide billing data for resale and UNEs in these formats to be considered to be conforming to the standards.**

- B. **Key Functions:**
 - 1. **Whether BST provides monthly billing data electronically to CLECs.**
 - 2. **Whether BST provides daily usage feeds to CLECs with information of a sufficient detail for CLECs to prepare end-user bills.**

- C. **Performance Measures:** Appendix A includes staff's recommended performance measures for use in third party testing. This includes the following billing measures:
 - 1. **Percent Invoice Accuracy**
 - 2. **Invoice Timeliness**
 - 3. **Usage Data Delivery Accuracy**
 - 4. **Usage Data Delivery Timeliness and Completeness**

4.0 PERFORMANCE MEASURE REVIEW

4.0 Performance Measure Review

4.1 Purpose

This chapter defines the specific tests to be undertaken in evaluating the systems, processes, and other operational elements associated with BST's support for the performance measure. These tests, which are similar to those contained in the Pennsylvania master test plan prepared by KPMG, are necessary to determine if the information provided by BST is valid. This is of particular importance since performance measure information will be a basis for a decision regarding parity.

4.2 Scope

The performance measure review is comprised of three tests areas, representing important and generally distinct areas of effort undertaken by BST. The three test areas will review all of the performance measures with which BST is required to comply with by state and federal regulators (See Appendix A). The three test areas are:

- ◆ Data Retention
- ◆ Standards & Definitions
- ◆ Data Processing

Each test area is further broken down into a number of process and subprocess areas that serve to identify the particular area of interest being tested.

4.3 Test Process

There are five tests which have been designed to address the three test areas. The organization of the test processes is as follows:

1. Collection and Storage of Data Verification and Validation.
2. Data Replication and Conversion Verification and Validation.
3. Development and Documentation of Standards & Definitions Verification and Validation.
4. Change Management of Standards and Definitions Verification and Validation.
5. Performance Measure Replication.

1. Collection and Storage of Data Verification and Validation

A. Description

This test evaluates key policies and practices for collecting and storing raw and target data necessary for the creation of performance measures. This test will rely on checklists and inspections. The objectives of this test are to determine the adequacy and completeness of key policies and procedures for collecting and storing performance data.

B. Test Scope

Collection and Storage of Data Verification and Validation Review				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Collection of Data	Collection policies & procedures	Adequacy and completeness of collection policies and procedures	Inspection Document review Report review	Qualitative
	Identification of collection points	Applicability of and measurability from control points	Inspection	Qualitative
	Existence of collection tools	Adequacy and scalability of data collection tools	Inspection	Qualitative
	Internal Controls	Adequacy and completeness of the internal control process	Inspection Document review Report Review	Qualitative
Storage of Data	Storage policies & procedures	Adequacy and completeness of storage policies and procedures	Inspection Document review Report review	Qualitative
	Identification of storage sites	Applicability of and measurability from control points	Inspection	Qualitative
	Existence of storage tools	Adequacy and scalability of data storage tools	Inspection	Qualitative
	Internal Controls	Adequacy and completeness of the internal control process	Inspection Document review Report Review	Qualitative

2. Data Replication and Conversion Verification and Validation

This test evaluates the overall policies and practices for replicating and converting the data necessary for the production of performance measure. This test will rely on checklists, document reviews and inspections. The objectives of this test are to determine the adequacy and completeness of key procedures for replicating and converting the data necessary for the production of performance measure.

B. Test Scope

Data Replication and Conversion Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Data Replication & Conversion	Transfer of data from point(s) of collection	Adequacy and completeness of the data transfer process	Inspection Document review Report Review	Qualitative
	Conversion of data from raw to target form to metric	Adequacy and completeness of conversion policies and procedures	Inspection Document review Report review	Qualitative
	Internal Controls	Adequacy and completeness of the internal control process	Inspection Document review Report Review	Qualitative

3. Development and Documentation of Standards and Definitions Verification and Validation

A. Description

This test evaluates the overall policies and practices for developing and documenting measure standards and definitions. This test will rely on checklists, document reviews and inspections. The objectives of this test are to determine the adequacy and completeness of key procedures for developing, documenting, and publicizing standards and definitions for performance measures.

B. Test Scope

Development and Documentation of Standards and Definitions Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Official Standards	Documentation of official standards	Adequacy and completeness of official standards	Inspection Document review Report review	Qualitative
	Distribution of official standards	Adequacy and completeness of the distribution of the standards	Inspection Document review Report review	Qualitative
Working Standards	Documentation of working standards	Adequacy completeness of standards	Inspection Document review Report review	Qualitative
	Distribution of working standards	Adequacy and completeness of the distribution of the standards	Inspection Document review Report review	Qualitative
Technical Definitions	Documentation of technical definitions	Adequacy and completeness of technical definitions	Inspection Document review Report review	Qualitative
	Distribution of working standards	Adequacy and completeness of the distribution of the standards	Inspection Document review Report review	Qualitative

4. Change Management of Standards and Definitions Verification and Validation

A. Description

This test evaluates the overall policies and practices for managing change of the standards and definitions in the BST measures and the communication of these changes to the FPSC and the CLECs. This test will rely on checklists and inspections. The objectives of this test are to determine the adequacy and completeness of procedures for developing, publicizing, conducting, and monitoring change management.

B. Test Scope

Change Management of Standards and Definitions Verification and Validation Review				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Change Management	Developing Change Proposals	Completeness and consistency of change development process	Inspection Document review Report review	Qualitative
	Evaluating Change Proposals	Completeness and consistency of change evaluation process	Inspection Document review Report review	Qualitative
	Implementing Change	Completeness and consistency of change implementation process	Inspection Document review Report review	Qualitative
	Intervals	Reasonableness of change interval	Inspection Document review Report review	Qualitative
	Documentation	Timeliness of documentation updates	Inspection Document review Report review	Qualitative
	Tracking Change Proposals	Adequacy and completeness of change management tracking process	Inspection Document review Report review	Qualitative

5. Performance Measure Replication

A. Description

This test evaluates BST's measure process by attempting to recreate its performance measure using data from BST's target database, and tests BST's policies and procedures for reporting the measure. This test will rely on mathematical techniques to verify and validate BST's performance measure along with interview guides and document reviews to verify and validate reporting of the measure. The objectives of this test are to recreate BST's performance measures, using the technical definitions verified and validated by test 3 above.

B. Test Scope

Network Design Request, Collocation, and Interconnection Planning Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Metric Replication	Reproduction of desired metric	Ability to reproduce desired measure	Accuracy	Quantitative
	Reporting of results	Adequacy and completeness of reporting policies	Inspection Document review Report Review	Qualitative

5.0 PROCESSES AND PROCEDURES REVIEW

5.0 Processes and Procedures Review

5.1 Purpose

The purpose of this section is to define the specific tests to be undertaken in evaluating the systems, processes, and other operational elements associated with BST's establishment and maintenance of business relationships with the CLECs. Areas to be evaluated include the provisioning of on-going operational support to CLECs in a manner both adequate to CLEC business needs and comparable to that provided to BST retail operations. These tests are important in order to provide assurance that processes are in place beyond the time frame of the third-party testing. These tests are similar to those identified in the Pennsylvania master test plan prepared by KPMG.

5.2 Scope

The processes and procedures review is comprised of seven test areas, representing important and generally distinct areas of effort undertaken by BST to establish and subsequently support the CLEC. These test areas include:

- ◆ Change Management
- ◆ CLEC Training
- ◆ Account Establishment and Management
- ◆ Forecasting
- ◆ Interface Development
- ◆ Network Design, Collocation and Interconnection Planning
- ◆ Domain Specific Process Reviews

Each test area is further broken down into a number of process and subprocess areas that serve to identify the particular area of interest under test.

5.3 Test Process

Eighteen test processes have been designed to address the seven test areas. The organization of the subject test processes is as follows:

1. Change Management Practices Verification and Validation.
2. Account Establishment and Management Verification Validation.

3. System Administration Help Desk.
4. CLEC Training Verification and Validation.
5. Interface Development Verification and Validation.
6. Forecasting Verification and Validation.
7. Network Design Request, Collocation, and Interconnection Planning Verification and Validation.
8. Preordering, Ordering and Provisioning Manual Order Processing Evaluation
9. Preordering, Ordering and Provisioning Work Center Support Evaluation
10. Provisioning Process Parity Evaluation
11. Provisioning Coordination Process Evaluation
12. Billing Work Center/Help Desk Support Evaluation
13. Billing Process Review: Daily Usage Feed Returns
14. Billing Process Review: Daily Usage Production and Distribution
15. Billing Process Review: Bill Production and Distribution
16. Maintenance and Repair End-to-End Process Evaluation
17. Maintenance and Repair Work Center Support Evaluation
18. Maintenance and Repair Coordination Process Evaluation
19. Maintenance and Repair Network Surveillance Support Evaluation

1. Change Management Practices Verification and Validation

A. Description

This test evaluates the overall policies and practices for managing change in the procedures and systems necessary for establishing and maintaining effective BST/CLEC relationships. This test

will rely on checklists and inspections. The objectives of this test are to determine the adequacy and completeness of procedures for developing, publicizing, conducting, and monitoring change management.

B. Test Scope

Change Management Practices Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Change Management	Developing Change Proposals	Completeness and consistency of change development process	Inspection Document review Report review	Qualitative
	Evaluating Change Proposals	Completeness and consistency of change evaluation process	Inspection Document review Report review	Qualitative
	Implementing Change	Completeness and consistency of change implementation process	Inspection Document review Report review	Qualitative
	Intervals	Reasonableness of change interval	Inspection Document review Report review	Qualitative
	Documentation	Timeliness of documentation updates	Inspection Document review Report review	Qualitative
	Tracking Change Proposals	Adequacy and completeness of change management tracking process	Inspection Document review Report review	Qualitative

2. Account Establishment and Management Verification Validation

A. Description

This test evaluates the overall policies and practices for establishing and managing the account relationship. It also measures the performance of the account management function responsiveness with respect to call return and call escalation norms established by BST. This test will rely on checklists, inspections, reviews of historical data and measurements where available.

The objectives of this test are to determine the adequacy and completeness of key procedures for developing, publicizing, conducting, and monitoring account management. It then verifies compliance with these policies.

B. Test Scope

Account Establishment and Management Verification Validation Review				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Establishing an account relationship	Staffing	Appropriate roles and responsibilities	Inspection Document review	Qualitative
		Capacity, coverage, and account allocation	Inspection Document review	Qualitative
Maintaining an account relationship	Escalation	Adequacy and completeness of escalation procedures	Inspection Document review Interviews	Qualitative
	Communications	Compliance with pre-filing commitment for industry letters and conferences	Inspection Document review	Qualitative
		Adequacy and completeness of emergency communication and notifications	Inspection Document review Interviews	Qualitative
Documentation – CLEC Handbook(s)	Document development and distribution	Adequacy and completeness of CLEC Handbook(s) development and distribution procedures	Inspection Document review	Qualitative

Account Establishment and Management Verification Validation Review				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
	Document structure	Adequacy and completeness of CLEC Handbook(s) structure	Inspection Document review	Qualitative
Maintain an account relationship	Respond to account inquiry/request for assistance	Timeliness of response	Report Review Logging Interviews	Quantitative

3. System Administration Help Desk

A. Description

This test is the process-oriented evaluation of the system administration help desk function, which consists of assisting CLECs with accessing systems. This test will rely on checklists, inspections, and walk-throughs. The objectives of this test are to:

- ◆ Determine completeness and consistency of overall system administration help desk process.
- ◆ Determine whether the escalation procedure is correctly maintained, documented and published.
- ◆ Determine the existence and functionality of procedures for measuring, tracking, projecting and maintaining system administration help desk performance.
- ◆ Ensure existence of reasonable security measures to ensure integrity of system administration help desk data and the ability to restrict access to parties with specific access permissions.
- ◆ Ensure the overall help desk effort has effective management oversight.
- Ensure responsibilities for performance improvement are defined and assigned.

B. Test Scope

System Administration Help Desk Function				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Process Help Desk Call	Resolution of user question, problem or issue	Completeness and consistency of process	Inspection Document review	Qualitative
Close Help Desk Call	Closure posting	Completeness and consistency of process	Inspection Document review	Qualitative
Status Tracking and Reporting	Status tracking and reporting	Completeness and consistency of reporting process	Inspection Document review	Qualitative
Problem Escalation	User initiated escalation	Completeness and consistency of process	Inspection Document review	Qualitative
Capacity Management	Capacity planning process	Completeness and consistency of process	Inspection Document review	Qualitative
Security and Integrity	Data access controls	Safety of process	Inspection Document review	Qualitative
Process Management	General management practices	Completeness and consistency of operating management practices	Inspection Document review	Qualitative
	Performance measurement process	Controllability, efficiency and reliability of process	Inspection Document review	Qualitative
	Process improvement	Completeness of process improvement practices	Inspection Document review	Qualitative

4. CLEC Training Verification and Validation

A. Description

This test evaluates key aspects of BST's training program for CLECs. This test will rely on checklists and inspections. The objectives of this test are to:

- ◆ Determine the existence and functionality of procedures for developing, publicizing, conducting, and monitoring CLEC training
- ◆ Ensure the CLEC training effort has effective management oversight

B. Test Scope

CLEC Training Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Training Program Development	Develop curriculum	Completeness of training curriculum and forums	Document review Inspection	Qualitative
		Adequacy of procedures to respond to information about training quality and utilization	Document review Inspection	Qualitative
		Adequacy of procedures to accept CLEC input regarding training curriculum	Document review Inspection	Qualitative
	Publicize training opportunities	Availability of information about training opportunities	Document review Inspection	Qualitative
Training Program Quality Assurance	Attendance/ utilization tracking	Adequacy of process to track utilization and attendance of various training tools and forums	Document review Inspection	Qualitative
	Session effectiveness tracking	Adequacy of process to survey training recipients on effectiveness of training	Document review Inspection	Qualitative
	Instructor oversight	Adequacy of procedures to monitor instructor performance	Document review Inspection	Qualitative
Process Management	Performance measurement process	Controllability, efficiency and reliability of process	Inspection Document review	Qualitative
	Process improvement	Completeness of process improvement practices	Inspection Document review	Qualitative

5. Interface Development Verification and Validation

A. Description

This test evaluates key methods and procedures for developing and maintaining OSS interfaces which enable the BST/CLEC relationship. These apply to interfaces such as BST's application-to-application interfaces and data transfer interfaces required for the following activities:

- ◆ Preordering
- ◆ Ordering
- Provisioning
- ◆ Billing
- ◆ Maintenance and Repair

This test will rely on checklists and inspections. The objectives of this test are to determine the adequacy and completeness of key methods and procedures for developing and maintaining interfaces.

B. Test Scope

Interface Development Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Developing Interface/ Software Methodology	Software development	Adequacy and completeness of software development methodology	Inspection Document review Report review	Qualitative
	Interface Development Methodology	Adequacy and completeness of interface development methodology	Inspection Document review Report review	Qualitative
	Distribution of Interface Development Methodology Documentation	Adequacy and completeness of interface development methodology document distribution procedures	Inspection Document review Report review	Qualitative

Verification and Validation

Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Interface Testing	Availability of Functioning Test Environments	Availability of functioning test environments for all supported interfaces	Inspection Document review Report review	Qualitative
	Distribution of Interface Testing Methodology Documentation	Adequacy and completeness of interface testing methodology document distribution procedures	Inspection Document review Report review	Qualitative
	Provision of Support for Interface Testing	Availability and documentation of provision of support for interface testing	Inspection Report review	Qualitative
Developing and Maintaining Testing and Production Interfaces	Implementation	Compliance with schedule of interface development deliverables (as defined in the TIS Change Management Process document)	Inspection Document review Report review	Qualitative

6. Forecasting Verification and Validation

A. Description

This test verifies and validates key aspects of the BST/CLEC forecasting process. This test will rely on checklists and inspections. The objectives of this test are to:

- ◆ Determine the existence and functionality of key procedures for developing, publicizing, conducting, and monitoring forecasting efforts
- Ensure the overall forecasting effort has effective management oversight

B. Test Scope

Forecasting Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Forecasting	Forecast development	Compliance with BST's documented forecasting procedures	Report review Inspection	Qualitative
	Forecast publication and confirmation	Availability of published forecast summaries	Report review Inspection	Existence

7. Network Design Request, Collocation, and Interconnection Planning Verification and Validation

A. Description

This test evaluates the key policies and practices for Network Design Request (NDR) processing, Collocation (physical and virtual) planning, and Interconnection Planning. This test will rely on checklists, interviews and inspections. The objectives of this test are to:

- Determine whether the CLEC has sufficient information to adequately prepare for NDR, Collocation and Interconnection planning.
- Determine whether the NDR, Collocation, and Interconnection planning processes are sufficiently well structured and managed to yield the desired results.

B. Test Scope

Network Design Request, Collocation, and Interconnection Planning Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
NDR Process	Preparation for NDR meetings	Usability and completeness of NDR forms	Document review Inspection	Qualitative

Network Design Request, Collocation, and Interconnection Planning Verification and Validation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
	NDR Meetings	Adequacy and completeness of process	Program managed process	Qualitative
Collocation	Collocation requirements forecasting	Usability and completeness of collocation forecast forms	Document review Inspection	Qualitative
	Evaluation of collocation establishment process	Adequacy and completeness of process	Program managed process Interviews	Qualitative
	Forecast analysis	Availability of results to commission and CLECs	Document review Inspection	Existence
Interconnection Planning	Interconnection planning information requirements	Completeness and usability of instructions for preparing for the Interconnection Planning meeting	Document review Inspection	Qualitative
	Evaluation of Interconnection Planning process	Adequacy and completeness of process	Program managed process	Qualitative

8. Preordering, Ordering, and Provisioning Manual Order Process Evaluation.

A. Description

The Preordering, Ordering, and Provisioning Manual Order Process Evaluation is a comprehensive review of the methods and procedures used to handle orders that have been manually submitted to BST. Operational analysis techniques will be used to conduct this test. It will rely on the development of various checklists to facilitate a structured walk through of the manual order handling process. The objective of this test is to validate the processes and procedures used to support manual submission of orders for service.

B. Test Scope

The table below outlines the processes and subprocesses involved in evaluating the timeliness, consistency, and accuracy of handling manual orders relating to BST.

Manual Order Processes				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Receive Manual Order	Faxed Manual Order Logging	Completeness and consistency of process	Inspection Document review	Qualitative
	Electronic Manual Order Logging	Completeness and consistency of process	Inspection Document review	Qualitative
Process Manual Order	Entry of Manual Order into SOP	Completeness and consistency of process	Inspection	Qualitative
Status Tracking and Reporting	Status tracking and reporting	Completeness and consistency of reporting process	Inspection Document review	Qualitative
Problem Escalation	User initiated escalation	Completeness and consistency of process	Inspection Document review	Qualitative
Capacity Management	Capacity planning process	Availability of trained alternate staff	Inspection Document review Interview	Qualitative
Process Management	General management practices	Consistency of Staff/Mgt. Understanding of process	Inspection Document review	Qualitative
	Performance measurement process	Ability of mgt. To track manual orders. Mgt tracking of agent performance Accurate documentation of process	Inspection	Qualitative

9. Preordering, Ordering, and Provisioning Work Center Support Evaluation

A. Description

The Preordering, Ordering, and Provisioning Work Center Support Evaluation is a comprehensive operational analysis of the work center/help desk processes developed by BST to provide support to CLECs with OSS questions, escalations, problems, and issues related to preordering, ordering, and provisioning. Basic functionality, performance and escalation procedures will be evaluated. The objectives of this evaluation are to:

- Determine completeness and consistency of work center/help desk processes and responses
- Determine whether the escalation procedure is documented and known to work center agents and management
- ◆ Determine the accuracy and completeness of procedures for measuring work center/help desk performance

B. Test Scope

The table below outlines the processes and subprocesses involved in evaluating the timeliness, consistency, and accuracy of handling work center and help desk activities related to preordering, ordering, and provisioning performed by BST.

Preordering, Ordering, and Provisioning Work Center/ Help Desk Support				
ProcessArea	Subprocess	Evaluation Measure	Evaluation Technique	CriteriaType
Respond to Help Desk Call	Answer call	Completeness and consistency of process	Inspection	Qualitative
	Interface with user	Availability of user interface	Inspection	Qualitative
	Log call	Completeness of logged information. Log is kept in appropriate media for appropriate interval.	Document Review Inspection	Qualitative

Preordering, Ordering, and Provisioning Work Center/ Help Desk Support				
ProcessArea	Subprocess	Evaluation Measure	Evaluation Technique	CriteriaType
Process Help Desk Call	Access to systems to observe user problems	Ability to access user records and transactions	Inspection	Qualitative
	Resolve user question, problem or issue	Completeness and consistency of process	Documentation Review	Qualitative
Close Help Desk Call	Log closure information	Completeness, consistency, and timeliness of process	Inspection	Qualitative
Monitor Status	Track status	Accuracy and completeness of status tracking capability. Availability of jeopardy notification	Inspection Document Review	Qualitative
	Report status	Completeness and consistency of reporting process. Accessibility of status report	Inspection Document Review	Qualitative
Request Escalation	Manage escalations	Consistency and completeness of procedure	Document Review Inspection	Qualitative
Manage the Help Desk Process	Provide management oversight	Completeness and consistency of operating management practices	Inspection	Qualitative

10. Provisioning Process Parity Evaluation

A. Description

The Provisioning Process Parity Evaluation is a review of the processes, systems, and interfaces that provide provisioning for CLEC orders. The review will focus on these areas:

- ◆ Order interfaces
- ◆ Workflow definitions
- ◆ Workforce scheduling

- ◆ Memory administration
- ◆ Service activation
- ◆ Test and acceptance
- ◆ Exception handling
- ◆ Completion notices

The focus of the evaluation will be "downstream" interfaces from manual processing and the gateway system that serves as the interface to all order processing. As appropriate, provisioning processes for different products and services will be evaluated separately. This will be required in those cases where the process and/or systems used for provisioning are different by product.

An operational analysis technique will be used to evaluate BST's systems and processes for parity with the corresponding BST retail functions. It will consist of targeted interviews of key development and process-owner personnel along with structured reviews of processes, systems, and interfaces documentation. The objective of this evaluation is to determine the degree to which the provisioning environment supporting CLEC and reseller orders is on parity with internal BST provisioning.

B. Test Scope

The table below outlines the processes and subprocesses involved in evaluating the level of parity provided by the BST provisioning systems and processes to the CLECs and resellers.

Provisioning Process Parity				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Provisioning Process Parity	Evaluate Order entry process (BST internal)	Consistency and repeatability as compared to retail	Inspection	Parity
	Evaluate workflow management	Consistency and repeatability as compared to retail	Inspection	Parity
	Evaluate workforce management	Consistency and repeatability as compared to retail	Inspection	Parity
	Evaluate service activation process	Consistency and repeatability as compared to retail	Inspection	Parity
	Evaluate service design process	Consistency and repeatability as compared to retail	Inspection	Parity
	Evaluate assignment process	Consistency and repeatability as compared to retail	Inspection	Parity

11. Provisioning Coordination Process Evaluation

A. Description

The Provisioning Coordination Process Evaluation is a review of the procedures, processes, and operational environment used to support coordinated provisioning with CLECs. The evaluation will address products and situations that require coordinated provisioning to minimize customer disruption. The requirement for coordination may come from either BST policy or a CLEC request. An operational analysis test approach will be used to evaluate BST's Provisioning Coordination Processes. It will consist of targeted interviews of key development personnel along with structured reviews of process documentation facilitated by an evaluation checklist. Case studies of actual coordination processes will be created or selected from live CLEC situations. Case studies will be selected and tracked to determine process operation. The objectives of this evaluation are to:

- ◆ Determine completeness and consistency of provisioning coordination processes
- ◆ Determine whether the provisioning coordination processes are correctly documented, maintained, and published
- ◆ Determine the accuracy, completeness, and functionality of procedures for measuring, tracking, projecting, and maintaining provisioning coordination processes performance
- ◆ Ensure the provisioning coordination processes have effective management oversight
- ◆ Ensure responsibilities for provisioning coordination processes performance improvement are defined and assigned

B. Test Scope

The table below outlines the tests to evaluate the procedures and processes in place to support for joint provisioning of services by the CLEC and BST.

Provisioning Coordination Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Support Provisioning Coordination Process	Identify orders requiring coordination	Availability of procedures and methods	Document Review	Existence
		Completeness and consistency of processes	Document Review, Inspection	Qualitative
	Request coordination with order	Completeness and consistency of processes	Document Review, Inspection	Qualitative
	Receive notification of provisioning schedule	Completeness and consistency of processes	Document Review Inspection	Qualitative
		Timeliness of notification	Document Review Inspection	Qualitative
	Manage coordinated provisioning cases	Completeness and consistency of operating management practice	Inspection	Qualitative
		Controllability, efficiency and reliability of process	Inspection	Qualitative
		Completeness of process improvement practices	Inspection	Qualitative

12. Billing Work Center/Help Desk Support Evaluation

A. Description

The Billing Work Center/Help Desk Support Evaluation is an operational analysis of the work center/help desk processes and documentation developed by BST to provide support to CLECs with usage (Daily Usage Feed) and/or billing related claims, questions, problems and issues. Basic functionality, performance, escalation procedures, and security will be evaluated. The objectives of this evaluation are to:

- ◆ Determine completeness and consistency of work center/help desk processes, documentation and responses.
- ◆ Determine whether the escalation procedure is correctly documented, maintained, published and followed.
- ◆ Determine the accuracy, completeness, and functionality of procedures for measuring and tracking work center/help desk performance. Determine the accuracy, completeness, and functionality of procedures for projecting resource needs and maintaining work center/help desk performance.
- ◆ Ensure accuracy and completeness of reasonable security measures to ensure integrity of work center/help desk data and the ability to restrict access to parties with specific access permissions.
- ◆ Ensure the work center/help desk effort has effective management oversight.
- ◆ Ensure responsibilities for performance improvement are defined and assigned.

B. Test Scope

The scope of this test includes all processes, subprocesses, and measurements of the Billing Work Center test, as shown in the table below.

Billing Work Center/Help Desk Support Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Receive Help Desk Call	Answer call	Timeliness of call	Inspections	Quantitative
	Interface with user	Usability of user interface. Availability of user interface	Inspections Inspections	Qualitative Quantitative
	Log call	Existence of call logging Accuracy of call logging	Document Review Inspections	Quantitative Qualitative
	Record severity code	Compliance of call logging - severity coding	Inspections	Qualitative

Billing Work Center/Help Desk Support Evaluation				
ProcessArea	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Process Help Desk Call	Resolve user question, problem or issue	Completeness and consistency of process	Documentation Review and inspections	Quantitative
		Accuracy of response	Inspections	Quantitative
Receive Claim	File claim	Completeness and consistency of process	Documentation Review and inspections	Qualitative
		Accuracy of response	Inspections	Qualitative
	Process claim	Completeness, consistency, and timeliness of process	Inspections, report review	Qualitative
	Issue adjustment when necessary	Completeness and consistency of process	Documentation review and inspection	Qualitative
	Disposition claim	Accuracy, completeness and reliability of disposition report	Inspections, report review	Quantitative and Qualitative
Close Help Desk Call	Post closure information	Completeness, consistency, and timeliness of process	Inspections	Quantitative
		Accuracy of posting	Inspections, report review	Quantitative
Monitor Status	Track Status	Existence of status tracking capability	Inspections	Existence
		Consistency and frequency of follow-up activities Availability of jeopardy notification	Document Review Document Review	Qualitative Quantitative
	Report Status	Completeness and consistency of reporting process Accuracy and timeliness of report	Inspections, report review Inspections, report review	Qualitative Quantitative
		Accessibility of status report	Inspections	Quantitative
Request Escalation	Identify escalation procedure	Existence of procedure	Document Review	Existence

Billing Work Center/Help Desk Support Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
	Evaluate escalation procedure	Completeness of the procedure	Document Review	Qualitative
		Consistency of the process	Inspection	Qualitative
Manage Workforce Capacity	Identify work force planning procedures	Existence of procedure	Document Review	Existence
	Evaluate work force planning procedures	Completeness of procedure	Document Review	Qualitative
	Review staffing plans	Scalability of staff volume	Report review	Qualitative
Provide Security and Integrity	Provide secured access	Completeness and applicability of security procedures, profiles, and restrictions	Document Review, Inspections	Qualitative
		Controllability of intra-company access	Document Review, Inspections	Qualitative
Manage the Help Desk Process	Provide management oversight	Completeness and consistency of operating management practices	Inspections	Qualitative
		Controllability, efficiency and reliability of process	Inspections	Qualitative
		Completeness of process improvement practices	Inspections	Qualitative

13. Daily Usage Feed Returns - Process Evaluation

A. Description:

The Daily Usage Feed Returns Process Evaluation is an operational analysis of the usage return process and related documentation used by BST to accept, investigate and where necessary, correct Daily Usage Feed return requests from CLECs. The objective of this evaluation is to determine the accuracy, completeness and timeliness of the processes and documentation used to process and respond to Daily Usage Feed Return requests.

B. Test Scope

The scope of this test includes the processes, subprocesses and measurements listed in the table below.

Daily Usage Feed Returns Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Process Daily Usage Feed Returns Requests	BST receives returned usage.	Completeness and accuracy of documentation and processes for creating, submitting and receiving returned usage	Inspections	Qualitative
	BST evaluates and processes returned usage	Accuracy, completeness and timeliness of corrections	Inspections	Qualitative
	BST provides item status for all returned records	Accuracy, completeness and timeliness of status report	Inspections, report review	Qualitative

14. Daily Usage Production and Distribution - Process Evaluation

A. Description

The Daily Usage Production and Distribution Process Evaluation is an operational analysis of the processes and documentation used by BST to create and transmit the Daily Usage Feed (DUF). The objective of this test is to determine the accuracy, completeness and timeliness of processes used to produce and distribute the DUF.

B. Test Scope

The scope of this test includes the processes, subprocesses and measurements listed in the table below.

Daily Usage Production and Distribution Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Produce Daily Usage Feed	Balancing and reconciliation of daily usage feed.	Completeness of balancing and reconciliation procedures	Inspections	Qualitative
	Route daily usage	Controllability of usage	Inspections	Qualitative

Daily Usage Production and Distribution Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Transmit Daily Usage Feed	Data transmission and cartridge tape delivery to CLEC	Completeness, consistency and timeliness of the process	Inspections	Qualitative
Maintain and Re-transmit Usage History	Create daily usage backup	Reliability of repeatable process	Inspections	Qualitative
	Retrieve and re-transmit daily usage backup data	Availability and timeliness of prior period usage data to CLEC	Inspection	Qualitative

15. Bill Production and Distribution - Process Evaluation

A. Description

The Bill Production Process Evaluation is an operational analysis of the processes employed by BST to produce and distribute carrier bills. The objective of this test is to determine whether the processes employed by BST to produce and distribute carrier bills ensure that those bills are accurate and are distributed to CLECs on a timely basis. The processes that enable a CLEC to request and obtain copies of previously received bills are also tested.

B. Test Scope

The scope of this test includes the processes, subprocesses and measurements listed in the table below.

Bill Production and Distribution Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Balance Cycle	Define balancing and reconciliation procedures	Completeness and effectiveness of bill balancing and reconciliation procedures	Inspections	Qualitative
	Produce Control Reports	Completeness and accuracy in generation of control elements	Inspections	Qualitative

Bill Production and Distribution Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
	Release cycle	Compliance to balancing and reconciliation procedures	Inspections	Qualitative
Deliver Bill	Delivery of bill media	Timeliness and controls of media delivery	Inspections	Qualitative
Maintain Bill History	Maintain billing information	Timeliness and controllability of billing information	Inspections	Qualitative
	Access billing information	Accessibility and availability of billing information	Inspections	Qualitative
Request Resend		Timeliness and accuracy of the delivery	Inspections	Qualitative

16. End-to-End Maintenance and Repair Process Evaluation

A. Description

This test will evaluate the functional equivalence of M&R processing for wholesale and retail trouble reports, by reviewing and evaluating the wholesale and retail process flow. The objectives of this test are to evaluate BST's wholesale M&R process, and the equivalence of BST's end-to-end processes for trouble reporting and repair of retail and wholesale services.

B. Test Scope

End-to-End Maintenance and Repair Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
End-to-End M&R Process: Resale	Process Flow Documentation	Comparison with Retail	Inspection	Qualitative
	Process Evaluation	Completeness, consistency and timeliness of the process	Inspection	Qualitative

End-to-End Maintenance and Repair Process Evaluation				
ProcessArea	Subprocess	Evaluation Measure	Evaluation Technique	CriteriaType
End-to-End M&R Process: UNE/UNE-P	Process Flow Documentation	Comparison with Retail	Inspection	Qualitative
	Process Evaluation	Completeness, consistency and timeliness of the process	Inspection	Qualitative

17. Maintenance and Repair Work Center Support Evaluation

A. Description

The Maintenance and Repair work center support evaluation is an operational analysis of the work center/help desk processes developed by BST to provide support to CLECs with questions, problems, and issues related to wholesale trouble reporting and repair operations. The objective of this test is to evaluate the effectiveness of M&R work center support operations and adherence to common support center/help desk procedures. An additional objective is to analyze the nature and frequency of problems referred to the work center to determine if they indicate potential problems in other M&R areas. Specifically, this evaluation is designed to:

- ◆ Determine completeness and consistency of work center/help desk processes and procedures
- ◆ Determine whether expedite and escalation procedures are correctly documented and work effectively
- ◆ Ensure existence of reasonable security measures to ensure integrity of work center/help desk data and the ability to restrict access to parties with specific access permissions
- ◆ Determine the timeliness and accuracy in identifying and resolving problems
- ◆ Determine the existence and functionality of procedures for measuring, tracking, projecting and maintaining work center/help desk performance

B. Test Scope

Maintenance and Repair Work Center Support Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Call Processing	Call Answer	Timeliness	Inspections Logging Interviews	Qualitative
	Call Logging	Accuracy Completeness Consistency	Inspections Logging Interviews	Qualitative
	Prioritization	Existence Effectiveness	Inspections Logging Interviews	Qualitative
Problem Tracking and Resolution	Documentation	Clarity Accuracy	Document Review Interviews	Qualitative
	Identify and Resolve	Timeliness Accuracy Completeness Consistency	Inspections Logging Interviews	Qualitative
	Track Problem	Existence Accuracy	Inspections Logging Interviews	Qualitative
	Log Status and Close	Accuracy Completeness Consistency	Inspections Logging Interviews	Qualitative
	Notify Customer	Timeliness	Inspections Logging Interviews	Qualitative
Expedite/ Escalation Procedures	Documentation	Existence Clarity Accuracy	Document Review Interviews	Qualitative
	Call Answer	Accessibility Timeliness	Inspections Logging Interviews	Qualitative
	Escalation Logging	Accuracy	Inspections Logging Interviews	Qualitative

Maintenance and Repair Work Center Support Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
	Identify and Resolve	Timeliness	Inspections Logging Interviews	Qualitative
	Log Status and Close	Accuracy	Inspections Logging Interviews	Qualitative
	Notify Customer	Timeliness	Inspections Logging Interviews	Qualitative
Work Center Procedures		Accuracy Completeness	Inspections Logging Interviews	Qualitative
Manual Handling — Resale		Accuracy Timeliness Consistency	Observation Logging Interviews	Qualitative
Manual Handling — UNE/UNE-P		Accuracy Timeliness Consistency	Observation Logging Interviews	Qualitative

18. Maintenance and Repair Coordination Process Evaluation

A. Description

The Maintenance and Repair coordination process evaluation is a test of the systems, processes, procedures, and other operational elements associated with M&R coordination activities between BST and CLEC operations organizations. The objective of this test is to determine the adequacy of M&R coordination processes and systems as they relate to joint CLEC/BST activities in the Maintenance and Repair domain.

B. Test Scope

Maintenance and Repair Coordination Process Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Joint Meet Procedures	Process Documentation	Accuracy Completeness	Interviews Document Review	Qualitative
	Notification Procedures	Timeliness Accuracy	Interviews	Qualitative
Coordinated Testing	Process Documentation	Accuracy Completeness	Interviews Document Review	Qualitative
	Notification Procedures	Timeliness Accuracy	Interviews	Qualitative

19. Network Surveillance Support Evaluation

A. Description

The network surveillance support evaluation is a review of the processes and other operational elements associated with BST's network surveillance and network outage notification processes and procedures as they relate to wholesale operations. The objective of this test is to determine the functionality of network surveillance and network outage notification procedures and to assess the performance capabilities of network outage notification procedures for wholesale operations as compared to retail procedures.

B. Test Scope

Network Surveillance Support Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Network Surveillance	IOF Surveillance	Existence Reliability	Inspection	Existence Qualitative
	AIN Interconnect Surveillance	Existence Reliability	Inspection	Existence Qualitative
	SS7 Interconnect Surveillance	Existence Reliability	Inspection	Existence Qualitative

Network Surveillance Support Evaluation

ProcessArea	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Outage Notification	Process Documentation	Accuracy Completeness	Inspection	Qualitative
	Notification Procedures	Timeliness Accuracy Completeness	Inspection	Qualitative

**6.0 TRANSACTION VERIFICATION AND
VALIDATION**

6.0 Transaction Verification and Validation

6.1 Purpose

The purpose of this section is to describe the specific tests to be undertaken in evaluating the systems and other operational elements associated with BST's support for preordering, ordering & provisioning, maintenance & repair, and billing transactions. The tests are designed to evaluate BST's compliance to measurement agreements, ensure adherence to good management practices, and provide a basis for comparing the operational areas to BST's retail operations. The tests listed are similar to those defined in the Pennsylvania master test plan prepared by KPMG.

6.2 Organization

The Transaction Verification and Validation review is organized into three sections that represent the key focus areas for testing in this domain. These three sections are:

- ◆ Preordering, Ordering, Provisioning (POP) Transactions
- Maintenance and Repair (M&R) Transactions
- ◆ Billing Transactions

6.3 Scope

As identified above, the transaction verification and validation review is comprised of three test areas, representing important and generally distinct areas of effort undertaken by BST. The three test areas will verify and validate BST's ability to support systems and processes that enable transaction processing. Each test area is broken down into a number of increasingly discrete tests, processes, and subprocess areas that serve a particular area of interest within the test area. Test scenarios will be used to evaluate functionality and performance in the three sections. Specific test scenarios will be developed by the vendor after a review of product offerings and forecasted demand. The mix of scenarios will be tailored to emphasize areas critical to the FPSC in making a decision of parity. Appendix B contains a suggested list of activities that should be incorporated into test scenarios.

6.4 Test Scenarios

Test scenarios describe at a high level realistic situations in which CLECs purchase wholesale services and network elements from BST to be resold or repackaged to the CLEC's end-

user customer on a retail basis. Scenarios will be used to test functionality, performance, and other attributes associated with the ability of CLECs to access information from BST business processes and associated systems. The key principles applied in generating the scenarios include: (1) emulating real world coverage, mix, and types of transactions while (2) balancing the requirement for practical and reasonably executable transactions which would not unduly disrupt normal production or negatively affect customer service. In general, each test scenario describes a real-world situation that will be used to create test cases.

Scenarios serve several key purposes. Scenarios help define the products, services, and transactions that should be included for testing. In this regard, test scenarios provide the guidance and framework for developing "real world" test cases to simulate live production in a controlled test environment. The test cases provide the actual detailed instructions required to build individual transaction test instances.

6.5 Test Processes

Nine tests have been designed to address the three test areas of preordering, ordering and provisioning (POP), maintenance and repair, (M&R) and billing. The organization of the subject test processes is as follows:

1. POP Functional Evaluation
2. POP Volume Performance Tests
3. Order Flow Through Evaluation
4. Provisioning Verification and Validation
5. M&R Functional Evaluation
6. M&R Performance Evaluation
7. End-to-End Trouble Report Processing
8. Billing Functional Usage Evaluation
9. Functional Carrier Bill Evaluation

1. Preordering, Ordering, and Provisioning Functional Evaluation

A. Description

The POP Functional Evaluation is a comprehensive review of all of the functional elements of Preordering, Ordering, and Provisioning; the achievement of the prescribed measures; and an analysis of performance in comparison to BST's retail system. The test will be performed via live transactions submitted over the EDI and TAG interface. Where appropriate, manual transactions will be submitted as well. EDI and TAG will be tested through transactions generated via the test transaction generator. The test transaction generator will also be responsible for recording the information required to produce the output reports.

The POP Functional Evaluation will look at an end-to-end view of the preordering through provisioning process. It will include a mix of stand-alone preordering and ordering transactions, along with preorder transactions followed by orders, supplements, and cancels. The vendor will collect data on transaction submissions and responses, and on provisioning activities. Where possible and appropriate, this information will be collected and maintained electronically. Only LSR orders will be tested. Erred as well as error-free transactions will be tested. The percent in nature of erred transactions should be consistent with that anticipated for December 2001. Not all orders will go through the physical provisioning process. Some will be future dated and others will be canceled before provisioning activities commence.

As part of the POP Functional Evaluation, the vendor will also seek qualitative input and quantitative data on the "real world" experience of CLECs operating in Florida. CLECs willing to participate in this test will be interviewed and their experiences will be incorporated into the test results after validation by the vendor. In addition, for some types of transactions, involvement will be sought from willing CLECs to participate in some aspects of the live transaction testing. This would be done for two principal purposes.

First, CLEC participation will be important for complex orders that cannot be simulated adequately in the "CLEC-Marketplace" test environment. Examples include complex facilities-based orders and orders, like those for unbundled loops with LNP, which require an actual CLEC switch to fully complete. Second, it is important to attempt to incorporate information to help control for "experiment bias" of the results. Therefore, the vendor will ask CLECs for data that can be validated on live orders that replicate those sent over the test systems. As appropriate, some test orders may be sent over CLEC systems. Successful completion of all of these aspects of the test require active participation of one or more CLECs. However, CLEC participation is voluntary and the scope of that participation is up to each individual CLEC.

The objective of this test is to validate the existence, functionality, and behavior of the interfaces and processes required by BST for preordering, ordering, and provisioning transaction requests and responses.

B. Test Scope

Ordering transactions consists of three distinct, but related, processes:

- ◆ Preorder Processing - Submission of requests for information required to complete orders,
- ◆ Order Processing - Submission of orders required to add/delete/change a customer's service, and
- ◆ Provisioning - Physical work performed by BST as a result of the submitted orders.

The ordering transactions tests will be comprised of "real-life," end-to-end test cases that cover the entire spectrum of preorder, order, and provisioning. The following order types will be tested:

- ◆ Migrate "as is"
- ◆ Migrate "as is" with changes
- ◆ Migrate "as specified"
- ◆ New customer
- ◆ Feature Change
- ◆ Directory Change
- ◆ Number Change
- ◆ Add lines
- ◆ Suspend/Restore
- ◆ Disconnect (full/partial)
- ◆ Move (inside/outside)
- ◆ Number Portability
- ◆ Line reclassification
- ◆ Change to New Local Service Provider
- ◆ UNE Loop Cut Over

The order types identified above will be tested across the available and applicable BST service delivery methods. The following service delivery methods will be tested:

- ◆ Resale
- ◆ UNE Platform
- ◆ Unbundled Loops
- ◆ Other Unbundled Network Elements

The orders will be placed using BST's existing interfaces: TAG, EDI, and manual. The following assumptions pertain to ordering interfaces:

- ◆ Both BST interfaces, TAG and the EDI, will be tested, including during the Volume Performance Test.
- ◆ Orders will be issued using both the ASR and LSR format, as appropriate.
- ◆ Orders that can be submitted either through TAG or EDI will not be submitted manually as a part of the testing process.
- ◆ If a scenario calls for an order type that can not be submitted electronically, the request will be submitted manually.

Other important aspects of ordering will be tested:

- ◆ “Flow through” order types, as stated and agreed-to by BST, will be tested to ensure that they do not require manual handling,
- ◆ Supplemental orders (changes to orders in process), including cancels, will be tested,
- ◆ Multiple products and features will be tested; the tests will cover a broad range of the options available to CLECs and resellers,
- ◆ Multiple switch-types, end-offices and cities will be included in the test,
- A portion of the orders sent will be physically provisioned. Some orders will be future dated, allowing them to be canceled prior to work scheduling and provisioning, and
- ◆ CLECs will be solicited for involvement in some aspects of the test, especially for assistance in the testing of complex services and services with long lead times.

In addition to normal orders, orders with planned errors will be sent to BST to check the accuracy of its system edits. Service locations supported by different BST ordering, provisioning, and central office switching and transmission configurations will be tested.

The test will be conducted using the most current release of the ordering rules and preordering business rules. Any BST updates to these rules released during the test period will be incorporated into the remaining orders, which may cause delays. Documentation affecting the POP domain given to the CLECs and the resellers – including the CLEC handbook, training, and other appropriate documentation – will be used to submit the transactions, and the accuracy and usefulness of this documentation will be evaluated.

The following chart contains the processes and subprocesses that will be used in evaluating BST’s preordering, ordering, and provisioning functionality and performance:

Preordering, Ordering, and Provisioning Processes	
Process Area	Subprocess
Preordering	Retrieve customer CSR from CRIS
	Validate Customer Address
	Reserve and release telephone numbers
	Inquire about customer’s directory listing

Preordering, Ordering, and Provisioning Processes	
Process Area	Subprocess
	Request information about services, features, facilities, and PIC/LPIC choices available to customers
	Inquire whether customer's loop is ISDN capable.
	Inquire whether customer's loop is ADSL capable.
	Determine due date/appointment availability
Ordering	Submit an order for the migration of a customer from BST to a CLEC "as is"
	Submit an order for the migration of a customer from BST to a customer "as specified"
	Submit an order for the partial migration of a customer from BST to a CLEC
	Submit an order for establishing service for a new customer of a CLEC
	Submit an order for feature changes to an existing CLEC customer
	Submit an order for adding lines/circuits to an existing CLEC customer.
	Submit an order for a telephone number change for an existing CLEC customer
	Submit an order for a directory change for an existing CLEC customer
	Submit an order for an inside move of an existing CLEC customer
	Submit an order for the outside move of an existing CLEC customer
	Submit an order for suspending service of an existing CLEC customer
	Submit an order for restoring service to an existing CLEC customer
	Submit an order for disconnecting service from an existing CLEC customer
	Submit an order for disconnecting some lines/circuits for an existing CLEC customer
	Submit an order for migration of a customer from another CLEC
	Change service delivery method for an existing CLEC customer
	Order interoffice facilities
	Receive order confirmation
Provisioning	Receive notification of jeopardy or delay
	Receive completion notification

Preordering, ordering, and provisioning functionality and performance:

Preordering, Ordering, and Provisioning Evaluation Measures		
Evaluation Measure	Evaluation Technique	Criteria Type
Clarity, accuracy and completeness of documentation	Document Review, Transaction Generation	Qualitative Quantitative
Accessibility of EDI (excluding Interoffice Facilities)	Transaction Generation	Quantitative
Accuracy and completeness of functionality	Transaction Generation	Quantitative
Timeliness of response	Logging	Quantitative
Accuracy and completeness of response	Transaction Generation, Inspection	Qualitative Quantitative
Clarity and accuracy of error messages	Transaction Generation, Inspection, Document Review	Quantitative
Accuracy, responsiveness, and completeness of Help Desk support	Transaction Generation, Logging	Qualitative Quantitative
Usability of information	Transaction Generation, Inspection	Qualitative Quantitative
Consistency with retail capability	Inspection	Qualitative Quantitative

The provisioning process has different measures:

Provisioning Evaluation Measures		
Evaluation Measure	Evaluation Technique	Criteria Type
Timeliness of provisioning	Transaction Generation, Inspection, Logging	Quantitative Qualitative
Frequency of delay or rescheduling of provisioning	Transaction Generation, Inspection, Logging	Quantitative Qualitative
Accuracy and completeness of provisioning	Transaction Generation, Inspection, Logging	Quantitative Qualitative

2. Preordering, Ordering, and Provisioning Volume Performance Tests

A. Description

The Volume Performance Test will identify the capacity and potential choke points, at projected future transaction volumes, of the BST EDI and TAG interfaces and BST systems and processes for responding to preordering queries and for initial processing of orders. There will be three parts to the test: 1) a "normal volume" test using anticipated transaction volumes for the December 2001 time frame, 2) a "peak" test using volumes at 150% of the normal volume test, and 3) a "stress" test using volumes at 250% of the normal volume test.

The Volume Performance Test will look at the performance of BST's preordering and ordering systems and processes from the submission of queries to the creation of internal service orders and the return of an order confirmation. The orders submitted in the Volume Performance Test will not go through the physical provisioning process. The test will include a mix of stand-alone preordering and ordering transactions. Transactions will be submitted using both the EDI and TAG interfaces.

While transactions will be submitted throughout the entire transaction test period as part of the POP Functional Evaluation, the volume tests will only run on certain days during the testing period. There will be two 24-hour "normal volume" days of testing. There will be one 24-hour "peak" test. There will be one 4-hour, off-peak "stress" test. The "stress" test will be run off-peak to limit the impact of the test on real customers. All the attributes and activities that apply to the POP Functional Evaluation for preordering and ordering also apply to this test.

The objective of the Volume Performance Test is to measure BST's capability and identify potential choke points of the TAG and EDI interfaces and systems put in place to access preordering information and submit orders to BST at projected future volumes.

B. Test Scope

The scope for this test includes preordering and order processing.

3. Order Flow Through Evaluation

A. Description

The Order "Flow Through" Evaluation tests the ability of orders to flow through from the CLEC through the interface into the BST ordering system without any human intervention. Only orders that qualify as "flow through", orders not needing manual action, will be tested. The list of

“flow through” types will be updated during the testing period. Additions and deletions to the list will be incorporated into the test.

“Flow through” orders will be submitted through both the TAG and the EDI interfaces. Any supplements and cancels that are considered to be “flow through” will also be submitted. The order transactions will be monitored to verify that they do not “fall out” for manual handling in the BST work center.

This test will be conducted as a part of the POP functional and normal volume testing. The objective of the Order “Flow Through” Test is to verify the ability of BST to flow through their front end systems, without manual intervention, all order types that at the time the transactions are submitted are designated by BST or otherwise considered to be “flow through”.

B. Test Scope

The scope for this test includes the following test processes:

1. Preordering
2. Ordering

4. Provisioning Verification and Validation

A. Description

The Provisioning Verification and Validation test is a comprehensive review of BST’s ability to complete accurately and expeditiously the provisioning of CLEC orders. This test will be conducted as a part of the POP functional testing. It will incorporate orders submitted by both the EDI and TAG interfaces and manually, where appropriate. While most kinds of orders will be included, the test will concentrate on those types of orders that require physical provisioning.

This test will involve verification that orders submitted have been properly provisioned and that the provisioning has been completed on time. Included in the test will be orders that have been supplemented and canceled, as well as those submitted with anticipated errors, to test the impact on provisioning.

For some orders, particularly the more complex ones, the involvement of CLECs operating in Florida will be solicited to volunteer use of their facilities to enhance the “real world” nature of the test. The CLECs will also be asked to provide data on their experiences with provisioning, after verification and validation by the vendor.

The objective of this test is to evaluate the ability of BST to accurately provision orders submitted by CLECs and to do so on time.

B. Test Scope

The scope for this test includes the following processes:

- 1. Preordering
- 2. Order Processing
- 3. Provisioning

5. M&R Functional Evaluation

A. Description

The M&R Functional Evaluation is a comprehensive review of all of the functional elements of the CLEC TAFI and ECTA Systems, their conformance to documented specifications, and an analysis of their functionality in comparison to BST's retail system. The test has two major phases, Phase 1—a basic functional evaluation, and Phase 2—a comparative functional evaluation.

The objective of this test is to validate the existence and behavior of TAFI and ECTA functional elements as documented in CLEC TAFI, and ECTA Training Guides and other applicable documents and to evaluate the equivalence of TAFI and ECTA functionality to BST's retail system.

B. Test Scope

Maintenance and Repair functionality will be reviewed within the context of specific documentation addressing its use in comparison to its retail analog. The following chart contains the processes, subprocesses, and methods for evaluating the functionality of CLEC TAFI and ECTA.

M&R Functional Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Trouble Reporting	Create/Enter Trouble Report (TR)	Functionality exists as documented	Inspection	Existence Qualitative Parity
	Modify TR	Functionality exists as documented	Inspection	Existence Qualitative Parity
	Close/Cancel TR	Functionality exists as documented	Inspection	Existence Qualitative Parity

M&R Functional Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
	Retrieve TR Status	Functionality exists as documented	Inspection	Existence Qualitative Parity
Trouble History Access	Retrieve Trouble History	Functionality exists as documented	Inspection	Existence Qualitative Parity
Access To Test Capability	Initiate MLT Test	Functionality exists as documented	Inspection	Existence Qualitative Parity
	Receive MLT Test Results	Functionality exists as documented	Inspection	Existence Qualitative Parity
Functionality	Functional Equivalence to BST's Retail system analog	Existence of Specific Function	Inspection Interviews	Parity Qualitative

This test is broken down into two phases: Phase 1 involves the use of test cases created for this test to evaluate TAFI and ECTA functionality and to determine if the system behaves as documented. Phase 2 involves observation and interviews of retail customer service attendants (CSA) processing trouble calls and entering trouble reports into BST's retail system to assess functionality in comparison to CLEC TAFI and ECTA systems.

6. M&R Performance Evaluation

A. Description

The M&R performance evaluation is a transaction driven test designed to evaluate the behavior of the CLEC TAFI and ECTA systems and its interfaces under load conditions. This test will be conducted twice. The first execution will use transaction sets established to simulate projected December 2001 volumes for peak busy hour and peak busy day operations. The second execution will use a multiple of the volumes used in the first execution.

The objective of this test is to evaluate the behavior of TAFI and ECTA under load conditions, to determine system performance in terms of response time and operability, and to identify future performance bottlenecks.

B. Test Scope

TAFI and ECTA performance will be evaluated under normal projected loads and in a stress/load test mode. The following chart contains the processes, subprocesses, and methods for evaluating the performance of CLEC TAFI and ECTA:

M&R Performance Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Performance	Projected Normal Loads	Timeliness Operability	Inspection Transaction Generation	Qualitative Quantitative
	Stress/Load	Timeliness Operability Capacity	Inspection Transaction Generation	Qualitative Quantitative

Test transactions will be sent to CLEC TAFI and ECTA. The transaction sets are structured to provide a transaction mix consistent with current system usage, projected normal volumes, and stress/load volumes. Submission rates should mirror peak busy hour and peak busy day behaviors.

7. End to End Trouble Report Processing

A. Description

This test involves the execution of selected maintenance and repair test scenarios to evaluate BST's performance in making repairs under the conditions of various wholesale maintenance scenarios. The objective of this test is to evaluate BST's performance in making repairs under the conditions of various wholesale maintenance scenarios.

B. Test Scope

Selected maintenance and repair test scenarios will be executed to evaluate BST's performance in making repairs under the conditions of various wholesale maintenance scenarios. The following chart contains the processes, subprocesses, and methods for evaluating the End-to-End Trouble Report Processing test:

End-to End Trouble Report Processing				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
End-to-End Trouble Report Processing – Resale	M&R Test Scenarios	Accuracy Timeliness	Inspection	Quantitative
End-to-End Trouble Report Processing – UNE/UNE-P	M&R Test Scenarios	Accuracy Timeliness	Inspection	Quantitative

9. Billing Functional Usage Evaluation

A. Description

The Functional Usage Evaluation is an analysis of BST's daily message processing to ensure usage appears accurately on the Daily Usage Feed (DUF) and the access billing records according to the defined schedule.

The objective of this test is to evaluate the following:

- Accuracy and completeness of the usage on the DUF and the access records received
- Timeliness of the DUF and access records delivery

B. Test Scope

Billing Functional Usage Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Technique	Criteria Type
Usage and Delivery	Track valid usage	Completeness and accuracy of data Timeliness of DUF and access records	Inspections	Quantitative
	Account for no usage	Completeness of data	Inspections	Quantitative

Test calling is dependent on the provisioning process, which is dependent on scenarios. Some customers are subject to service changes (e.g. migrations from BST retail to a CLEC, feature changes, etc.). Test calls and service changes will occur simultaneously.

This test will use operational analysis to evaluate the completeness and accuracy of calls contained in the DUF and the access records. This analysis will also examine the age of calls on the DUF. The evaluations will be accomplished by dispatching testers to various locations within Florida. These testers will place test calls and will record important information about these calls such as call from number, call to number, call type and duration. The data contained in these Daily Usage Feeds and access records will then be compared to the call logs. A second group of testers will record important information about the contents of the Daily Usage Feed and access records cartridges received by the vendor.

Test calls will be made using some customer accounts that will migrate during the test period. Migration refers to the conversion of account ownership from one local exchange company to another. Test calls will be made from migrating accounts before and after the migration date to ensure accurate routing of data in the Daily Usage Feed and access records.

For example, a BST retail customer migrates to a CLEC. When the order completes, the routing guide file will be updated during batch processing that evening. All usage from calls made prior to and on the same day of the completion should be routed to BST retail. All usage from calls made on the following day, after the guide file is updated, should be routed to the new CLEC.

Test calls should be placed from around the BST calling region. Test calls will be made throughout the workday. Test calls will include all types of calls, with the exception of 911. Local and toll test calls terminating on the test lines will also be made. A sample of the test calls will then be selected and verified.

9. Functional Carrier Bill Evaluation

A. Description

The Functional Carrier Bill Evaluation is an analysis of BST's ability to accurately bill usage plus monthly recurring charges (MRC) and non-recurring charges (NRC) on the appropriate type of bill. An accurately billed item will contain the correct price and correct supporting information, such as start/end dates, duration, standard amounts, and discount amounts. This test will also evaluate the timeliness of bill delivery to the CLECs. BST will need to run a bill cycle from the initial test bed prior to any POP tests to use as a baseline set of bills.

B. Test Scope

Monthly charges will be examined for both resale and UNE billing on CABS and CRIS bills. The table below reflects a number of key characteristics of retail and UNE billing information that will be used in the design of test cases. Information includes the various charge components and their destination bill.

Key Characteristics Of Billing Information for Resale and UNE Customers				
	Billing Component	Rating	Usage	Billing
Resale	Usage	CRIS	DUF	CRIS
	MRC/NRC	CRIS	N/A	CRIS
UNE-P	UNE-P usage (line port)	CRIS	DUF	CRIS
	UNE-P MRC/NRC	CRIS	N/A	CRIS
UNE	UNE-loops usage and MRC/NRC	CRIS	DUF	CRIS
UNE-Other	IOF, collocation,	CABS	DUF	CABS
	High Cap Loops (D3) MRC/NRC	CABS	N/A	CABS
	Directory Listings	CRIS	N/A	CRIS
Retail	Non-unbundled Services MRC/NRC (Ancillary services)	CRIS	N/A	CRIS

This test evaluates the timely delivery of the bill and the accurate and timely appearance of charges on the appropriate bill. Appearance of charges will depend on the type of products ordered and/or class of service changes for resale and UNE. Details to be evaluated include:

- ◆ Appropriate prorating of charges for new and/or disconnected service.
- ◆ Charges are accurate (order matches billing).
- ◆ Totals are accurate.
- ◆ New/disconnected products appear (or do not appear) on the bill.
- ◆ Bill dates are correct and match appropriate date from provisioning process.
- ◆ Adjustments appear on the bill.
- ◆ Bills are delivered to CLECs and Resellers in a timely manner.
- ◆ UNE billed on a usage basis are billed correctly.

Test Scope for Carrier Bill Evaluation				
Process Area	Subprocess	Evaluation Measure	Evaluation Techniques	Criteria Type
Maintain Bill Balance	Carry balance forward	Accuracy of bill balance	Inspection	Quantitative
Verify Billing Accounts	Verify Billing Accounts	Completeness and accuracy of extraction	Inspection	Quantitative
Bills and Delivery	Verify normal recurring charges	Completeness and accuracy of data	Inspection	Quantitative
	Verify one-time charges	Completeness and accuracy of data	Inspection	Quantitative
	Verify prorated recurring charges	Completeness and accuracy of data	Inspection	Quantitative
	Verify Usage Charges	Completeness and accuracy of data	Inspection	Quantitative
	Verify discounts	Completeness and accuracy of data	Inspection	Quantitative
	Verify adjustments (debits and credits)	Completeness and accuracy of data	Inspection	Quantitative
	Verify late charges	Completeness and accuracy of data	Inspection	Quantitative
	Receive bill copy	Timeliness of media delivery	Logging	Quantitative

As part of this test, a large variety of products and services will be ordered. This may result in many variations in billing presentation from the two primary billing systems (CRIS and CABS). Relevant types will be selected for review based upon the product mix and anticipated charges as defined in the expected test results.

The set of selected test scenarios will include:

- ◆ Test cases for 'migration/conversion' of customers

- ◆ Test cases for disconnects, new service (add/delete)
- ◆ Test cases for changes to services (modify)

All migration situations should be adequately represented:

- ◆ BST to a CLEC
- ◆ CLEC to BST
- ◆ CLEC to CLEC

This test will use operational analysis to evaluate the completeness and accuracy of charges that should appear on the bill based on usage information from the Functional Usage Evaluation and selected scenarios. Expected results will be defined for each test case. Three bill periods will be processed for the same set of customers.

The first bill period consists of the baseline bills where customers created for this test are billed for the first time directly from the initial test bed. These bills are produced prior to the execution of any transaction scenarios that affect selected customers.

The second and third bill periods consist of bills produced after selected scenarios have been executed. This second set of bills will include items such as prorates, disconnects, migrations, adjustments, etc. Some customers will be created during the test execution, and will only receive second period bills.

APPENDICES

Appendix A Performance Measures

The Performance Measures and evaluation criteria below are supplied to measure whether BellSouth provides competitive carriers parity performance through its pre-ordering, ordering, provisioning, maintenance and repair and billing OSS interfaces. The performance measures and evaluation standards are based on current BellSouth Service Quality Measurements, and suggested improvements from FPSC staff. Staff believes the disaggregation of certain measurements, and development of BellSouth retail analogs, is necessary to provide third party testers sufficient quantitative measurements and data to fully evaluate BellSouth OSS performance.

Performance Measures				
No.	Process	Metric	Submetric	Evaluation Criteria/Standards
Pre-Ordering Performance Measures				
1	Pre-Ordering	Average OSS Response Interval	<p><u>Currently provided by BST:</u></p> <ul style="list-style-type: none"> a. RSAG (by TN) address validation b. RSAG (by ADDR) address validation c. ATLAS TN reservation d. DSAP installation appointment scheduling e. CRSACCTS f. OASIS g. HAL/CRIS customer service record h. COFI/USOC product/service availability I. PSIMS/ORB product/service availability <p><u>Proposed by staff:</u> Further disaggregation between LENS and TAG, and by resale and UNE</p>	<ul style="list-style-type: none"> a. LENS & TAG vs RNS Parity + 4 sec b. LENS & TAG vs RNS Parity + 4 sec c. LENS & TAG vs RNS Parity + 4 sec d. LENS & TAG vs RNS Parity + 4 sec e. None provided - Retail only f. None provided - Retail only g. None provided - CLEC only h. None provided - CLEC only I. None provided - CLEC only <p><u>Proposed by staff:</u> BST development of retail analogues where none exists</p>
2	Pre-Ordering	OSS Interface Availability	<p><u>Current:</u></p> <ul style="list-style-type: none"> a. OSS Interface Availability of CLEC-only interfaces b. OSS Interface Availability of shared CLEC/BST interfaces 	<p>a,b. None. No retail analogue currently provided.</p> <p><u>Proposed by staff:</u> BST development of retail analogues for the above</p>

Performance Measures

No.	Process	Metric	Submetric	Evaluation Criteria/Standards
Ordering Measures				
3	Ordering	Percent Flow-Through Service Requests	<p><u>Current:</u> a. EDI flowthrough rates (Bus+Res) b. TAG flowthrough rates (Bus+Res) c. LENS flowthrough rates (Bus+Res)</p> <p><u>Proposed by staff:</u> a. Further disaggregate CLEC measures between business and residential for comparability with BST retail b. BST report actual DOE flowthrough for comparison to CLEC business orders.</p>	a-c. None. Currently no directly comparable retail data provided. [BST separately reports retail residential order flowthrough rates via RNS flowthrough rate. BST reports DOE flowthrough rate as zero percent.]
4	Ordering	Percent Rejected Service Requests	<p><u>Current:</u> a. Mechanized CLEC order % rejected b. Non-Mechanized CLEC order % rejected</p>	a,b. None. No retail analogue currently provided. <u>Proposed by staff:</u> a. BST development of retail analogues
5	Ordering	Reject Interval	<p><u>Current:</u> a. Mechanized order reject intervals b. Non-Mechanized order reject intervals for: Resale Residence Resale Business Resale Special UNE UNE Loops with NP Other</p> <p><u>Proposed by staff:</u> Add local interconnection trunks reject intervals</p>	a,b. None. No retail analogue currently provided. <u>Proposed by staff:</u> BST development of retail analogues
6	Ordering	Firm Order Confirmation Timeliness	<p><u>Current:</u> a. Fully Mechanized FOC intervals b. Partially Mechanized FOC intervals c. Non-Mechanized FOC intervals d. Total Mechanized (Fully+Partial) FOC intervals</p> <p><u>Proposed by staff:</u> Add local interconnection trunks FOC intervals.</p>	a-d. None. No retail analogue currently provided. <u>Proposed by staff:</u> BST development of retail analogues

Performance Measures				
No.	Process	Metric	Submetric	Evaluation Criteria/Standards
7	Ordering	Speed of Answer in Ordering Center	<u>Current:</u> a. Answer times in seconds, combined residential and business orders. <u>Proposed by staff:</u> Disaggregate CLEC measures, at least between residential and business order for comparability with BST retail.	a. None. Currently no directly comparable retail data provided. [BST separately reports retail residential and retail business order center answer times.]
Provisioning Measures				
8	Provisioning	Average Completion Interval	<u>Current:</u> a. Average interval-dispatched orders >10 circuits and <10 circuits b. Average interval-nondispatched orders >10 circuits and <10 circuits Resale Residence Resale Business Resale Design UNE Design UNE Non-Design UNE Loops with NP	a-b. Parity with retail analogue when available. No retail analogue currently provided for UNE orders. <u>Proposed by staff:</u> BST development of retail analogues for UNE orders.
9	Provisioning	Held Order Interval Distribution and Mean Interval	<u>Current:</u> a. Average interval orders held facilities caused b. Average interval orders held equipment caused c. Average interval orders held other cause: Resale Residence Resale Business Resale Design UNE Design UNE Non-Design UNE Loops with NP Other <u>Proposed by staff:</u> Include Local Interconnection Trunk data	a-c. Parity with retail analogue when available. No BST retail analogue currently provided for UNE orders. <u>Proposed by staff:</u> BST development of retail analogues for UNE orders

Performance Measures

No.	Process	Metric	Submetric	Evaluation Criteria/Standards
10	Provisioning	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	<p><u>Current:</u></p> <p>a. Average number of hours and minutes for positive notification of jeopardies</p> <p>b. Percent of orders placed in jeopardy:</p> <ul style="list-style-type: none"> Resale Residence Resale Business Resale Special UNE <p><i>Proposed by staff:</i> Include Local Interconnection Trunk data</p>	<p>a,b. Parity with retail analogue when available No BST retail analogue currently provided for UNE orders.</p> <p><i>Proposed by staff:</i> BST development of retail analogues</p>
11	Provisioning	Percent Missed Installation Appointments	<p><u>Current:</u></p> <p>Percent Missed Appointments dispatched and non-dispatched:</p> <ul style="list-style-type: none"> a. >10 circuits -Total Missed Appointments b. >10 circuits -End User Caused c. <10 circuits -Total Missed Appointments d. <10 circuits -End User Caused <ul style="list-style-type: none"> Resale Residence Resale Business Resale Design UNE Design UNE Non-Design UNE Loops with NP 	<p>a-d. Parity with retail analogue when available.</p> <p><i>Proposed by staff:</i> BST development of retail analogue for UNE orders.</p>
12	Provisioning	Percent Provisioning Troubles Within 30 Days	<p><u>Current:</u></p> <p>>10 circuits <10 circuits:</p> <ul style="list-style-type: none"> a. Percent Troubles within 30 days - Dispatched orders b. Percent Trouble within 30 days - Nondispatched orders c. Percent Trouble within 30 days -total orders <ul style="list-style-type: none"> Resale Residence Resale Business Resale Design UNE Design UNE Non-Design UNE Loops with NP 	<p>a-c. Parity with retail analogue when available. No BST retail analogue is currently provided for UNE orders.</p>

Performance Measures				
No.	Process	Metric	Submetric	Evaluation Criteria/Standards
13	Provisioning	Coordinated Customer Conversions	<u>Current:</u> a. Average interval (minutes) for customer conversions - UNE Loop with LNP. b. Average interval (minutes) for customer conversions - UNE Loop without LNP.	a,b. Parity with retail analogue when available. No BST retail analogue is currently provided for UNE orders.
14	Provisioning	Average Completion Notice Interval	<u>Current:</u> a. Average interval (hours) for CLEC completion notice to be sent: Resale Residence Resale Business Resale Special UNE UNE Non-Design	a. Parity with retail analogue when available. No BST retail analogue is currently provided.
Maintenance and Repair Measures				
15	Trouble Reporting	OSS Interface Availability	<u>Current:</u> a. TAFI Availability BST & CLEC b. BST & CLEC LMOS HOST, MARCH & SOCS c. ECTA Availability None <i>Proposed by staff:</i> BST development of ECTA performance measurements for interface availability	a. Parity with BST TAFI. b. Shared use by both; same availability c. Currently no ECTA performance measurements.
16	Trouble Reporting	Maintenance OSS Response Interval	<u>Current:</u> a. CLEC TAFI b. BST Residence TAFI c. BST Business TAFI Number and percent of system response intervals ≤ 4 seconds, >4 & ≤ 10 seconds, ≤ 10 seconds, >10 seconds and >30 seconds for: CRIS, DLETH, DLR, LMOS, LMOSupd, LNP, MARCH, OSPCM, PREDICTOR and SOCS d. ECTA Response Interval None <i>Proposed by staff:</i> Disaggregate CLEC TAFI measurement into Residence and Business for more accurate comparison	a. Parity with BST Residence and Business TAFI b,c. Parity with CLEC TAFI d. No ECTA performance measures currently developed <i>Proposed by staff:</i> Develop OSS Response Interval measurement for ECTA to show the response levels of repair support systems

Performance Measures

No.	Process	Metric	Submetric	Evaluation Criteria/Standards
17	Trouble Reporting	Average Answer Time- Repair Centers	<p><u>Current:</u> Average monthly answer time in seconds for:</p> <ul style="list-style-type: none"> a. CLEC Aggregate <ul style="list-style-type: none"> UNE Center Resale Maintenance Center b. BST Aggregate <ul style="list-style-type: none"> Residence Repair Center Business Repair Center 	Parity with BST retail answer times
18	Maintenance	Percent Missed Repair Appointments	<p><u>Current:</u> Dispatched, nondispatched and total missed repair appointments by state for:</p> <ul style="list-style-type: none"> a. CLEC b. BST <ul style="list-style-type: none"> Resale/Retail POTS <ul style="list-style-type: none"> Residence Business Resale/Retail Design CLEC/BST Trunking CLEC UNE Designed CLEC UNE Non-Designed 	<ul style="list-style-type: none"> a. Parity with BST dispatched and nondispatched reports b. Parity with CLEC reports <p>BST cannot currently measure CLEC UNE Loop and Number Portability repair reporting</p> <p><i>Proposed by staff:</i> BST should remedy the inability to report CLEC UNE Loop and NP repair reports</p>
19	Maintenance	Customer Trouble Report Rate	<p><u>Current:</u> Dispatched, nondispatched and total customer trouble rates by state for:</p> <ul style="list-style-type: none"> a. CLEC b. BST <ul style="list-style-type: none"> Resale/Retail POTS <ul style="list-style-type: none"> Residence Business Resale/Retail Design CLEC/BST Trunking CLEC UNE Designed CLEC UNE Non-Designed 	<ul style="list-style-type: none"> a. Parity with BST dispatched and nondispatched reports b. Parity with CLEC reports <p>BST cannot currently measure CLEC UNE Loop and Number Portability repair reporting</p> <p><i>Proposed by staff:</i> BST should remedy the inability to report CLEC UNE Loop and NP repair reports</p>
20	Maintenance	Maintenance Average Duration	<p><u>Current:</u> Dispatched, nondispatched and total average duration rates by state for:</p> <ul style="list-style-type: none"> a. CLEC b. BST <ul style="list-style-type: none"> Resale/Retail POTS <ul style="list-style-type: none"> Residence Business Resale/Retail Design CLEC/BST Trunking CLEC UNE Designed CLEC UNE Non-Designed 	<ul style="list-style-type: none"> a. Parity with BST dispatched and nondispatched reports b. Parity with CLEC reports <p>BST cannot currently measure CLEC UNE Loop and Number Portability repair reporting</p> <p><i>Proposed by staff:</i> BST should remedy the inability to report CLEC UNE Loop and NP repair reports</p>

Performance Measures				
No.	Process	Metric	Submetric	Evaluation Criteria/Standards
21	Maintenance	Percent Repeat Troubles Within 30 days	<p><u>Current:</u> Dispatched, nondispatched and total percent repeat trouble report rates by state for:</p> <p>a. CLEC b. BST Resale/Retail POTS Residence Business Resale/Retail Design CLEC/BST Trunking CLEC UNE Designed CLEC UNE Non-Designed</p>	<p>a. Parity with BST dispatched and nondispatched reports b. Parity with CLEC reports</p> <p>BST cannot currently measure CLEC UNE Loop and Number Portability repair reporting</p> <p><i>Proposed by staff:</i> BST should remedy the inability to report CLEC UNE Loop and NP repair reports</p>
22	Maintenance	Percent Out of Service Greater Than 24 Hours	<p><u>Current:</u> Dispatched, nondispatched and total percent out of service greater than 24 hour trouble reports by state for:</p> <p>a. CLEC b. BST Resale/Retail POTS Residence Business Resale/Retail Design CLEC/BST Trunking CLEC UNE Designed CLEC UNE Non-Designed</p>	<p>a. Parity with BST dispatched and nondispatched reports b. Parity with CLEC reports</p> <p>BST cannot currently measure CLEC UNE Loop and Number Portability repair reporting</p> <p><i>Proposed by staff:</i> BST should remedy the inability to report CLEC UNE Loop and NP repair reports</p>
Billing Metrics				
23	Billing	Invoice Accuracy	<p><u>Current:</u> Billing revenue, total adjustments and percent accuracy for:</p> <p>a. CLEC Resale UNE Interconnection CLEC Region b. BST Region c. BIBS None</p> <p><i>Proposed by staff:</i> Disaggregate BST Invoice Accuracy to reflect the same level of disaggregation as CLEC measurements</p>	<p>a. Parity with BST retail analogues for resale, UNE and interconnection billing b. Parity with CLEC measurements</p> <p>Currently BST has not made available any billing measurements for BIBS</p> <p><i>Proposed by staff:</i> Develop measurements to compare the wholesale BIBS billing system performance with CRIS retail billing performance</p>

Performance Measures

No.	Process	Metric	Submetric	Evaluation Criteria/Standards
24	Billing	Mean Time To Deliver Invoices (Invoice Timeliness)	<p><u>Current:</u> Meantime to deliver CRIS bills in workdays and to deliver CABS bills in calendar days for: a. CLEC Region Resale UNE Interconnection b. BST Region c. BIBS</p> <p><u>Proposed by staff:</u> Disaggregate BST Mean Time to Deliver CRIS Invoices to reflect the same level of disaggregation as CLEC measurements for CRIS billing</p>	<p>a. Parity with BST billing analogues for retail, designed services, BST Trunking and BST Region b. Parity with CLEC measurements</p> <p>Currently BST has not provided a UNE billing analogue</p> <p>Currently BST has not made available any billing measurements for BIBS</p> <p><u>Proposed by staff:</u> Develop measurements to compare the wholesale BIBS billing system performance with CRIS retail billing performance</p> <p>Develop a retail billing analogue for UNEs</p>
25	Billing	Usage Data Delivery Accuracy	<p><u>Current:</u> Total data packs sent, total packs requiring retransmission and percent accuracy for BST region and CLEC Region</p>	Parity with BST Percent Accuracy
26	Billing	Usage Data Delivery Timeliness	<p><u>Current:</u> Cumulative Percent of Usage Records Received Within Six Days by region for CLECs</p>	Parity with BST Cumulative Percent of Usage Records Received Within Six Days
27	Billing	Usage Data Delivery Completeness	<p><u>Current:</u> Cumulative Percent of Usage Records Received Within 30 Days by region for CLECs</p>	Parity with BST Cumulative Percent of Usage Records Received Within 29 Days

Appendix B Scenario Activities

The following is a list of scenario activities which at a minimum, should be included in a master test plan developed by a vendor in preparation for third party testing of BST. These activities will be combined with specific product and service offerings after a review of forecasted demand. This activities were adopted from the Pennsylvania test plan and may need modification to fit specific needs in Florida.

Resale Ordering and Provisioning Activities

1. Migration from BST "as is"
2. CLEC to CLEC migration
3. Feature changes to existing customer
4. Migration from BST "as specified"
5. New customer
6. Telephone number change
7. Directory change
8. Add lines/trunks/ circuits
9. Suspend/restore service
10. Disconnect (full and partial)
11. Moves (inside and outside)
12. Convert line to ISDN
13. Migrate from CLEC to BST

UNE Ordering and Provisioning Activities

1. Migrate lines from BST without number portability.
2. Migrate lines from BST with INP
3. Migrate lines from BST with LNP
4. Migrate from CLEC to CLEC
5. Add new lines to existing customer
6. Add new interoffice DS1/DS3 facilities
7. Purchase lines for a new customer
8. Disconnect (full and partial)
9. Moves (inside and outside)
10. Convert from UNE-P to UNE loop
11. Convert from Resale to UNE loop
12. Convert from Resale to UNE Platform

Preordering Activities

1. Obtain CSRs
2. Validate customer address
3. Reserve and release telephone numbers
4. Perform directory listing inquiry
5. Inquire about feature and service availability
6. Determine if customer's loop qualifies for ISDN
7. Determine if customer's loop is ASDL capable
8. Determine availability of desired due date

Maintenance and Repair Activities

1. Short on outside plant facility
2. Open on outside plant facility
3. Short on the line within the central office
4. Open on the line within the central office
5. Noise on line
6. Echo on line
7. Customer w/INP not receiving incoming calls
8. Customer w/ LNP not receiving incoming calls
9. Customer receiving incoming calls intended for another customer's number.
10. Call waiting not working
11. Repeat dialing not working
12. Customer cannot call 900 numbers
13. Calls do not roll-over for customer w/ multiline hunt group
14. Call forwarding not working
15. Caller ID not working
16. Pick-up group order for large centrex customer not functioning properly
17. DS1 loop MUXed to DS3 IOF not functioning.