EXHIBIT OSS – 65

Bellsouth Telecommunications, Inc.
OSS Evaluation – Georgia
KPMG Supplemental Test Plan Final Report

BellSouth Telecommunications, Inc. OSS Evaluation – Georgia

Supplemental Test Plan

Final Report

VERSION 1.0

Submitted by:

KPMG Consulting

March 20, 2001

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Document Control

I. Document Control

A. Distribution

Table I-1.1: Distribution List For Document

Person	Organization
William Stacy	BellSouth Telecommunications, Inc.
Milton McElroy	BellSouth Telecommunications, Inc.
Kathy Wilson-Chu	BellSouth Telecommunications, Inc.
Bennett Ross	BellSouth Telecommunications, Inc.
Raymond Sears	KPMG Consulting, Inc.
Mike Weeks	KPMG Consulting, Inc.
David Frey	KPMG Consulting, Inc.
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Brian Rutter	KPMG Consulting, Inc.
Elizabeth Fuccillo	KPMG Consulting, Inc.
Steve Strickland	KPMG Consulting, Inc.
Gregory Pulaski	KPMG Consulting, Inc.

Table I-2.2: Version Control

Version	Date	Reason
1.0	March 20, 2001	Initial release

B. *Statement of Limiting Conditions*

The following conditions, limitations, and assumptions relate to this draft report:

This report is provided pursuant to the terms and conditions of the consulting services contract between KPMG Consulting, Inc. ("KCI") and Bell South - Georgia.

The information and conclusions presented in this report are based on the information provided to KCI or obtained by KCI in the course of the evaluation. All results and conclusions contained herein are subject to change based on additional work or additional information that is provided to KCI.[1]

The original *Master Test Plan* (*MTP*) governing much of the testing work at BellSouth - Georgia was not authored or developed by KCI. On September 9, 1999, KCI inherited a *MTP* and certain associated work-in-progress that had been performed by two third parties. Therefore, KCI makes no representations or warranties as to the contents of this *MTP* or the testing work that had been done prior to September 9, 1999. Furthermore, KCI has not independently verified the accuracy or completeness of the information and work product provided by these third parties; accordingly KCI expresses no opinion on nor bear any responsibility for this information and work product.

The results contained within this report are made up of a significant number of tests and evaluation criteria and are presented without weighting considerations; as such, none of the individual test results can be considered independently. To draw conclusions based on individual test measures or a limited number of test measures would be inappropriate.

This report assumes that the reader possesses a general understanding of the telecommunication industry and related systems, documentation, and processes, consequently KCI assumes no responsibility for the misuse, misunderstanding, or misinterpretation of the content of the report.

This report has been prepared solely for the purpose stated and should not be used for any other purpose. Except as specifically stated in the report, neither KCI's report nor its contents is to be referred to or quoted, in whole or in part, in any registration statement, prospectus, public filing, loan agreement, or other agreement or document without KCI's prior written approval.

Certain information and assumptions (oral and written) have been provided to KCI by the management of BellSouth and other third parties. KCI has relied on this information in our analysis and in the preparation of the report, and has not

[1] Note that in the metrics domain, test execution activities are still in progress.

independently verified to the accuracy or completeness of the information provided; accordingly KCI expresses no opinion on such data.

KCI has not conducted an audit or review of the historical data provided to us in accordance with generally accepted auditing procedures and/or standards promulgated by the American Institute of Certified Public Accountants ("AICPA").

Evaluation Overview

II. Evaluation Overview

1.0 Objective

The objectives of this Evaluation Overview are to provide:

- Background on the Georgia Public Service Commission's (GPSC's) consideration of BellSouth's compliance with the requirements of Section 271 of *The Telecommunications Act of 1996;*
- A summary of the business processes and supporting functions and interfaces identified for testing by the GPSC (subsequent to the development of the *Master Test Plan* [*MTP*]) as described in the *Supplemental Test Plan* (*STP*);
- A summary of the initial test components outlined in the *MTP;*
- A high-level description of the processes KCI followed in evaluating BellSouth's interfaces, systems, policies, procedures, and documentation in executing the *STP.*

2.0 Audience

KCI anticipates that the audience for this document will fall into two main categories:

- Readers who will utilize this document during an evaluation process (i.e., the GPSC; the FCC and the Department of Justice); and
- Other interested parties who have some stake in the result of BellSouth's OSS evaluation and wish to have insight into the test results (e.g., BellSouth, CLECs, and other ILECs).

While many of the above parties have stated an interest in the test and its results, only BellSouth and the GPSC have rights to this document. Third-party reliance on this report is not intended and is explicitly prohibited. It is expected that the GPSC will review this report in forming its own assessment of BellSouth's compliance with the requirements of the Act.

3.0 Background

The Georgia Public Service Commission (GPSC) is considering the matter of BellSouth - Georgia's (BellSouth) compliance with the requirements of Section 271 of The Telecommunications Act of 1996 (the Act) in the context of Docket No. 8354-U. The Act, together with Federal Communications Commission (FCC) interpretations, requires Incumbent Local Exchange Carriers (ILECs) to:

- Provide non-discriminatory access to its Operational Support Systems (OSS) on appropriate terms and conditions;
- Provide the documentation and support necessary for Competitive Local Exchange Carriers (CLECs) to access and use these systems; and
- Demonstrate that the ILEC's systems are operationally ready and provide an appropriate level of performance.

Compliance with these requirements should allow competitors to obtain pre-ordering information, execute service orders for resold services and unbundled network elements (UNE), manage trouble, and obtain billing information at a level deemed to be non-discriminatory when compared with the ILEC's (in this case BellSouth's) retail operations.

4.0 Supplemental Test Plan Scope and Background

In its initial *Order on Petition for Third Party Testing* (*Order*), dated May 20, 1999, the GPSC ordered BellSouth to conduct an independent, third-party test of the readiness of specific aspects of BellSouth's OSS, and related interfaces, documentation, and processes supporting local market entry by the CLECs.

In its *Order*, the GPSC specified that the third-party testing should focus on the following service delivery methods:

- Unbundled Network Element (UNE) analog loops with and without number portability (Interim Number Portability [INP] and Local Number Portability [LNP])
- UNE switch ports
- UNE loop/port combinations

Furthermore, the *Order* specifically identified five OSS functions to be evaluated:

- Pre-ordering;
- Ordering;
- Provisioning;

- Maintenance and Repair; and
- Billing[1].

The *Order* also called for normal- and peak-volume testing of the OSS interfaces supporting pre-ordering, ordering, and maintenance and repair functions for both resale and UNE services. In addition, the *Order* called for a review of BellSouth's *Percent Flow-Through Service Request Report*[2].

On January 12, 2000, the GPSC issued a second *Order* specifying a requirement for BellSouth to develop a *Supplemental Test Plan* (*STP*) to describe additional third-party testing of aspects of BellSouth's OSS supporting local market entry by the CLECs. The *STP*, submitted to the GPSC on January 24, 2000, with revisions filed on March 2, 2000 and again on March 17, 2000 following receipt of CLEC comments, describes the plan for evaluating:

- The Electronic Interface Change Control Process as applied to the implementation of OSS '99;
- Pre-ordering, ordering, and provisioning of xDSL-capable loops;
- Pre-ordering, ordering and provisioning, maintenance and repair, and billing of Resale services; and
- Processes and procedures supporting the collection and calculation of performance data.

The results presented in this report pertain only to the areas identified for testing under the *STP*. Results of the tests described in the *MTP* are presented in a separate document, *BellSouth – Georgia OSS Evaluation, Master Test Plan, Final Report.*

6.0 Approach

6.1 Domains

The *STP* was divided into four domains to facilitate testing of BellSouth's wholesale operations (i.e., those operations selling local services and support to other local service providers, or CLECs) by logical business function[3]. This test organization facilitates parity comparisons, where appropriate, to BellSouth's retail operations (i.e., those operations selling local services and support to end-user customers).

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[1] In the initial *Master Test Plan* filed by BellSouth with the GPSC on May 29, 1999, BellSouth introduced a Change Management function for evaluation.

[2] The results of this review are presented in KCI's *BellSouth – Georgia Flow-Through Evaluation, Draft*, January 15, 2001.

[3] Note that the *MTP*, developed by a previous Test Manager, separates pre-ordering from ordering and provisioning functions. The *STP*, developed by KCI, treats these activities as logically integrated functions.

The five test domains are:

- Pre-Ordering, Ordering and Provisioning (POP)
- Billing (BLG)
- Maintenance and Repair (M&R)
- Change Management (CM)
- Performance Measures (Metrics)

In addition, Capacity Management evaluations of xDSL-associated pre-ordering and ordering processes were included in the POP domain .

Within each domain, specific methods and procedures were applied to evaluate BellSouth's performance *vis-à-vis* specific test targets. Details on the evaluation methods, analysis methods, and results of each evaluation are provided in the individual test sections. A summary of the evaluations and results is provided in Section III, Test Summaries.

6.2 Test Types

In developing the prior test of Bell Atlantic - New York's OSS, KCI identified two fundamental types of tests useful in an evaluation of an ILEC's provision of wholesale services to CLECS: transaction-based and operational. These test types have since been used in OSS evaluations in multiple jurisdictions.

6.2.1 Transaction-based Tests

One of the goals of transaction-based testing was to live the CLEC experience. The fundamental idea was to establish a pseudo-CLEC, and to submit pre-order, order and repair transactions using BellSouth's electronic interfaces[4] -- much like a real CLEC would do. Transaction-driven system testing was utilized extensively in the POP, M&R, and BLG domains. These tests are "non-invasive" in that they depend on arms-length interaction (e.g., order submissions, receipt of bills) using publicly available interfaces and documentation.

KCI and Hewlett Packard (HP) combined efforts to accomplish the transaction-driven tests. KCI's role was that of a CLEC operations group, including understanding business rules, creating and tracking orders, monitoring BellSouth performance, entering trouble tickets, and evaluating carrier-to-carrier bills. HP's role was that of a CLEC Information Technology group -- establishing electronic bonding with BellSouth, translating back and forth between business and electronic interface rule formats, and resolving problems with missing orders and responses.

[4] Interface development was not part of the scope of the test called for in the GPSC's *Order*.

The POP transaction-driven tests utilized the Telecommunications Access Gateway (TAG) and Electronic Data Interchange (EDI) interfaces constructed by HP[5]. Bills were processed for the BLG evaluations through the Customer Records Information System (CRIS) invoicing system while usage was processed in the Optional Daily Usage File (ODUF) system[6]. M&R trouble tickets were submitted through the Trouble Analysis Facilitation Interface (TAFI) and the Electronic Communications Trouble Administration (ECTA) Gateway[7].

CLEC live test cases provided an alternative test method for transactions that were not practical to provide in KCI's test environment. Moreover, CLEC live test cases provided a different perspective on actual production.

6.2.2 Operational Tests

Operational tests focused on the form, structure, and content of the business process under study. This test method was used to evaluate BellSouth's day-to-day operations and operational management practices, including procedural development and procedural change management. These tests are "invasive," in that KCI receives access to documentation, personnel, and procedural descriptions that are not necessarily publicly available.

Operational analysis also evaluated the results of a process to determine if the process appeared to function correctly, in accordance with documentation and expectations. In some cases, KCI reviewed management practices and operating procedures, comparing the results against legal or statutory requirements or against "best practices" identified by KCI.

6.3 Military-style Test Philosophy

In conducting the evaluation, KCI employed a "military-style" test philosophy. In a military-style test, a mindset of "test until you pass" was generally adopted so that a baseline set of working components would be available to the CLECs by the end of the test period. This was believed to be in the best interest of all parties seeking an open, competitive market for local services in Georgia.

The military-style test process works as follows:

- KCI tests a component;
- KCI informs BellSouth of any problems encountered by creating a written exception[8] describing the failed component and the potential impact on a CLEC;

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[5] See Section V, "O&P Overview" for a more detailed description of the BellSouth TAG and EDI interfaces.
[6] See Section VI, "Billing Overview" for a more detailed description of the BellSouth billing systems.
[7] See Section VII, "M&R Overview" for a more detailed description of the BellSouth TAFI and ECTA interfaces.
[8] Note that KCI first issues a "Draft Exception" to BellSouth to substantiate the accuracy of the test data and preliminary analysis.

- BellSouth prepares a written response to the exception describing any intended fix;
- After BellSouth fixes are complete, KCI retests the component as required; and
- If the exception is cleared, then the process is considered complete, and KCI prepares a written closure statement for consideration by the GPSC. Otherwise, KCI continues to iterate through the cycle until exception closure is reached.

6.4 Test Bed

In order to accomplish the resale and xDSL testing, BellSouth was required to provision a test bed of initial accounts that would represent a market share of BellSouth or other CLEC accounts that would be lost to KCI's pseudo-CLEC. The notion of a test bed is a logical concept in that the test accounts were created in BellSouth's production systems, not in a separate test system.

KCI and BellSouth cooperated to define the test bed. Using the Resale and xDSL test scenario descriptions in the *STP*, KCI developed test cases for each scenario. Based on the test cases, KCI delivered a set of line and account requirements to BellSouth that it provisioned. These requirements covered a range of customer starting states (e.g., BellSouth retail, KCI Resale); line counts (single and multi-line); service types (business, residential); and features (e.g., call waiting, call forwarding). The resale and xDSL test bed accounts were established across multiple Central Offices, covering different rate centers and switch types. The test bed specifications submitted to BellSouth provided no indication of the subsequent order activity planned by KCI. In addition to the test bed accounts, BellSouth provided KCI with facility and customer information (cable-pair assignments, telephone numbers, and addresses) required when populating specific service requests.

For the Resale and xDSL testing, a single test bed was established for ordering and provisioning, maintenance and repair, and billing to facilitate "end-to-end" evaluations. Prior to the initiation of testing, KCI validated the provisioning of the test bed by BellSouth to ensure the proper start state for the test accounts.

In addition to the test bed accounts established by BellSouth, KCI utilized live CLEC addresses to conduct a portion of xDSL pre-order testing.

Additional details on the individual test beds are provided in the test domain introductions.

6.5 Blindness

As previously stated, one of the objectives of the test was to live the CLEC experience. Yet it was virtually impossible for the test to be truly blind to BellSouth. For example, transactions arrive on dedicated telephone circuits, the owners of which are known by BellSouth. Each CLEC has a unique set of IDs assigned by BellSouth that must be included in every transaction.

To partially offset this lack of blindness, KCI instituted certain procedures to help ensure that KCI and HP would not receive treatment from BellSouth that was obviously different from that received by a real CLEC. For example, KCI required that all documents given to us be generally available to all CLECs, and that any training courses attended by KCI personnel for test purposes be available to all CLECs. KCI reported problems using the same help desk mechanisms used by the CLECs.

6.6 Limitations

In the pre-ordering/ordering and provisioning, maintenance and repair, and billing domains, the test exercised a set of activities that is much broader than that likely to be undertaken by any single CLEC in the near future. However, the test was not intended to be exhaustive because it is neither feasible nor desirable to test all possible permutations and combinations of all features and functions across all offered Resale and xDSL products.

In some cases it was not practical to simulate certain order types, troubles, and processes in a test situation. Examples include orders with very long interval periods and provisioning of large volumes of test transactions that would exceed the manual capacity of BellSouth's work centers.

7.0 Results

As of the date of this report, some test execution activities are ongoing, primarily in the metrics domain. Test results for all domains are based on the information available to KCI at the time of writing. A final report will be prepared by KCI for submission to BellSouth and the GPSC upon completion of all test execution activities and the closure (for evaluation purposes) of all exceptions.

7.1 Evaluation Criteria and Results

Test targets and their corresponding evaluation criteria provided the basis for conducting tests. Evaluation criteria were the norms, benchmarks, standards, and guidelines used to evaluate items identified for testing. Evaluation criteria also provided a framework for identification of the scope of tests, the types of measures that must be made during testing, and the approach necessary to analyze results.

The GPSC voted on June 6, 2000 to approve a set of Service Quality Measurement- (SQM-) related measures and standards to be used for purposes of KCI's evaluation. On January 16, 2001, the GPSC issued an order requiring BellSouth to report a set of measures that differs in some cases from the requirement of the June 6th test standards. In cases where a test evaluation criterion mapped to a BellSouth SQM, the test results were compared against the proposed standards. In cases where a standard does not exist, results were evaluated using explicit evaluation criteria established by KCI, based on its professional judgment. For quantitative evaluation criteria where the test result did not meet or exceed the established standard or KCI benchmark, KCI conducted a review to determine whether the differential was statistically significant.

Each evaluation criterion was analyzed individually and has its own associated result and comment. The results fell into the following categories:

- Satisfied – KCI's analysis demonstrated that the evaluation criterion was satisfied through existing business operations components (e.g., procedure, system, or document). A criterion was satisfied by meeting a quantitative, qualitative, parity, or existence parameter established for purposes of the test.
- Not Satisfied – KCI's analysis demonstrated that the evaluation criterion was not satisfied through existing business operations components (e.g., procedure, system, or document). A criterion was not satisfied by failing to meet a quantitative, qualitative, parity, or existence parameter established for purposes of the test.
- No Result Determination Made - test results are presented as diagnostic information only.
- Not Complete - test execution is in progress and/or exceptions remain open.

In cases where failure to satisfy the criterion might, in KCI's judgment, present a significant business impact to CLECs, KCI issued an exception. Exceptions were a means of identifying to BellSouth defects in its OSS components. Where applicable to an evaluation criterion, the significant details of an exception are documented in the "Comments" column of *Section 3.0 Results Summary* for each test. Other items worthy of mention that might not present a significant business impact to CLECs are also described in the "Comments" column.

For information on all exceptions, please access the GPSC Web site at:

http://www.psc.state.ga.us/telecom/Third%20Party.htm

KCI must point out that the criteria are not all of equal importance. Some are less important as stand-alone measures, but are important when considered in a group. Other criteria are significant in their own right. A simple numerical

counting or averaging of results by result category is misleading and should be avoided.

Test Summaries

III. Test Summaries

This section provides summary information on each test domain. Each domain summary provides a description of the test objective, evaluation methods, analysis methods, and summary results. See Section II, 7.1 "Evaluation Criteria and Results" for definitions of these items.

The following evaluations are summarized in this section:

A. Pre-Ordering, Ordering, and Provisioning (PO&P)

B. Billing (BLG)

C. Maintenance and Repair (M&R)

D. Change Management (CM)

E. Performance Metrics Review (PMR)

A. Pre-Ordering, Ordering and Provisioning (PO&P)

This section provides a summary of the Pre-Ordering, Ordering and Provisioning (PO&P) domain testing activities. For more information on planned testing, refer to *The BellSouth Georgia OSS Evaluation Supplementary Test Plan, Section V: Pre-Ordering, Ordering and Provisioning Test.* For more detailed information on the test design, analysis, and results from the execution of the tests, refer to Section IV: *Pre-Ordering, Ordering and Provisioning Test* in this document.

11.0 PO&P-11: EDI and TAG Resale Functional Evaluation

This section provides a summary of the EDI and TAG Resale Functional Evaluation.

11.1 Objective

The objective of this test was to evaluate the functionality of BellSouth's pre-ordering and ordering systems for Resale services in processing pre-order queries via the Telecommunications Access Gateway (TAG) interface, and Local Service Requests (LSRs) submitted via TAG or Electronic Data Interchange (EDI).

11.2 Evaluation Methods

The EDI and TAG Resale Functional Evaluation included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth-GA OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the EDI and TAG Resale Functional Evaluation.

11.3 Analysis Methods

The data collected from the EDI and TAG Resale Functional Test were analyzed, and the results were assessed employing test-specific evaluation.

11.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete, Not Satisfied) are provided in Section II.

Table III-A.11: PO&P-11: EDI and TAG Resale Functional Evaluation – Summary Results

Evaluation Criteria – Satisfied	
PO&P-11-1-1	TAG and EDI order transaction capability is consistently available during scheduled hours of operation.
PO&P-11-2-1	The TAG and EDI interface provides expected system responses.
PO&P-11-2-2	BLS systems and representatives provide required Pre-order functionality for Resale-specific inquiries.
PO&P-11-2-3	BLS systems and representatives provide required Resale order functionality.

PO&P-11-3-1a	BLS's EDI interface provides timely Functional Acknowledgements (FAs).
PO&P-11-3-1b	BLS's TAG interface provides timely Functional Acknowledgements (FAs).
PO&P-11-3-2b	BLS's TAG interface provides timely Fully Mechanized (FM) order errors (ERRs) / clarifications (CLRs).
PO&P-11-3-3a	BLS's EDI interface provides timely Partially Mechanized (PM) order clarifications (CLRs).
PO&P-11-3-4a	BLS's EDI interface provides timely Flow-Through (FT) Firm Order Confirmations (FOCs).
PO&P-11-3-4b	BLS's TAG interface provides timely Flow Through (FT) Firm Order Confirmations (FOCs).
PO&P-11-3-5a	BLS's EDI interface provides timely Non-Flow Through (NFT) Firm Order Confirmations (FOCs).
PO&P-11-3-5b	BLS's TAG interface provides timely Non-Flow Through (NFT) Firm Order Confirmations (FOCs).
PO&P-11-4-1	BLS systems and representatives provide clear, accurate, and complete pre-order responses.
PO&P-11-4-2	BLS systems and representatives provide clear, accurate, and complete pre-order error messages.
PO&P-11-4-6	BLS systems and representatives provide clear, accurate, and complete Completion Notifications (CNs).
PO&P-11-4-7	BLS service orders tracking systems (CSOTS) provide accurate LSR status.
Evaluation Criteria – Not Satisfied	
PO&P-11-3-2a	BLS's EDI interface provides timely Fully Mechanized (FM) order errors (ERRs) / clarifications (CLRs).
PO&P-11-3-3b	BLS's TAG interface provides timely Partially Mechanized (PM) order clarifications (CLRs).
PO&P-11-4-3	BLS systems and representatives provide clear, accurate, and complete Firm Order Confirmations (FOCs).
PO&P-11-4-4	BLS systems and representatives provide clear, accurate and complete order errors (ERRs) / clarifications (CLRs).
Evaluation Criteria – No Result Determination Made	
PO&P-11-3-6a	BLS's EDI interface provides timely Completion Notifications (CNs).
PO&P-11-3-6b	BLS's TAG interface provides timely Completion Notifications (CNs).
PO&P-11-3-7	BLS's TAG and EDI interface provides timely Jeopardy Notifications.
PO&P-11-3-8	BLS's TAG and EDI interface provides Missed Appointment (MA) notifications within agreed upon standard intervals.
PO&P-11-4-5	Service order provisioning due dates identified within BLS's order confirmation (FOC) delivered through TAG and EDI are consistent with the CLEC's valid due date (DDD) request (e.g., a due date selected in accordance with the product's standard interval or acquired from a Calculate Due Date (CDD) pre-order query).

12.0 PO&P12: xDSL Functional Evaluation

This section provides a summary of the xDSL Functional Evaluation.

12.1 Objective

The objective of this test was to evaluate the functionality of BellSouth's pre-ordering and ordering systems for Digital Subscriber Line (xDSL) services in processing queries and orders submitted via two manual interfaces; e-mail and facsimile. This test focused on the pre-ordering and ordering processes. The provisioning of xDSL capable loops was tested in xDSL Provisioning Verification Evaluation (PO&P13).

12.2 Evaluation Methods

The xDSL Functional Evaluation included a checklist of evaluation criteria developed by KCI during the initial phase of the BLS-GA OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the xDSL Functional Test.

12.3 Analysis Methods

The data collected from the xDSL Functional Evaluation was analyzed, and the results were assessed employing test-specific evaluation criteria.

12.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete, Not Satisfied) are provided in Section II.

Table III-A.12: PO&P-12: xDSL Results Comparison – Summary Results

Evaluation Criteria – Satisfied	
PO&P-12-1-1	Facsimile / e-mail access is consistently available during scheduled hours of operation.
PO&P-12-2-2	BLS's Representative provides required pre-order functionality for xDSL Loops.
PO&P-12-2-3	BLS's Representative provides required order functionality for xDSL product.
PO&P-12-3-1	BLS's Representative provides pre-order rejections / clarifications (CLRs) within agreed upon standard intervals.
PO&P-12-3-2	BLS's Representative provides Loop Make Up Service Inquiry Information (LMU-SI) within agreed upon intervals.
PO&P-12-3-3	BLS's Representative provides Acknowledgements for Service Requests (LSR / SIs) within agreed upon standard intervals.
PO&P-12-3-4	BLS's Representative provides order rejections / clarifications (CLRs) within agreed upon standard intervals.
PO&P-12-3-5	BLS's Representative provides Firm Order Confirmations (FOCs) within agreed upon standard intervals.
PO&P-12-3-8	BLS's Representative provides Order status updates within agreed upon standard intervals.
PO&P-12-4-1	BLS systems and representatives provide clear, accurate, and complete LMU-SI / LSR responses.

PO&P-12-4-2	BLS systems and representatives provides clear, accurate, and complete LMU-SI rejections / clarifications (CLR).
PO&P-12-4-3	BLS's Representative provides clear, accurate, and complete Firm Order Confirmations (FOCs).
PO&P-12-4-4	BLS's Representative provides clear, accurate and complete order LSR-SI rejections / clarifications.
PO&P-12-4-6	BLS provides status on order completion.
Evaluation Criteria – Not Satisfied	
PO&P-12-2-1	BLS's Representative provides expected responses.
Evaluation Criteria – No Result Determination Made	
PO&P-12-3-6	BLS's Representative provides Jeopardy Notifications within agreed upon standard intervals.
PO&P-12-3-7	BLS's Representative provides Missed Appointment (MA) notifications within agreed upon standard intervals.
PO&P-12-4-5	Service order provisioning due dates identified within BLS's firm order confirmation (FOC) delivered through manual processes are consistent with the CLEC's valid due date (DDD) request (e.g., a due date selected in accordance with the product's standard interval or acquired from a Calculate Due Date [CDD] pre-order query).
PO&P-12-4-7	BLS's Representative returns clear, accurate, and complete Jeopardy Notifications.
PO&P-12-4-8	BLS's Representative provides clear, accurate, and complete Missed Appointment notifications.

13.0 PO&P-13: Provisioning Verification Evaluation – Resale & xDSL

This section provides a summary of the Resale & ADSL – Provisioning Verification Evaluation.

13.1 Objective

The objective of the Provisioning Verification Evaluation Test was to measure BellSouth's ability to meet the agreed-upon functionality and measures of service in the provisioning of Resale services and Digital Subscriber Loops (xDSL).

13.2 Evaluation Methods

The Provisioning Verification Evaluation – Resale & xDSL included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - GA OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the xDSL Functional Test.

KCI verified the provisioning accuracy for selected test instances from PO&P11 to complete its Resale provisioning evaluation.

KCI executed the xDSL validation by collecting a series of observations: (1) Accompanying outside plant technicians to the customer premise and (2) Accompanying UNE-C technicians as they worked with the OST technicians and the

CLEC to test that the loop met the physical characteristics required to support xDSL service.

13.3 Analysis Methods

The data collected from the Resale & ADSL – Provisioning Verification Evaluation were analyzed, and the results were assessed employing test-specific evaluation criteria.

13.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete, Not Satisfied) are provided in Section II.

Table III-A.13: PO&P-13: Provisioning Verification Evaluation – Resale & xDSL – Summary Results

Evaluation Criteria – Satisfied	
PO&P-13-1-1	The ADSL completion dates accurately reflect the completion due date contained in the order confirmation.
PO&P-13-1-2	ADSL coordinated provisioning procedures are conducted in accordance with stated timing intervals.
PO&P-13-2-1	ADSL coordination provisioning procedures are conducted in adherence with methodologies prescribed in internal Method and Procedure documentation.
PO&P-13-3-1	A complete (e.g. beginning-to-end) description of the ADSL Jeopardy Notification process is defined.
PO&P-13-4-1	Provisioning activity occurs on the date confirmed to the CLEC.
PO&P-13-4-4	Provisioning was completed accurately for orders placed in PO&P11 EDI & TAG Resale Functional Evaluation–Customer Service Record (CSR) Validation.
Evaluation Criteria – No Result Determination Made	
PO&P-13-3-2	ADSL provisioning Jeopardy Notifications are returned in adherence to stated timing intervals.
PO&P-13-3-3	ADSL provisioning Jeopardy Notifications are returned with accurate field entries.
Evaluation Criteria – Not Satisfied	
PO&P-13-4-2	Provisioning was completed accurately for orders placed on PO&P-11 EDI & TAG Functional Evaluation - Directory Listings.
PO&P-13-4-3	Provisioning was completed accurately for orders placed in PO&P-11 EDI & TAG Resale Functional Evaluation– Switch Translations Verification.

14.0 PO&P-14: Resale and xDSL Documentation Evaluation

This section provides a summary of the Resale and xDSL Documentation Evaluation.

14.1 Objective

The Resale and xDSL Documentation Evaluation was an operational review of the documentation developed by BellSouth to provide support to Competitive Local Exchange Carriers (CLECs) with Operations Support Systems (OSS) questions, problems, and issues related to carrying out the business processes of pre-ordering and ordering.

14.2 Evaluation Methods

The Resale and xDSL Documentation Evaluation included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth-GA OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the xDSL Functional Test.

14.3 Analysis Method

The data collected from the Resale and xDSL Documentation Evaluation were analyzed, and the results were assessed employing test-specific evaluation criteria.

14.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete, Not Satisfied) are provided in Section II.

Table III-A.14: PO&P-14: Resale and xDSL Documentation Evaluation – Summary Results

Evaluation Criteria – Satisfied	
PO&P-14-1-1	BLS documentation is readily available via the BLS Web site or in hard copy.
PO&P-14-1-2	BLS makes updates to documents readily available to the CLECs.
PO&P-14-1-3	Training is available for use of documentation.
PO&P-14-1-4	Responsibilities and procedures for developing, updating, and correcting documentation are clearly defined.
PO&P-14-1-5	Responsibilities and procedures for distributing documentation are clearly defined.
PO&P-14-2-1	Document version is indicated clearly within and throughout each document.
PO&P-14-2-2	BLS document organization is consistent with its intended use.
PO&P-14-2-3	BLS documents contain information that is relevant to its intended audience.
PO&P-14-2-4	BLS documents contain table of contents.
PO&P-14-2-5	BLS documents are logically organized with clear page numbering and section labeling.
PO&P-14-2-6	BLS documents contain contact/help desk numbers.
PO&P-14-2-7	BLS documents clearly indicate purpose and scope.
PO&P-14-2-8	Cross-references are clearly stated directing readers to relevant sources of additional information.
PO&P-14-2-9	BLS documents clearly instruct users how to notify BLS of document errors and omissions.

PO&P-14-3-1	BLS documents provide description of all error messages and potential steps for resolution.
PO&P-14-3-2	BLS documents clearly identify inputs/outputs of the specific processes.
PO&P-14-3-3	BLS documents include expected results of process and cycle times.
PO&P-14-4-1	BLS documents correctly define data fields.
PO&P-14-4-2	BLS documents accurately define acceptable formats for data fields.
PO&P-14-4-3	BLS documents clearly identify required and optional fields.
PO&P-14-4-4	BLS documents clearly describe expected system responses/outputs.
PO&P-14-4-5	BLS documents contain methods and procedures to correctly execute processes.

15.0 PO&P-15: Work Center Capacity Management Evaluation - xDSL

This section provides a summary of the Work Center Capacity Management Evaluation.

15.1 Objective

The objective of this test was to assess the scalability of BellSouth's manual processes for xDSL pre-order and order processing. This evaluation included a detailed review of the safeguards and procedures in place to plan for and manage projected growth in the capacity of the manual processes and associated workforce.

15.2 Evaluation Methods

The evaluation of Capacity Management for the manual processes began with a review of the work center procedural documentation and interviews with center personnel to collect information about the processing of xDSL orders. Structured center walk-throughs and direct observation of personnel performing their daily work supplemented the planned test interviews and document reviews. Business transaction volume and forecast data were gathered in order to assess current and future workload. Process models were developed to assess the capacity and scalability of the manual processes. Work force planning procedures and staffing plans were evaluated through additional interviews and documentation reviews.

15.3 Analysis Methods

The Work Center Capacity Management Evaluation - xDSL included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures, provided the framework of norms, standards and guidelines for the Work Center Capacity Management Evaluation - xDSL.

15.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete, Not Satisfied) are provided in Section II.

Table III-A.15: PO&P15: Work Center Capacity Management Evaluation - xDSL – Summary Results

Evaluation Criteria – Satisfied	
PO&P-15-1-1	There is an established process for capturing business and transaction volumes.
PO&P-15-1-2	There is an established process for capturing resource utilization and performance.
PO&P-15-1-3	Managers monitor resource utilization and performance through the use of defined instrumentation and other documented tools.
PO&P-15-1-4	There is an established process for forecasting and trend analysis of business volumes and transactions.
PO&P-15-1-5	There is an established process for forecasting and trend analysis of resource utilization.
PO&P-15-1-6	There are defined methods and procedures for supervisors and managers to follow to evaluate workforce performance and to establish performance metrics and goals.
PO&P-15-1-7	Capacity Management procedures are defined and documented.
PO&P-15-1-8	Workforce performance and existing capacity are considered in the planning process for capacity management.
PO&P-15-1-9	Capacity Management procedures define performance metrics which trigger staff augmentation, staff redeployment / redistribution, or staff training.
PO&P-15-1-10	Contingency and disaster recovery plans exist in the event of a significant increase in volume or significant loss of BLS resources.

16.0 PO&P-16: xDSL Process Parity Evaluation

This section provides a summary for the PO&P16: xDSL Process Parity Evaluation.

16.1 Objective

The objective of this test was to review the processes and systems that provide pre-order, order, and provisioning for CLEC and Reseller xDSL orders. The review focused on the following areas:

- Pre-Order, Ordering, and Provisioning Systems
- Workflow definitions
- Workforce scheduling
- Facility administration
- Service activation
- Test and acceptance
- Exception handling
- Completion notices

16.2 Evaluation Methods

The evaluation of xDSL Process Parity began with a review of xDSL Pre-order, Order, and Provisioning process documentation. All relevant systems and interfaces were identified and interviews with center personnel, including process owners and staff were conducted. Structured center walk-throughs and direct observation of personnel performing their daily work supplemented the planned test interviews and document reviews. Physical systems and communication environments were inspected and process models were developed to assess the parity between wholesale and retail pre-order, order, and provisioning processes.

16.3 Analysis Methods

The xDSL Process Parity Evaluation included a checklist of evaluation measures developed by KCI during the preparation of supplemental test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures, detailed in the Supplemental Test Plan, provided the framework of norms, standards and guidelines for the xDSL Process Parity Evaluation.

16.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete, Not Satisfied) are provided in Section II.

Table III-A.16: PO&P-16: xDSL Process Parity Evaluation – Summary Results

Evaluation Criteria – Satisfied	
PO&P-16-1-1	Documented procedures for xDSL Pre-Order Service Inquiry process are consistent, repeatable, and comparable between retail and wholesale.
PO&P-16-1-2	Documented procedures for xDSL Pre-Order Loop Qualification processes are consistent, repeatable, and comparable between retail and wholesale.
PO&P-16-1-3	Documented procedures for xDSL Order Submission are consistent, repeatable, and comparable between retail and wholesale.
PO&P-16-1-4	Documented procedures for xDSL Order Entry are consistent, repeatable, and comparable between retail and wholesale.
PO&P-16-1-5	Documented procedures for xDSL Facility Assignment are consistent, repeatable, and comparable between retail and wholesale.
PO&P-16-1-6	Documented procedures for xDSL Service Activation are consistent, repeatable, and comparable between retail and wholesale.
PO&P-16-1-7	Systems in the Pre-Order Service Inquiry process are comparable between retail and wholesale.
PO&P-16-1-8	Systems in the Pre-Order Loop Qualification process are comparable between retail and wholesale.
PO&P-16-1-9	Systems in the Order submission processes are comparable between retail and wholesale.

PO&P-16-1-10	Systems in the Order Entry process are comparable between retail and wholesale.
PO&P-16-1-11	Systems in the Facility assignment process are comparable between retail and wholesale.
PO&P-16-1-12	Systems in the Service Activation process are consistent between retail and wholesale.
PO&P-16-1-13	Service Inquiry transactions are executed in a consistent, comparable, and repeatable manner between retail and wholesale.
PO&P-16-1-14	Loop Qualification transactions are executed in a consistent, comparable, and repeatable manner between retail and wholesale.
PO&P-16-1-15	Order Submission transactions are executed in a consistent, comparable, and repeatable manner between retail and wholesale.
PO&P-16-1-16	Order Entry transactions are executed in a consistent, comparable, and repeatable manner between retail and wholesale.
PO&P-16-1-17	Facility Assignment transactions are executed in a consistent, comparable, and repeatable manner between retail and wholesale.
PO&P-16-1-18	Service Activation transactions are executed in a consistent, comparable, and repeatable manner between retail and wholesale.

B. Billing (BLG)

This section provides a summary of the Billing domain testing activities. For more information on planned testing, refer to Section VII: *Billing Test Section* of the *Supplemental Test Plan*. For more detailed information on the test design, analysis, and results from the execution of the tests, refer to Section V: *Billing Domain Results and Analysis* in this document.

1.0 BLG-7: CRIS Resale Invoicing Functional Evaluation

This section provides a summary for the BLG-7 CRIS Resale Invoicing Functional Evaluation.

1.1 Objective

The objective of this test was to validate the completeness and accuracy of the CRIS Resale invoicing process in accordance with BellSouth's published specifications.

1.2 Evaluation Methods

In order to accomplish this objective, KCI executed order transactions against test bed lines established for testing purposes. Test case scenarios were developed and utilized to create Local Service Requests for products and activities specified in the *Supplemental Test Plan*. Expected results were developed for each test scenario based on the policies and rate structure specified in BellSouth documentation and procedures. These expected results were compared to billing invoices produced by BellSouth to verify that charges were appropriately and accurately billed and delivered within the expected time interval.

1.3 Analysis Methods

The CRIS Resale Invoicing Functional Billing Evaluation (BLG-7) included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for this test.

1.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results are provided in Section II.

Table III-B.1: BLG-7: CRIS Resale Invoicing Functional Evaluation – Summary Results

Evaluation Criteria – Satisfied	
BLG-7-1-1	The appropriate major bill sections appear on the bills per BLS's documentation.
BLG-7-1-2	The appropriate data appear on the page headers per BLS's documentation.
BLG-7-1-3	The appropriate data appear on the Remittance page per BLS's documentation.

BLG-7-1-4	Appropriate data appear in the Summary Billing Section per BLS's documentation.
BLG-7-1-5	Appropriate details appear in the Summary Billing Section per BLS's documentation.
BLG-7-1-6	The appropriate details appear in the Current Charges Section per BLS's documentation.
BLG-7-1-7	The appropriate details appear in the Other Charges and Credits Section per BLS's documentation.
BLG-7-1-8	Summary Page calculations correspond with the calculation definition.
BLG-7-1-9	Balance Due calculations cross-total as appropriate.
BLG-7-1-10	Late Payment Charge calculations correspond with the calculation definition in the BLS documentation.
BLG-7-1-11	Non-recurring and pro-rated monthly charge calculations correspond appropriately to the BLS tariffs.
BLG-7-1-12	Usage rates correspond, as defined in the BLS tariffs or Interconnection Agreement.
BLG-7-1-13	Calculations correspond for Summary Rate as defined in BLS tariffs or Interconnection Agreement.
BLG-7-1-14	Calculation for Detailed Rates correspond, as defined in the BLS tariffs or Interconnection Agreement.
BLG-7-1-15	Remittance totals cross-total appropriately.
BLG-7-1-16	Summary sections / page correspond with appropriate totals elsewhere in the bills.
BLG-7-1-17	Other Charges & Credits (OC&C) information matches expected results.
BLG-7-1-18	Monthly Recurring Charge information matches expected results.
BLG-7-1-19	Usage charge(s) match expected results.
BLG-7-1-20	Verification of bill delivery timeliness corresponds as defined in Appendix D2 of the BLS GA-OSS *Master Test Plan*.

2.0 BLG-8: Resale Usage Functional Evaluation

This section provides a summary of the BLG-8: Resale Usage Functional Evaluation.

2.1 Objective

The objective of this test was to assess the accuracy, completeness and timeliness of the usage file message processing capability as described in BellSouth's published specifications.

2.2 Evaluation Methods

In order to accomplish this objective, KCI placed test calls that originated and terminated in four central office locations using three switch types. Calls were made to and from locations within the BellSouth service area. Call records compiled by the testers and the DUF records generated by BellSouth were used to evaluate the completeness, accuracy, and timeliness of DUF processing.

2.3 Analysis Methods

The Resale Usage Functional Evaluation included a checklist of evaluation criteria developed by KCI. These evaluation criteria provided the framework of norms, standards, and guidelines for this test.

2.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results are provided in Section II.

Table III-B.2: BLG-8: Resale Usage Functional Evaluation – Summary Results

Evaluation Criteria – Satisfied	
BLG-8-1-1	For all scripted and completed test calls that should generate a DUF record, appropriate DUF records are contained in the electronically delivered Daily Usage Files.
BLG-8-1-2	For all scripted and completed test calls that should generate a DUF record, all expected DUF records are contained in the electronically delivered Daily Usage Files.
BLG-8-1-3	For all scripted and completed test calls that should generate a DUF record, 95% are delivered within six calendar days.
BLG-8-1-4	DUF records transmitted to KCI pseudo-CLEC contained billable information.

C. Maintenance & Repair (M&R)

This section provides a summary of the Maintenance & Repair (M&R) domain testing activities. For more information on planned testing, refer to Section VI: *Maintenance and Repair Test Section* of the *Supplemental Test Plan*. For more detailed information on the test design, analysis, and results from the execution of the tests, refer to Section VI: *Maintenance and Repair Domain Results and Analysis* in this document.

1.0 M&R 11: M&R Process Evaluation

This section provides a summary for the M&R-11: M&R Process Evaluation.

1.1 Objective

This test was composed of two sub-tests. The objective of Sub-Test 1 was to evaluate the equivalence of BellSouth's end-to-end processes for trouble reporting and repair for retail xDSL lines and wholesale xDSL over a CLEC Resale POTS line. The objective of Sub-Test 2 was to evaluate BellSouth's performance in making repairs to xDSL lines under the conditions of various wholesale maintenance scenarios.

1.2 Evaluation Methods

The evaluation was comprised of two major elements. For Sub-Test 1, process flows for wholesale xDSL over a CLEC Resale POTS line and retail trouble management were reviewed and evaluated along with technician methods and procedures (M&Ps) and job aids for wholesale trouble repair. For Sub-Test 2, faults were inserted into a working test bed of provisioned telephone lines, and BellSouth's performance was observed and measured in relation to the isolation and repair of those faults.

1.3 Analysis Methods

The data collected from the M&R Process Evaluation were analyzed, and the results were assessed employing test-specific evaluation criteria.

1.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-C.1: M&R-11: M&R Process Evaluation – Summary Results

Evaluation Criteria – Satisfied	
M&R-11-1-1	BLS has documented M&R process flows for handling xDSL trouble tickets.
M&R-11-1-2	BLS M&R systems accurately capture relevant data and performance.
M&R-11-1-3	BLS provides commitment date and time when logging a trouble call.
M&R-11-1-4	Technicians close the trouble ticket using correct codes.
M&R-11-1-5	Closed trouble tickets were called in by technicians.

Evaluation Criteria – Satisfied	
M&R-11-1-6	BLS has a documented escalation process for xDSL service.
M&R-11-1-7	BLS follows documented processes for logging, tracking, and reporting of trouble tickets.

2.0 M&R-12: TAFI Functional Test of Resale Lines

This section provides a summary of the M&R-12: TAFI Functional Test of Resale Lines.

2.1 Objective

The objective of this test was to validate the existence of Trouble Administration Facilitation Interface (TAFI) trouble reporting and screening functionality for resale service customers in accordance with the Competitive Local Exchange Carrier (CLEC) TAFI End-User Training and User Guide.

2.2 Evaluation Methods

This test cycle was executed in BellSouth's production environment by exercising a defined set of TAFI functions associated with trouble management activities against test bed accounts. Scenarios testing these functions were executed both via a LAN-to-LAN connection and via dial-up access in order to evaluate differences in system response times associated with the methods of access.

2.3 Analysis Methods

The data collected from the TAFI Functional Test were analyzed, and the results were assessed employing test-specific evaluation criteria.

2.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-C.2: M&R-12: TAFI Functional Test of Resale Lines – Summary Results

Evaluation Criteria – Satisfied	
M&R-12-1-1	The user is able to enter a trouble report using TAFI and receive a satisfactory response.
M&R-12-1-2	The user is able to modify a trouble report using TAFI and receive a satisfactory response.
M&R-12-1-3	The user is able to create a repeat report using TAFI and receive a satisfactory response.
M&R-12-1-4	The user is able to create a subsequent report using TAFI and receive a satisfactory response.
M&R-12-1-5	The user is able to enter multiple trouble reports (MTRs) using TAFI and receive a satisfactory response.
M&R-12-1-6	The user is able to enter and retrieve trouble reports from the queue in TAFI and receive a satisfactory response.

M&R-12-1-7	The user is able to execute supervisor functions within TAFI and receive a satisfactory response.
M&R-12-1-8	The user is able to close a trouble report using TAFI and receive a satisfactory response.
M&R-12-1-9	The user is able to cancel a trouble report using TAFI and receive a satisfactory response.
M&R-12-1-10	The user is able to conduct a port and loop-port test (Mechanized Loop Tests [MLT]) using TAFI and receive a satisfactory response.
M&R-12-1-11	The user is able to view port and loop-port test (MLT) results using TAFI and receive a satisfactory response.
M&R-12-1-12	The user is able to retrieve a LMOS recent status report and receive a satisfactory response.
M&R-12-1-13	The user is able to obtain customer line record information (BOCRIS CSR) using TAFI and receive a satisfactory response.
M&R-12-1-14	The user is able to obtain Predictor results using TAFI and receive a satisfactory response.
M&R-12-1-15	The user is able to view Display Line Record (DLR) information using TAFI and receive a satisfactory response.
M&R-12-1-16	The user is able to view SOCS pending order information using TAFI and receive a satisfactory response.
M&R-12-1-17	The user is able to view and resend transactions that incurred host request errors using TAFI and receive a satisfactory response.
M&R-12-1-18	The user is able to retrieve trouble history using TAFI and receive a satisfactory response.
M&R-12-2-1	The user receives timely responses when entering and retrieving trouble reports from the queue in TAFI.
M&R-12-2-2	The user receives timely responses when executing TAFI supervisor functions.
M&R-12-2-3	The user receives timely responses from the MLT test.
M&R-12-2-4	The user receives timely responses when retrieving a LMOS recent status report using TAFI.
M&R-12-2-5	The user receives timely responses when obtaining customer line record information using TAFI.
M&R-12-2-6	The user receives timely responses when obtaining Predictor results using TAFI.
M&R-12-2-7	The user receives timely responses when retrieving DLR information using TAFI.
M&R-12-2-8	The user receives timely responses when retrieving SOCS pending order information using TAFI.
M&R-12-2-9	The user receives timely responses when retrieving trouble history using TAFI.
M&R-12-3-1	TAFI is a user-friendly system for creating trouble reports.
M&R-12-3-2	TAFI is a user-friendly system for modifying trouble reports.
M&R-12-3-3	TAFI is a user-friendly system for creating repeat reports.
M&R-12-3-4	TAFI is a user-friendly system for creating subsequent reports.
M&R-12-3-5	TAFI is a user-friendly system for entering multiple trouble reports (MTR).
M&R-12-3-6	TAFI is a user-friendly system for entering and retrieving trouble reports from the queue.

M&R-12-3-7	TAFI is a user-friendly system for executing supervisor functions.
M&R-12-3-8	TAFI is a user-friendly system for closing trouble reports.
M&R-12-3-9	TAFI is a user-friendly system for canceling trouble reports.
M&R-12-3-10	TAFI is a user-friendly system for initiating port and loop-port tests.
M&R-12-3-11	TAFI is a user-friendly system for viewing port and loop-port test results.
M&R-12-3-12	TAFI is a user-friendly system for retrieving a LMOS recent status report.
M&R-12-3-13	TAFI is a user-friendly system for obtaining customer line record information.
M&R-12-3-14	TAFI is a user-friendly system for obtaining Predictor results.
M&R-12-3-15	TAFI is a user-friendly system for viewing DLR information.
M&R-12-3-16	TAFI is a user-friendly system for viewing SOCS pending order information.
M&R-12-3-17	TAFI is a user-friendly system for viewing and resending trouble reports that incurred host request errors.
M&R-12-3-18	TAFI is a user-friendly system for retrieving trouble history.
M&R-12-3-19	TAFI is a user-friendly system for handling non-designed UNE M&R issues.

3.0 M&R-13: ECTA Functional Test of Resale Lines

This section provides a summary for the M&R-13: ECTA Functional Test of Resale Lines.

3.1 Objective

The objective of this test was to validate the existence of Electronic Communication Trouble Administration (ECTA) trouble reporting and screening functionality for resale service customers in accordance with BellSouth's published specifications.

3.2 Evaluation Methods

In order to accomplish this objective, KCI executed a test cycle by exercising a defined set of ECTA functions associated with trouble management activities against test bed accounts. The functional elements targeted by this test included access to test capabilities, trouble report entry, query and receipt of trouble report status information, modification and addition of information to trouble reports, and cancellation / closure of trouble reports. In addition, error conditions were included to assess the ECTA Gateway's response to incorrect information. The ECTA Functional Test was conducted against BellSouth's production environment system.

3.3 Analysis Methods

The data collected from the ECTA Functional Test were analyzed, and the results were assessed employing test-specific evaluation criteria.

3.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-C.3: M&R-13: ECTA Functional Test of Resale Lines – Summary Results

Evaluation Criteria – Satisfied	
M&R-13-1-1	The user is able to enter a trouble report into ECTA and receive a satisfactory response.
M&R-13-1-2	The user is able to request trouble report status from ECTA and receive an adequate response.
M&R-13-1-3	The user is able to add trouble information to an ECTA trouble report and receive an adequate response.
M&R-13-1-4	The user is able to modify trouble administration information on an ECTA trouble report and receive a satisfactory response.
M&R-13-1-5	The user is able to cancel a trouble report in ECTA and receive a satisfactory response.
M&R-13-1-6	The user is able to respond to trouble repair completion notifications and receive a satisfactory response.
M&R-13-1-7	The user is able to conduct a Mechanized Line Test and receive a satisfactory response.
M&R-13-2-1	The user receives a timely response when entering a trouble report using ECTA.
M&R-13-2-2	The user receives a timely response when requesting trouble report status using ECTA.
M&R-13-2-3	The user receives a timely response when adding trouble information using ECTA.
M&R-13-2-4	The user receives a timely response when modifying trouble report administration information using ECTA.
M&R-13-2-5	The user receives a timely response when canceling a trouble report using ECTA.
M&R-13-2-6	The user receives a timely response when responding to a verify repair completion.
M&R-13-2-7	The user receives a timely response when conducting a Mechanized Line Test using ECTA.

D. Change Management (CM)

This section provides a summary of the Change Management (CM) testing activities. For more information on planned testing, refer to *The BellSouth Georgia – OSS Evaluation Supplemental Test Plan, Section VIII: Change Management Test Section*. For more detailed information on the test design, analysis, and results from the execution of the tests, refer to Section VII: *Change Management Test Section* in this document.

1.0 CM2: OSS '99 Release Evaluation

This section provides a summary of the CM2: OSS '99 Release Evaluation.

1.1 Objective

The objective of this test was to examine the methods and procedures that BellSouth used to develop and release the OSS '99 applications package and supporting documentation. In this evaluation, KCI assessed 1) the adequacy, accuracy, and timeliness of BellSouth's OSS '99 change management procedures and release documentation, and 2) the availability of interface testing support and functioning test environments during the OSS '99 Release.

1.2 Evaluation Methods

The OSS '99 Release Evaluation entailed documentation reviews and interviews with BellSouth personnel involved with the OSS '99 Release. Documentation collected and reviewed for this evaluation included project plans, team rosters, document change logs, beta testing agreements, test cases, technical specifications, and interface requirements.

1.3 Analysis Methods

The data collected from the OSS '99 Release Evaluation were analyzed, and the results were assessed employing test-specific evaluation criteria.

1.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results are provided in Section II.

Table III-D.1: CM2: OSS '99 Release Evaluation – Summary Results

Evaluation Criteria – Satisfied	
CM-2-1-1	The release provided reasonable intervals for considering and notifying customers about proposed changes.
CM-2-1-2	The release process included provisions for allowing and incorporating input from customers.
CM-2-1-3	Initial interface specifications, which defined applicable business rules, data formats and definitions, and transmission protocols, were made available to customers.
CM-2-1-4	Revised interface specifications, following assimilation of customer input, were made

	available to customers.
CM-2-1-5	Accurate and complete revision summary documentation was provided to customers.
CM-2-1-6	Functioning testing environments were made available to customers for all supported interfaces.
CM-2-1-7	Carrier-to-carrier test environments were stable and segregated from BellSouth production and development environments.
CM-2-1-8	BellSouth provided telephone customer support for interface testing to the CLECs (on-call support was available 24 hours a day, seven days a week for emergencies).
CM-2-1-9	Procedures were defined to log and communicate software "bugs," errors, and omissions in specifications, as well as other issues discovered during carrier-to-carrier testing.

E. Performance Metrics Review (PMR)

This section provides a summary of the Performance Metrics Reviews (PMR). For more information on planned testing, refer to The BellSouth - Georgia OSS Evaluation *Supplemental Test Plan, Section IV, Performance Metrics Review*. For more detailed information on the test design, analysis, and results from the execution of the tests, refer to Section VIII: Performance Metrics Review Test in this document.

1.0 PMR-1: Data Collection and Storage Verification and Validation Review Test

This section provides a summary of the PMR-1: Data Collection and Storage Verification and Validation Review.

1.1 Objective

The objective of this test was to evaluate the adequacy and completeness of key policies and procedures for collecting and storing performance data.

1.2 Evaluation Methods

The Data Collection and Storage Verification and Validation Review included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the Data Collection and Storage Verification and Validation Review.

1.3 Analysis Methods

The information collected from the Data Collection and Storage Verification and Validation Review was analyzed, and the results were assessed employing test-specific evaluation criteria.

1.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete, or Not Satisfied) are provided in Section II.

Table III-E.1: PMR-1: Data Collection and Storage Test – Summary Results

Evaluation Criteria – Satisfied	
PMR1-1-1	BLS has adequate and complete data collection policies and procedures.
PMR1-1-2	BLS has well-identified points of data collection
PMR1-1-3	BLS has tools in place that enable it to collect data in an adequate and scalable manner.
PMR1-1-4	BLS has adequate and complete internal controls for its data collection processes.
PMR1-2-2	BLS is able to identify the storage sites for the data used in metrics calculations.
PMR1-2-3	BLS has tools in place that enable it to store data in an adequate fashion and scale.
PMR1-2-4	BLS has internal controls in place that assure that data stored accurately reflect data

	that was collected.
Evaluation Criteria – Not Complete	
PMR1-2-1	BLS has adequate and complete data collection policies and procedures.

2.0 PMR-2: Metrics Definition Documentation and Implementation Verification and Validation Review Test

This section provides a summary for the PMR-2: Metrics Definition Documentation and Implementation Verification and Validation Review.

2.1 Objective

The objective of this test was to evaluate the adequacy, completeness, accuracy, and logic of the performance metrics as documented.

2.2 Evaluation Methods

The Metrics Definition Test included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the Metrics Definition Test.

2.3 Analysis Methods

The information collected from the Metrics Definition Test was analyzed, and the results were assessed employing test-specific evaluation criteria.

2.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-E.2: PMR-2: Metrics Definition Test – Summary Results

Evaluation Criteria – Satisfied	
PMR2-1-1	The definition is complete and agrees with the name of the SQM – Pre-Ordering Average OSS Response Time and Response Interval.
PMR2-1-2	The stated calculation is complete, logical, and consistent with the definition – Pre-Ordering Average OSS Response Time and Response Interval.
PMR2-1-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Pre-Ordering Average OSS Response Time and Response Interval.
PMR2-1-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Pre-Ordering Average OSS Response Time and Response Interval.
PMR2-2-1	The definition is complete and agrees with the name of the SQM – Pre Ordering OSS Interface Availability.
PMR2-2-2	The stated calculation is complete, logical, and consistent with the definition – Pre-Ordering OSS Interface Availability.

PMR2-3-1	The definition is complete and agrees with the name of the SQM – Ordering – Percent Rejected Service Requests.
PMR2-3-2	The stated calculation is complete, logical, and consistent with the definition – Ordering – Percent Rejected Service Requests.
PMR2-3-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Percent Rejected Service Requests.
PMR2-3-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Ordering – Percent Rejected Service Requests.
PMR2-4-1	The definition is complete and agrees with the name of the SQM – Ordering – Reject Interval.
PMR2-4-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Ordering Reject Interval.
PMR2-5-1	The definition is complete and agrees with the name of the SQM – Ordering – Firm Order Confirmation Timeliness.
PMR2-5-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Ordering – Firm Order Confirmation Timeliness.
PMR2-6-1	The definition is complete and agrees with the name of the SQM – Ordering – Speed of Answer in Ordering Center.
PMR2-6-2	The stated calculation is complete, logical, and consistent with the definition – Ordering – Speed of Answer in Ordering Center.
PMR2-6-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Ordering – Speed of Answer in Ordering Center.
PMR2-6-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Ordering – Speed of Answer in Ordering Center.
PMR2-7-1	The definition is complete and agrees with the name of the SQM - Provisioning – Mean Held Order Interval & Distribution Intervals.
PMR2-7-2	The stated calculation is complete, logical, and consistent with the definition - Provisioning – Mean Held Order Interval & Distribution Intervals.
PMR2-7-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Provisioning – Mean Held Order Interval & Distribution Intervals.
PMR2-7-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Provisioning – Mean Held Order Interval & Distribution Intervals.
PMR2-8-1	The definition is complete and agrees with the name of the SQM - Provisioning – Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices.
PMR2-8-2	The stated calculation is complete, logical, and consistent with the definition - Provisioning – Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices.
PMR2-8-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices.
PMR2-8-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices.
PMR2-9-1	The definition is complete and agrees with the name of the SQM – Provisioning – Percent Missed Installation Appointments.

PMR2-9-2	The stated calculation is complete, logical, and consistent with the definition – Provisioning – Percent Missed Installation Appointments.
PMR2-9-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Provisioning – Percent Missed Installation Appointments.
PMR2-9-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Provisioning – Percent Missed Installation Appointments.
PMR2-10-1	The definition is complete and agrees with the name of the SQM - Provisioning – Average Completion Interval Order Completion Interval Distribution.
PMR2-10-2	The stated calculation is complete, logical, and consistent with the definition - Provisioning – Average Completion Interval Order Completion Interval Distribution.
PMR2-10-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Provisioning – Average Completion Interval Order Completion Interval Distribution.
PMR2-10-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Average Completion Interval Order Completion Interval Distribution.
PMR2-11-1	The definition is complete and agrees with the name of the SQM – Provisioning – Average Completion Notice Interval.
PMR2-11-2	The stated calculation is complete, logical, and consistent with the definition – Provisioning – Average Completion Notice Interval.
PMR2-11-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Provisioning – Average Completion Notice Interval.
PMR2-11-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Provisioning – Average Completion Notice Interval.
PMR2-12-1	The definition is complete and agrees with the name of the SQM – Provisioning – Coordinated Customer Conversions.
PMR2-12-2	The stated calculation is complete, logical, and consistent with the definition – Provisioning – Coordinated Customer Conversions.
PMR2-12-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Provisioning – Coordinated Customer Conversions.
PMR2-12-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Provisioning – Coordinated Customer Conversions.
PMR2-13-1	The definition is complete and agrees with the name of the SQM – Provisioning – Percent Troubles within 30 days.
PMR2-13-2	The stated calculation is complete, logical, and consistent with the definition – Provisioning – Percent Troubles within 30 days.
PMR2-13-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Provisioning – Percent Troubles within 30 days.
PMR2-13-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Provisioning – Percent Troubles within 30 days.
PMR2-14-1	The definition is complete and agrees with the name of the SQM – Provisioning – Total Service Order Cycle Time.
PMR2-14-2	The stated calculation is complete, logical, and consistent with the definition – Provisioning – Total Service Order Cycle Time.
PMR2-14-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Provisioning – Total Service Order Cycle Time.

PMR2-14-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Provisioning – Total Service Order Cycle Time.
PMR2-15-1	The definition is complete and agrees with the name of the SQM – Provisioning – Service Order Accuracy.
PMR2-15-2	The stated calculation is complete, logical, and consistent with the definition – Provisioning – Service Order Accuracy.
PMR2-15-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Provisioning – Service Order Accuracy.
PMR2-15-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Provisioning – Service Order Accuracy.
PMR2-16-1	The definition is complete and agrees with the name of the SQM – Maintenance & Repair – Missed Repair Appointments.
PMR2-16-2	The stated calculation is complete, logical, and consistent with the definition – Maintenance & Repair – Missed Repair Appointments.
PMR2-16-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Maintenance & Repair – Missed Repair Appointments.
PMR2-16-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Maintenance & Repair – Missed Repair Appointments.
PMR2-17-1	The definition is complete and agrees with the name of the SQM – Maintenance & Repair – Customer Trouble Report Rate.
PMR2-17-2	The stated calculation is complete, logical, and consistent with the definition – Maintenance & Repair – Customer Trouble Report Rate.
PMR2-17-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Maintenance & Repair – Customer Trouble Report Rate.
PMR2-17-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Maintenance & Repair – Customer Trouble Report Rate.
PMR2-18-1	The definition is complete and agrees with the name of the SQM – Maintenance & Repair – Maintenance Average Duration.
PMR2-18-2	The stated calculation is complete, logical, and consistent with the definition – Maintenance & Repair – Maintenance Average Duration.
PMR2-18-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Maintenance & Repair – Maintenance Average Duration.
PMR2-18-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Maintenance & Repair – Maintenance Average Duration.
PMR2-19-1	The definition is complete and agrees with the name of the SQM – Maintenance & Repair – Percent Repeat Troubles Within 30 Days.
PMR2-19-2	The stated calculation is complete, logical, and consistent with the definition – Maintenance & Repair – Percent Repeat Troubles Within 30 Days.
PMR2-19-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Maintenance & Repair – Percent Repeat Troubles Within 30 Days.
PMR2-19-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Maintenance & Repair – Percent Repeat Troubles Within 30 Days.
PMR2-20-1	The definition is complete and agrees with the name of the SQM – Maintenance & Repair – Out of Service > 24 hours.

PMR2-20-2	The stated calculation is complete, logical, and consistent with the definition – Maintenance & Repair – Out of Service > 24 hours.
PMR2-20-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Maintenance & Repair – Out of Service > 24 hours.
PMR2-20-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Maintenance & Repair – Out of Service > 24 hours.
PMR2-21-1	The definition is complete and agrees with the name of the SQM – Maintenance & Repair – OSS Interface Availability.
PMR2-21-2	The stated calculation is complete, logical, and consistent with the definition – Maintenance & Repair – OSS Interface Availability.
PMR2-22-1	The definition is complete and agrees with the name of the SQM - Maintenance & Repair – OSS Response Interval and Percentages.
PMR2-22-2	The stated calculation is complete, logical, and consistent with the definition - Maintenance & Repair – OSS Response Interval and Percentages.
PMR2-22-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Maintenance & Repair – OSS Response Interval and Percentages.
PMR2-22-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Maintenance & Repair – OSS Response Interval and Percentages.
PMR2-23-1	The definition is complete and agrees with the name of the SQM - Maintenance & Repair – Average Answer Time – Repair Centers.
PMR2-23-2	The stated calculation is complete, logical, and consistent with the definition - Maintenance & Repair – Average Answer Time – Repair Centers.
PMR2-23-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Maintenance & Repair – Average Answer Time – Repair Centers.
PMR2-23-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Maintenance & Repair – Average Answer Time – Repair Centers.
PMR2-24-1	The definition is complete and agrees with the name of the SQM – Billing – Invoice Accuracy.
PMR2-24-2	The stated calculation is complete, logical, and consistent with the definition – Billing – Invoice Accuracy.
PMR2-24-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Billing – Invoice Accuracy.
PMR2-24-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Billing – Invoice Accuracy.
PMR2-25-1	The definition is complete and agrees with the name of the SQM – Billing – Mean Time to Deliver Invoices.
PMR2-25-2	The stated calculation is complete, logical, and consistent with the definition – Billing – Mean Time to Deliver Invoices.
PMR2-25-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Billing – Mean Time to Deliver Invoices.
PMR2-25-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Billing – Mean Time to Deliver Invoices.
PMR2-26-1	The definition is complete and agrees with the name of the SQM – Billing – Usage Data Delivery Accuracy.

PMR2-26-2	The stated calculation is complete, logical, and consistent with the definition – Billing – Usage Data Delivery Accuracy.
PMR2-26-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Billing – Usage Data Delivery Accuracy.
PMR2-26-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Billing – Usage Data Delivery Accuracy.
PMR2-27-1	The definition is complete and agrees with the name of the SQM - Billing – Usage Data Delivery Completeness.
PMR2-27-2	The stated calculation is complete, logical, and consistent with the definition - Billing – Usage Data Delivery Completeness.
PMR2-27-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Billing – Usage Data Delivery Completeness.
PMR2-27-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Billing – Usage Data Delivery Completeness.
PMR2-28-1	The definition is complete and agrees with the name of the SQM – Billing – Usage Data Delivery Timeliness.
PMR2-28-2	The stated calculation is complete, logical, and consistent with the definition – Billing – Usage Data Delivery Timeliness.
PMR2-28-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Billing – Usage Data Delivery Timeliness.
PMR2-28-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Billing – Usage Data Delivery Timeliness.
PMR2-29-1	The definition is complete and agrees with the name of the SQM – Billing – Mean Time to Deliver Usage.
PMR2-29-2	The stated calculation is complete, logical, and consistent with the definition – Billing – Mean Time to Deliver Usage.
PMR2-29-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Billing – Mean Time to Deliver Usage.
PMR2-29-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Billing – Mean Time to Deliver Usage.
PMR2-30-1	The definition is complete and agrees with the name of the SQM - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR2-30-2	The stated calculation is complete, logical, and consistent with the definition - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR2-30-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR2-30-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR2-31-1	The definition is complete and agrees with the name of the SQM – Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (Toll).
PMR2-31-2	The stated calculation is complete, logical, and consistent with the definition – Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (Toll).

PMR2-31-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (Toll).
PMR2-31-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (Toll).
PMR2-32-1	The definition is complete and agrees with the name of the SQM - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA).
PMR2-32-2	The stated calculation is complete, logical, and consistent with the definition - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA).
PMR2-32-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA).
PMR2-32-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA).
PMR2-33-1	The definition is complete and agrees with the name of the SQM - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (DA).
PMR2-33-2	The stated calculation is complete, logical, and consistent with the definition - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (DA).
PMR2-33-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (DA).
PMR2-33-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (DA).
PMR2-34-1	The definition is complete and agrees with the name of the SQM – E911 Timeliness.
PMR2-34-2	The stated calculation is complete, logical, and consistent with the definition – E911 Timeliness.
PMR2-34-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – E911 Timeliness.
PMR2-34-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – E911 Timeliness.
PMR2-35-1	The definition is complete and agrees with the name of the SQM – E911 Accuracy.
PMR2-35-2	The stated calculation is complete, logical, and consistent with the definition – E911 Accuracy.
PMR2-35-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – E911 Accuracy.
PMR2-35-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – E911 Accuracy.
PMR2-36-1	The definition is complete and agrees with the name of the SQM – E911 Mean Interval.
PMR2-36-2	The stated calculation is complete, logical, and consistent with the definition – E911 Mean Interval.

PMR2-36-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – E911 Mean Interval.
PMR2-36-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – E911 Mean Interval.
PMR2-37-1	The definition is complete and agrees with the name of the SQM - Trunk Group Performance – Trunk Group Service Report.
PMR2-37-2	The stated calculation is complete, logical, and consistent with the definition - Trunk Group Performance – Trunk Group Service Report.
PMR2-37-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Trunk Group Performance – Trunk Group Service Report.
PMR2-37-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Trunk Group Performance – Trunk Group Service Report.
PMR2-38-1	The definition is complete and agrees with the name of the SQM - Trunk Group Performance – Trunk Group Service Detail.
PMR2-38-2	The stated calculation is complete, logical, and consistent with the definition - Trunk Group Performance – Trunk Group Service Detail.
PMR2-38-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Trunk Group Performance – Trunk Group Service Detail.
PMR2-38-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Trunk Group Performance – Trunk Group Service Detail.
PMR2-39-1	The definition is complete and agrees with the name of the SQM - Trunk Group Performance – Aggregate.
PMR2-39-2	The stated calculation is complete, logical, and consistent with the definition - Trunk Group Performance – Aggregate.
PMR2-39-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Trunk Group Performance – Aggregate.
PMR2-39-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Trunk Group Performance – Aggregate.
PMR2-40-1	The definition is complete and agrees with the name of the SQM - Trunk Group Performance – CLEC Specific.
PMR2-40-2	The stated calculation is complete, logical, and consistent with the definition - Trunk Group Performance – CLEC Specific.
PMR2-40-3	BLS's computation instructions agree with the stated calculation in the SQM documentation - Trunk Group Performance – CLEC Specific.
PMR2-40-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions - Trunk Group Performance – CLEC Specific.
PMR2-41-1	The definition is complete and agrees with the name of the SQM – Collocation – Average Response Time.
PMR2-41-2	The stated calculation is complete, logical, and consistent with the definition – Collocation – Average Response Time.
PMR2-41-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Collocation – Average Response Time.
PMR2-41-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Collocation – Average Response Time.

PMR2-42-1	The definition is complete and agrees with the name of the SQM – Collocation - Average Arrangement Time.
PMR2-42-2	The stated calculation is complete, logical, and consistent with the definition – Collocation - Average Arrangement Time.
PMR2-42-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Collocation – Average Arrangement Time.
PMR2-42-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Collocation - Average Arrangement Time.
PMR2-43-1	The definition is complete and agrees with the name of the SQM – Collocation – Percent of Due Dates Missed.
PMR2-43-2	The stated calculation is complete, logical, and consistent with the definition – Collocation – Percent of Due Dates Missed.
PMR2-43-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Collocation – Percent of Due Dates Missed.
PMR2-43-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Collocation – Percent of Due Dates Missed.
Evaluation Criteria – Not Complete	
PMR2-2-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Pre-Ordering OSS Interface Availability.
PMR2-2-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Pre-Ordering OSS Interface Availability.
PMR2-4-2	The stated calculation is complete, logical, and consistent with the definition – Ordering – Reject Interval.
PMR2-4-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Ordering – Reject Interval.
PMR2-5-2	The stated calculation is complete, logical, and consistent with the definition – Ordering – Firm Order Confirmation Timeliness.
PMR2-5-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Ordering – Firm Order Confirmation Timeliness.
PMR2-21-3	BLS's computation instructions agree with the stated calculation in the SQM documentation – Maintenance & Repair – OSS Interface Availability.
PMR2-21-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions – Maintenance & Repair – OSS Interface Availability.

3.0 PMR-3: Metrics Change Management Verification and Validation Review

This section provides a summary of the PMR-3: Metrics Change Management Verification and Validation Review.

3.1 Objective

The objective of this test was to evaluate the adequacy and completeness of key procedures for developing, conducting, monitoring, and publicizing change management of the performance metrics.

3.2 Evaluation Methods

The Metrics Change Management Test included a checklist of evaluation criteria developed by the test manager during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the Metrics Change Management Test.

3.3 Analysis Methods

The information collected from the Metrics Change Management Test was analyzed, and the results were assessed employing test-specific evaluation criteria.

3.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-E.3: PMR-3: Metrics Change Management Test – Summary Results

Evaluation Criteria – Satisfied	
PMR3-1-1	BLS has a complete and consistent change development process.
PMR3-1-2	The methods and approaches used by BLS to evaluate change proposals are complete and consistent.
PMR3-1-3	BLS's implementation of changes is complete and consistent.
PMR3-1-4	BLS evaluates its change proposals within a reasonable time frame.
PMR3-1-5	BLS updates its documentation in a timely manner.
PMR3-1-6	BLS's process for tracking changes is adequate and complete.

4.0 PMR-4: Metrics Data Integrity Verification and Validation Review

This section provides a summary of the PMR-4: Metrics Data Integrity Verification and Validation Review Test.

4.1 Objective

The objective of this test was to evaluate the integrity of key procedures for processing the data necessary to produce performance metrics.

4.2 Evaluation Methods

The Metrics Data Integrity Test included a checklist of evaluation criteria developed by the test manager during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the Metrics Data Integrity Test.

4.3 Analysis Methods

The information collected from the Metrics Data Integrity Test was analyzed, and the results were assessed employing the evaluation criteria.

4.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-E.4: PMR-4: Metrics Data Integrity Test – Summary Results

Evaluation Criteria – Satisfied	
PMR4-1-2	All of the selected early-stage data were accounted for in the raw data - Pre-Ordering – Average OSS Response Time and Response Interval.
PMR4-2-1	The selected raw data and the corresponding early-stage data agree – Pre-Ordering – OSS Interface Availability.
PMR4-2-2	All of the selected early-stage data were accounted for in the raw data – Pre-Ordering – OSS Interface Availability.
PMR4-6-1	The selected raw data and the corresponding early-stage data agree – Ordering – Speed of Answer in Ordering Center.
PMR4-6-2	All of the selected early-stage data were accounted for in the raw data – Ordering – Speed of Answer in Ordering Center.
PMR4-7-1	The selected raw data and the corresponding early-stage data agree - Provisioning - Mean Held Order Interval and Distribution Intervals.
PMR4-7-2	All of the selected early-stage data were accounted for in the raw data – Provisioning – Mean Held Order Interval and Distribution Intervals.
PMR4-8-1	The selected raw data and the corresponding early-stage data agree - Provisioning – Average Jeopardy Notice Interval and Percent of Orders Given Jeopardy Notices.
PMR4-8-2	All of the selected early-stage data were accounted for in the raw data - Provisioning – Average Jeopardy Notice Interval and Percent of Orders Given Jeopardy Notices.
PMR4-9-1	The selected raw data and the corresponding early-stage data agree – Provisioning – Percent Missed Installation Appointments.
PMR4-9-2	All of the selected early-stage data were accounted for in the raw data – Provisioning – Percent Missed Installation Appointments.
PMR4-10-1	The selected raw data and the corresponding early-stage data agree - Provisioning - Average Completion Interval / Order Completion Interval Distribution.
PMR4-10-2	All of the selected early-stage data were accounted for in the raw data - Provisioning - Average Completion Interval / Order Completion Interval Distribution.
PMR4-11-1	The selected raw data and the corresponding early-stage data agree – Provisioning – Average Completion Notice Interval.
PMR4-11-2	All of the selected early-stage data were accounted for in the raw data – Provisioning – Average Completion Notice Interval.
PMR4-12-1	The selected raw data and the corresponding early-stage data agree – Provisioning – Coordinated Customer Conversions.
PMR4-12-2	All of the selected early-stage data were accounted for in the raw data – Provisioning – Coordinated Customer Conversions.

PMR4-13-2	All of the selected early-stage data were accounted for in the raw data – Provisioning – Percent Provisioning Troubles within 30 days of Service Order Activity.
PMR4-14-1	The selected raw data and the corresponding early-stage data agree – Provisioning – Total Service Order Cycle Time.
PMR4-14-2	All of the selected early-stage data were accounted for in the raw data – Provisioning – Total Service Order Cycle Time.
PMR4-15-1	The selected raw data and the corresponding early-stage data agree – Provisioning – Service Order Accuracy.
PMR4-15-2	All of the selected early-stage data were accounted for in the raw data – Provisioning – Service Order Accuracy.
PMR4-16-1	The selected raw data and the corresponding early-stage data agree – Maintenance & Repair – Missed Repair Appointments.
PMR4-16-2	All of the selected early-stage data were accounted for in the raw data – Maintenance & Repair – Missed Repair Appointments.
PMR4-17-1	The selected raw data and the corresponding early-stage data agree – Maintenance & Repair – Customer Trouble Report Rate.
PMR4-17-2	All of the selected early-stage data were accounted for in the raw data – Maintenance & Repair – Customer Trouble Report Rate.
PMR4-18-1	The selected raw data and the corresponding early-stage data agree – Maintenance & Repair – Maintenance Average Duration.
PMR4-18-2	All of the selected early-stage data were accounted for in the raw data – Maintenance & Repair – Maintenance Average Duration.
PMR4-19-1	The selected raw data and the corresponding early-stage data agree - Maintenance and Repair - Percent Repeat Troubles within 30 days.
PMR4-19-2	All of the selected early-stage data were accounted for in the raw data - Maintenance and Repair - Percent Repeat Troubles within 30 days.
PMR4-20-1	The selected raw data and the corresponding early-stage data agree - Maintenance and Repair - Out of Service > 24 hours.
PMR4-20-2	All of the selected early-stage data were accounted for in the raw data - Maintenance and Repair - Out of Service > 24 hours.
PMR4-21-1	The selected raw data and the corresponding early-stage data agree – Maintenance & Repair – OSS Interface Availability.
PMR4-21-2	All of the selected early-stage data were accounted for in the raw data – Maintenance & Repair – OSS Interface Availability.
PMR4-22-1	The selected raw data and the corresponding early-stage data agree - Maintenance & Repair – OSS Response Interval & Percentages.
PMR4-22-2	All of the selected early-stage data were accounted for in the raw data - Maintenance & Repair – OSS Response Interval & Percentages.
PMR4-23-1	The selected raw data and the corresponding early-stage data agree - Maintenance & Repair – Average Answer Time for Repair Centers.
PMR4-23-2	All of the selected early-stage data were accounted for in the raw data - Maintenance & Repair – Average Answer Time for Repair Centers.
PMR4-24-1	The selected raw data and the corresponding early-stage data agree – Billing – Invoice Accuracy.
PMR4-24-2	All of the selected early-stage data were accounted for in the raw data – Billing – Invoice Accuracy.
PMR4-25-1	The selected raw data and the corresponding early-stage data agree – Billing – Mean Time to Deliver Invoices.

PMR4-25-2	All of the selected early-stage data were accounted for in the raw data – Billing – Mean Time to Deliver Invoices.
PMR4-26-1	The selected raw data and the corresponding early-stage data agree – Billing – Usage Data Deliver Accuracy.
PMR4-26-2	All of the selected early-stage data were accounted for in the raw data – Billing – Usage Data Deliver Accuracy.
PMR4-27-1	The selected raw data and the corresponding early-stage data agree – Billing – Usage Data Delivery Completeness.
PMR4-27-2	All of the selected early-stage data were accounted for in the raw data – Billing – Usage Data Delivery Completeness.
PMR4-28-1	The selected raw data and the corresponding early-stage data agree – Billing – Usage Data Delivery Timeliness.
PMR4-28-2	All of the selected early-stage data were accounted for in the raw data – Billing – Usage Data Delivery Timeliness.
PMR4-29-1	The selected raw data and the corresponding early-stage data agree – Billing – Mean Time to Deliver Usage.
PMR4-29-2	All of the selected early-stage data were accounted for in the raw data – Billing – Mean Time to Deliver Usage.
PMR4-30-1	The selected raw data and the corresponding early-stage data agree - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR4-30-2	All of the selected early-stage data were accounted for in the raw data - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR4-31-1	The selected raw data and the corresponding early-stage data agree - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (Toll).
PMR4-31-2	All of the selected early-stage data were accounted for in the raw data - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (Toll).
PMR4-32-1	The selected raw data and the corresponding early-stage data agree - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA).
PMR4-32-2	All of the selected early-stage data were accounted for in the raw data - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA).
PMR4-33-1	The selected raw data and the corresponding early-stage data agree - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (DA).
PMR4-33-2	All of the selected early-stage data were accounted for in the raw data - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (DA).
PMR4-34-1	The selected raw data and the corresponding early-stage data agree – E911 Timeliness.
PMR4-34-2	All of the selected early-stage data were accounted for in the raw data – E911 Timeliness.
PMR4-35-1	The selected raw data and the corresponding early-stage data agree – E911 Accuracy.
PMR4-35-2	All of the selected early-stage data were accounted for in the raw data – E911 Accuracy.
PMR4-36-1	The selected raw data and the corresponding early-stage data agree – E911 Mean Interval.
PMR4-36-2	All of the selected early-stage data were accounted for in the raw data – E911 Mean Interval.
PMR4-37-1	The selected raw data and the corresponding early-stage data agree – Trunk Group Performance – Aggregate.
PMR4-37-2	All of the selected early-stage data were accounted for in the raw data – Trunk Group Performance – Aggregate.

PMR4-38-2	All of the selected early-stage data were accounted for in the raw data – Trunk Group Performance – Trunk Group Service Report.
PMR4-39-2	All of the selected early-stage data were accounted for in the raw data – Trunk Group Performance – Trunk Group Service Detail.
PMR4-40-1	The selected raw data and the corresponding early-stage data agree – Collocation – Average Response Time.
PMR4-40-2	All of the selected early-stage data were accounted for in the raw data – Collocation – Average Response Time.
PMR4-41-1	The selected raw data and the corresponding early-stage data agree – Collocation – Average Arrangement Time.
PMR4-41-2	All of the selected early-stage data were accounted for in the raw data – Collocation – Average Arrangement Time.
PMR4-42-1	The selected raw data and the corresponding early-stage data agree – Collocation – Percent of Due Dates Missed.
PMR4-42-2	All of the selected early-stage data were accounted for in the raw data – Collocation – Percent of Due Dates Missed.
PMR4-43-1	BLS's data transfer processes are adequate and complete.
PMR4-44-1	The internal controls on data transfer processes are adequate and complete.
Evaluation Criteria – Not Complete	
PMR4-1-1	The selected raw data and the corresponding early-stage data agree - Pre-Ordering – Average OSS Response Time and Response Interval.
PMR4-3-1	The selected raw data and the corresponding early-stage data agree – Ordering – Percent Rejected Service Requests.
PMR4-3-2	All of the selected early-stage data were accounted for in the raw data – Ordering – Percent Rejected Service Requests.
PMR4-4-1	The selected raw data and the corresponding early-stage data agree – Ordering – Reject Interval.
PMR4-4-2	All of the selected early-stage data were accounted for in the raw data – Ordering – Reject Interval.
PMR4-5-1	The selected raw data and the corresponding early-stage data agree – Ordering – Firm Order Confirmation Timeliness.
PMR4-5-2	All of the selected early-stage data were accounted for in the raw data – Ordering – Firm Order Confirmation Timeliness.
PMR4-13-1	The selected raw data and the corresponding early-stage data agree – Provisioning – Percent Provisioning Troubles within 30 days of Service Order Activity.
PMR4-38-1	The selected raw data and the corresponding early-stage data agree – Trunk Group Performance – Trunk Group Service Report.
PMR4-39-1	The selected raw data and the corresponding early-stage data agree – Trunk Group Performance – Trunk Group Service Detail.

5.0 PMR-5: Metrics Calculation and Reporting Verification and Validation Review

This section provides a summary of the PMR-5: Metrics Calculation and Reporting Verification and Validation Review Test.

5.1 Objective

The objective of this test was to evaluate the accuracy of metrics calculations and reports.

5.2 Evaluation Methods

The Metrics Calculation and Reporting Test included a checklist of evaluation criteria developed by the test manager during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the Metrics Calculation and Reporting Test.

5.3 Analysis Methods

The data collected from the Calculation and Reporting Test were analyzed, and the results were assessed employing test-specific evaluation criteria.

5.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-E.5: PMR-5: Calculation and Reporting Test – Summary Results

Evaluation Criteria – Satisfied	
PMR-5-1-1	BLS reports are correctly disaggregated and complete – Ordering – Percent Rejected Service Requests.
PMR-5-1-2	KCI-calculated SQM values agree with BLS-reported SQM values – Ordering – Percent Rejected Service Requests.
PMR-5-2-1	BLS reports are correctly disaggregated and complete – Ordering – Reject Interval.
PMR-5-2-2	KCI-calculated SQM values agree with BLS-reported SQM values – Ordering – Reject Interval.
PMR-5-3-1	BLS reports are correctly disaggregated and complete – Ordering – Firm Order Confirmation Timeliness.
PMR-5-3-2	KCI-calculated SQM values agree with BLS-reported SQM values – Ordering – Firm Order Confirmation Timeliness.
PMR-5-4-1	BLS reports are correctly disaggregated and complete – Ordering – Speed of Answer in Ordering Center.
PMR-5-4-2	KCI-calculated SQM values agree with BLS-reported SQM values – Ordering – Speed of Answer in Ordering Center.
PMR-5-5-1	BLS reports are correctly disaggregated and complete – Provisioning – Mean Held Order Interval and Distribution Intervals.
PMR-5-5-2	KCI-calculated SQM values agree with BLS-reported SQM values – Provisioning - Mean Held Order Interval and Distribution Intervals.
PMR-5-6-1	BLS reports are correctly disaggregated and complete - Provisioning - Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices.

PMR-5-6-2	KCI-calculated SQM values agree with BLS-reported SQM values - Provisioning - Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices.
PMR-5-7-1	BLS reports are correctly disaggregated and complete – Provisioning – Percent Missed Installation Appointments.
PMR-5-7-2	KCI-calculated SQM values agree with BLS-reported SQM values – Provisioning – Percent Missed Installation Appointments.
PMR-5-8-1	BLS reports are correctly disaggregated and complete – Provisioning - Average Completion Interval / Order Completion Interval Distribution.
PMR-5-8-2	KCI-calculated SQM values agree with BLS-reported SQM values – Provisioning - Average Completion Interval / Order Completion Interval Distribution.
PMR-5-9-1	BLS reports are correctly disaggregated and complete – Provisioning – Average Completion Notice Interval.
PMR-5-9-2	KCI-calculated SQM values agree with BLS-reported SQM values – Provisioning – Average Completion Notice Interval.
PMR-5-10-1	BLS reports are correctly disaggregated and complete – Provisioning – Coordinated Customer Conversions.
PMR-5-10-2	KCI-calculated SQM values agree with BLS-reported SQM values – Provisioning – Coordinated Customer Conversions.
PMR-5-11-1	BLS reports are correctly disaggregated and complete – Provisioning – Percent Provisioning Troubles within 30 days of Service Order Activity.
PMR-5-12-1	BLS reports are correctly disaggregated and complete – Provisioning – Total Service Order Cycle Time.
PMR-5-12-2	KCI-calculated SQM values agree with BLS-reported SQM values – Provisioning – Total Service Order Cycle Time.
PMR-5-13-1	BLS reports are correctly disaggregated and complete – Maintenance & Repair – Missed Repair Appointments.
PMR-5-13-2	KCI-calculated SQM values agree with BLS-reported SQM values – Maintenance & Repair – Missed Repair Appointments.
PMR-5-14-1	BLS reports are correctly disaggregated and complete – Maintenance & Repair – Customer Trouble Report Rate.
PMR-5-14-2	KCI-calculated SQM values agree with BLS-reported SQM values – Maintenance & Repair – Customer Trouble Report Rate.
PMR-5-15-1	BLS reports are correctly disaggregated and complete – Maintenance & Repair – Maintenance Average Duration.
PMR-5-15-2	KCI-calculated SQM values agree with BLS-reported SQM values – Maintenance & Repair – Maintenance Average Duration.
PMR-5-16-1	BLS reports are correctly disaggregated and complete – Maintenance & Repair – Percent Repeat Troubles within 30 days.
PMR-5-16-2	KCI-calculated SQM values agree with BLS-reported SQM values – Maintenance & Repair – Percent Repeat Troubles within 30 days.
PMR-5-17-1	BLS reports are correctly disaggregated and complete – Maintenance & Repair – Out of Service > 24 hours.
PMR-5-17-2	KCI-calculated SQM values agree with BLS-reported SQM values – Maintenance & Repair – Out of Service > 24 hours.
PMR-5-18-1	BLS reports are correctly disaggregated and complete – Billing – Invoice Accuracy.

PMR-5-18-2	KCI-calculated SQM values agree with BLS-reported SQM values – Billing – Invoice Accuracy.
PMR-5-19-1	BLS reports are correctly disaggregated and complete – Billing – Mean Time to Deliver Invoices.
PMR-5-19-2	KCI-calculated SQM values agree with BLS-reported SQM values – Billing – Mean Time to Deliver Invoices.
PMR-5-20-1	BLS reports are correctly disaggregated and complete – Billing – Usage Data Delivery Accuracy.
PMR-5-20-2	KCI-calculated SQM values agree with BLS-reported SQM values – Billing – Usage Data Delivery Accuracy.
PMR-5-21-1	BLS reports are correctly disaggregated and complete – Billing – Usage Data Delivery Completeness.
PMR-5-21-2	KCI-calculated SQM values agree with BLS-reported SQM values – Billing – Usage Data Delivery Completeness.
PMR-5-22-1	BLS reports are correctly disaggregated and complete – Billing – Usage Data Delivery Timeliness.
PMR-5-22-2	KCI-calculated SQM values agree with BLS-reported SQM values – Billing – Usage Data Delivery Timeliness.
PMR-5-23-1	BLS reports are correctly disaggregated and complete – Billing – Mean Time to Deliver Usage.
PMR-5-23-2	KCI-calculated SQM values agree with BLS-reported SQM values – Billing – Mean Time to Deliver Usage.
PMR-5-24-1	BLS reports are correctly disaggregated and complete - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR-5-24-2	KCI-calculated SQM values agree with BLS-reported SQM values - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll).
PMR-5-25-1	BLS reports are correctly disaggregated and complete - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds–(Toll).
PMR-5-25-2	KCI-calculated SQM values agree with BLS-reported SQM values - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds–(Toll).
PMR-5-26-1	BLS reports are correctly disaggregated and complete - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Directory Assistance).
PMR-5-26-2	KCI-calculated SQM values agree with BLS-reported SQM values - Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Directory Assistance).
PMR-5-27-1	BLS reports are correctly disaggregated and complete - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (Directory Assistance).
PMR-5-27-2	KCI-calculated SQM values agree with BLS-reported SQM values - Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (Directory Assistance).
PMR-5-28-1	BLS reports are correctly disaggregated and complete – E911 - Timeliness.
PMR-5-28-2	KCI-calculated SQM values agree with BLS-reported SQM values – E911 - Timeliness.
PMR-5-29-1	BLS reports are correctly disaggregated and complete – E911 - Accuracy.
PMR-5-29-2	KCI-calculated SQM values agree with BLS-reported SQM values – E911 - Accuracy.
PMR-5-30-1	BLS reports are correctly disaggregated and complete – E911 – Mean Interval.
PMR-5-30-2	KCI-calculated SQM values agree with BLS-reported SQM values – E911 – Mean Interval.

PMR-5-31-1	BLS reports are correctly disaggregated and complete – Trunk Group Performance – Aggregate.
PMR-5-31-2	KCI-calculated SQM values agree with BLS-reported SQM values – Trunk Group Performance – Aggregate.
PMR-5-32-1	BLS reports are correctly disaggregated and complete – Trunk Group Performance – Trunk Group Service Report.
PMR-5-32-2	KCI-calculated SQM values agree with BLS-reported SQM values – Trunk Group Performance – Trunk Group Service Report.
PMR-5-33-1	BLS reports are correctly disaggregated and complete – Trunk Group Performance – Trunk Group Service Detail.
PMR-5-33-2	KCI-calculated SQM values agree with BLS-reported SQM values – Trunk Group Performance – Trunk Group Service Detail.
PMR-5-34-1	BLS reports are correctly disaggregated and complete – Collocation – Average Response Time.
PMR-5-34-2	KCI-calculated SQM values agree with BLS-reported SQM values – Collocation – Average Response Time.
PMR-5-35-1	BLS reports are correctly disaggregated and complete – Collocation – Average Arrangement Time.
PMR-5-35-2	KCI-calculated SQM values agree with BLS-reported SQM values – Collocation – Average Arrangement Time.
PMR-5-36-1	BLS reports are correctly disaggregated and complete – Collocation – Percent of Due Dates Missed.
PMR-5-36-2	KCI-calculated SQM values agree with BLS-reported SQM values – Collocation – Percent of Due Dates Missed.
Evaluation Criteria – Not Complete	
PMR-5-11-2	KCI-calculated SQM values agree with BLS-reported SQM values – Provisioning – Percent Provisioning Troubles within 30 days of Service Order Activity.

6.0 PMR-6: Statistical Evaluation of Transactions Test Metrics

This section provides a summary of the PMR-6: Statistical Evaluation of Transactions Test Metrics.

6.1 Objective

The objective of this test was to compare the transactions test metric values to standards set forth by the Georgia Public Service Commission (GPSC). These standards were provided by the GPSC at detailed levels of disaggregation, and took the form of comparable BellSouth retail values (for parity tests), or benchmarks.

6.2 Evaluation Methods

The Statistical Evaluation of Transactions Test Metrics included a checklist of evaluation criteria developed by the test manager during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the Statistical Evaluation.

6.3 Analysis Methods

The data collected from the Statistical Evaluation were analyzed, and the results were assessed employing test-specific evaluation criteria.

6.4 Summary Results

The following tables present the summary results for the evaluation criteria. Definitions of evaluation criteria and possible results (Satisfied, Not Complete or Not Satisfied) are provided in Section II.

Table III-E.6: PMR-6: Statistical Evaluation– Summary Results

Evaluation Criteria – Satisfied	
PMR6-1-1	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale ordering.
PMR6-1-3	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale maintenance and repair.
PMR6-1-4	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale billing.
PMR6-2-3	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE maintenance and repair.
PMR6-2-4	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE billing.
Evaluation Criteria – Not Satisfied	
PMR6-1-2	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale provisioning.
PMR6-2-1	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE ordering.
PMR6-2-2	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE provisioning.
PMR6-3-1	The test CLEC performance exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for flow-through.
Evaluation Criteria – Not Complete	
PMR6-3-2	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for flow-through.

PO & P

IV. Pre-Ordering, Ordering and Provisioning (PO&P) Domain Results and Analysis

1.0 Description

The purpose of this section is to present the specific tests, results, and analysis from KCI's evaluation of the systems, processes, and other operational elements associated with BellSouth's support for wholesale pre-ordering and ordering functions. The Pre-Ordering, Ordering and Provisioning (PO&P) tests evaluated the systems and processes associated with BellSouth's ability to provide Competitive Local Exchange Carriers (CLECs) with non-discriminatory access to its Operational Support Systems (OSS). The pre-ordering and ordering portion of the test assessed the adequacy of BellSouth's ordering processes/systems and support procedures to efficiently process Local Service Request (LSRs) for Resale and Digital Subscriber Line (xDSL) services. The provisioning verification portion of the test included a review of BellSouth's ability to accurately complete the provisioning of CLEC Resale and xDSL orders.

2.0 Methodology

The scope of the PO&P tests encompassed the review and analysis of BellSouth's processes, procedures, interfaces, and systems for pre-ordering, ordering and provisioning Resale and xDSL accounts. This was accomplished by reviewing and assessing relevant documentation, testing the functionality of BellSouth's pre-ordering, ordering and provisioning processes/systems, testing the capability to increase system capacity, and evaluating provisioning performance for BellSouth's CLEC customers. Additionally, a parity analysis was conducted to compare the BellSouth processes and systems that support xDSL services for wholesale and retail customers.

2.1 Business Process Description (Resale)

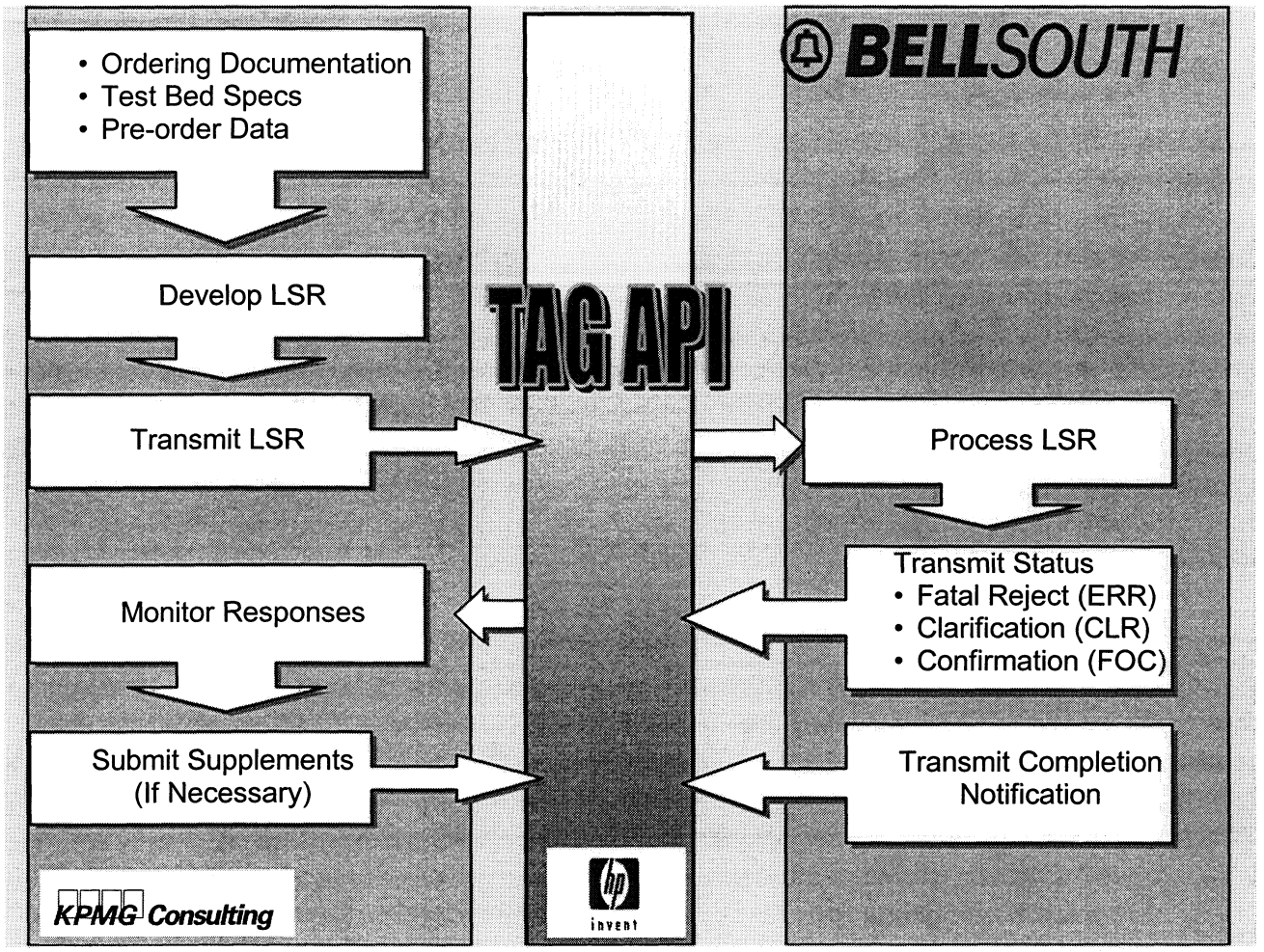
Two BellSouth electronic ordering interfaces, the Telecommunications Access Gateway (TAG) and the Electronic Data Interchange (EDI), were tested.

The TAG and EDI environments are described in more detail below.

TAG

Pre-Order queries, and orders, can be submitted electronically to BellSouth through TAG, a BellSouth-developed CORBA-based machine-to-machine interface. TAG allows for bi-directional flow of information between BellSouth's OSS and CLEC customers. CLECs develop their own software applications to obtain information from BellSouth's OSS through TAG, and can incorporate various internal functions, such as down loading information directly to their own inventory / billing systems, creating their own customer databases and generating internal reports.

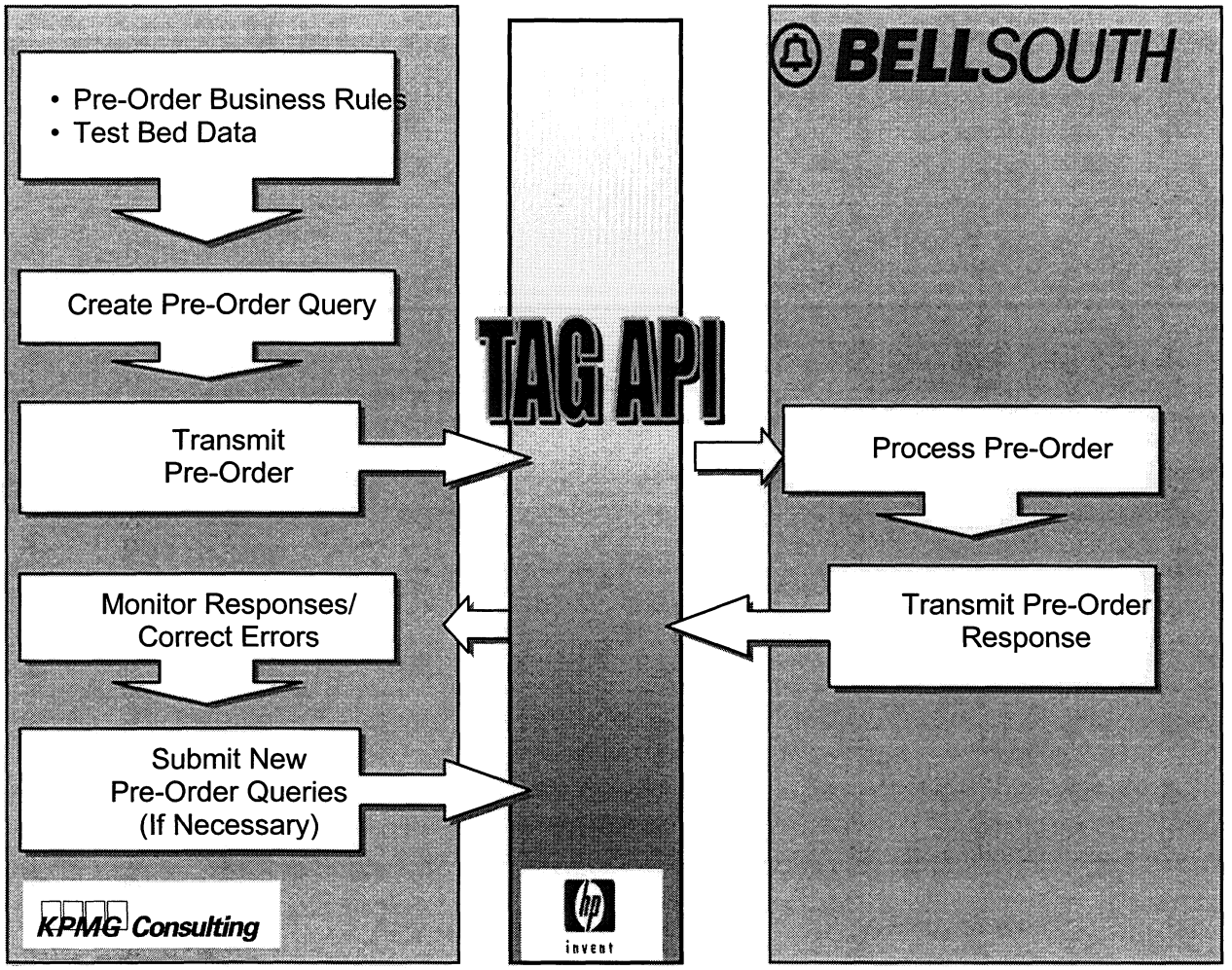
Figure IV-A: TAG Order Process Flow



Additionally, TAG provides a standard Application Program Interface (API) to BellSouth's pre-ordering OSS. TAG transactions are real time. TAG allows CLECs to execute the following pre-order queries:

- Telephone Number Selection / Reservations / Assignment
- Appointment Availability
- Service Availability
- Customer Records
- Due Date Calculation

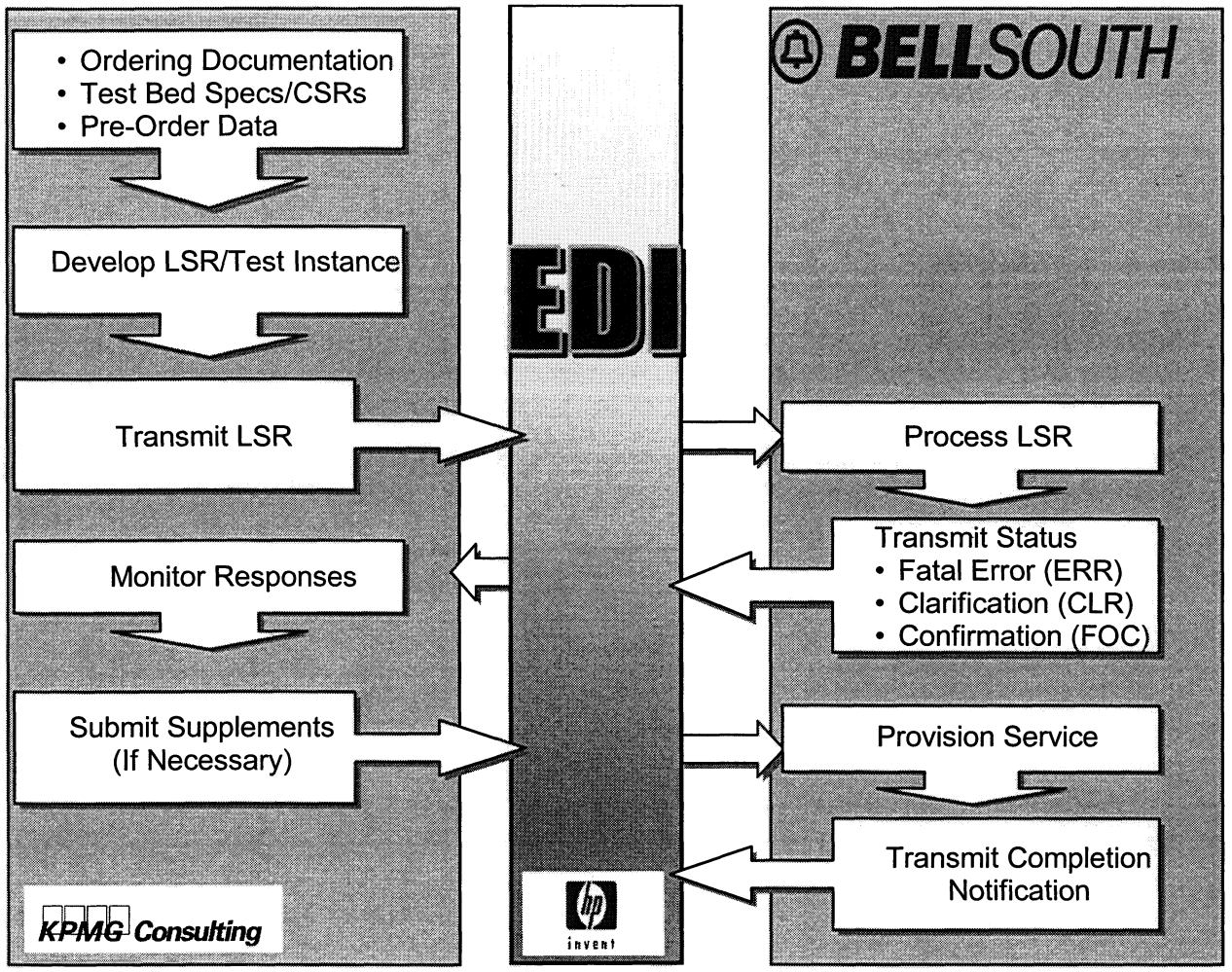
Figure IV-B: TAG Pre-Order Process Flow



EDI

Electronic Data Interchange (EDI) is a batch driven machine-to-machine interface designed to allow BellSouth's computer applications to exchange business files with CLEC computer applications. BellSouth defines the information that is needed to successfully submit each order type. This information is encoded to fit the standard EDI transaction set for data transmission. EDI uses industry standards, which define the format and data content of each transaction sent between CLECs and BellSouth. BellSouth determines how and when each data element is transferred (or mapped) into a BellSouth Service Order.

Figure IV-C: EDI Order Process Flow



Transaction Types

TAG and EDI allow CLECs to process the following ordering transactions types through BellSouth's OSS:

- Submit Local Service Requests (LSRs)
- Receive Functional Acknowledgements (FA)
- Receive Firm Order Confirmations (FOCs)
- Receive Completion Notices (CNs)
- Receive Rejects (ERRs), Clarifications (CLRs), and Status Messages (e.g., Jeopardy and Missed Appointment Notifications)

2.1.1 Ordering Process Flow (Resale)

KCI utilized three primary inputs to create order test instances: test bed information, pre-order data, and BellSouth's ordering documentation.

Test Bed Information

Test bed information consists of data on the baseline accounts against which order and pre-order transactions were executed. These accounts included customers in BellSouth and CLEC "start states." See Section 2.3 "Test Bed" for a description of test bed requirements and the Customer Service Record (CSR) delivery process.

Pre-Order Data

For a defined number of Resale test instances, KCI performed pre-order queries to validate customer address and service information, validate specific switch capabilities, select and reserve telephone numbers (TNs), and obtain valid due dates. KCI reviewed the pre-order response information and used this information to validate or add data to the subsequent service request.

BellSouth Ordering Documentation (Resale)

BellSouth Resale pre-ordering and ordering documentation contains two main components: 1) The technical specifications include programming instructions for creating TAG or EDI transaction sets; and 2) The business rules provide the pre-ordering and ordering forms and data elements that comprise a pre-order query or service request, as well as the data characteristics, usage requirements, and valid entries for each data element.

Using test bed and pre-order information, and applying the ordering rules defined in BellSouth documentation, KCI developed an order test instance, or Local Service Request (LSR). Each LSR was assigned a unique Purchase Order Number (PON) for BellSouth and KCI tracking purposes. The LSR was transmitted in a text file to Hewlett Packard (HP), which utilized the BellSouth technical specifications to map the text file into TAG or EDI data[2], and transmitted the LSR to BellSouth's EDI or TAG gateway.

When BellSouth receives the LSR, an FA is automatically returned to the CLEC, confirming that the file has been successfully received. As the LSR passes through the BellSouth back-end OSS systems, BellSouth systems or representatives perform validations to determine if the CLEC's service request is properly formatted and

[2] HP reported and delivered errors encountered during the text file-to-TAG/EDI mapping to KCI. LSRs containing errors identified at the text file level were never transmitted to the BellSouth EDI or TAG Gateway. In these cases, KCI investigated the errors, made appropriate modifications to the LSR, and resubmitted the service request/text file to HP for processing.

contains accurate data. In response to an erred LSR, BellSouth transmits one of the following error responses[3]:

Fatal Reject (ERR)

BellSouth returns an ERR when a CLEC electronically submits an LSR that is unreadable or lacks correct information in all required fields. BellSouth categorizes fatal rejects as fully-mechanized responses.

Auto Clarification ("auto" CLR)

BellSouth returns an auto CLR when an electronically-submitted LSR does not pass second level system edit checks for order accuracy. BellSouth categorizes auto CLRs as fully-mechanized responses.

Clarification (CLR)

BellSouth returns a CLR after an electronically-submitted LSR "falls out" for manual handling. When an LSR falls out, a representative from BellSouth's Local Carrier Service Center (LCSC) reviews the LSR. If it is determined that the request fell out due to a CLEC error, the representative sends a request for clarification back to the CLEC. BellSouth classifies CLRs as partially-mechanized responses.

In response to an ERR, the CLEC must re-submit the original LSR after correcting any errors. Following receipt of a CLR (system- or representative-generated), the CLEC must submit a supplemental service request ("Sup") that modifies the original order.

Once an LSR passes through the ordering validation process, it is logged in the BellSouth Service Order Communication System (SOCS), which coordinates downstream provisioning activity and monitors the status of the order. SOCS generates a Firm Order Confirmation (FOC) response that is delivered to the CLEC. This FOC confirms that BellSouth has validated the LSR and provides a Due Date (DD) on which BellSouth commits to provisioning the requested service.

2.1.2 *Provisioning (Resale)*

The provisioning process begins once SOCS produces a complete and accurate service order. Once SOCS receives the order information, it is transmitted to the Service Order Analysis & Control System (SOAC). SOAC determines which downstream assignment and control systems require information necessary to complete order provisioning, based on information contained in the service order.

A Local Service Request (LSR) passes through several stages after confirmation and prior to completion. The LSR status changes to indicate the order's progress through provisioning validation and completion activities. With each change in status, BellSouth transmits a Status Message to the CLEC. Notification is also provided in the

[3] Definitions of error categories taken from the BellSouth Service Quality Measurements (SQM) Georgia Performance Reports, 10/22/99, p. 14 (Percent Rejected Service Request report definition).

event that provisioning activities cannot be completed on the committed due date as a result of a CLEC or BellSouth issue. BellSouth delivers a Missed Appointment (MA) notice when the due date on a service order is missed. Status and MA codes, definitions, and information on required CLEC action are provided on the BellSouth Web site. Upon completion of provisioning activities, BellSouth transmits a Completion Notification (CN) to the CLEC indicating successful activation of the order.

2.2 Business Process Description (xDSL)

KCI tested the existence and functionality of the manual interfaces established by BellSouth for pre-ordering and ordering of xDSL capable loops[4]. KCI tested two BellSouth manual processes for DSL ordering: e-mail and facsimile.

The pre-order/order process for xDSL capable loops is a manual process, encompassing three steps. These steps include submission of three forms: 1) Loop Make-Up Service Inquiry[5] (LMU-SI)/Local Service Request (LSR); 2) Unbundled Loop Modification (ULM)[6]; and 3) Local Service Request/Service Inquiry[7] (LSR/SI).

The LMU-SI/LSR is the pre-order query utilized by CLECs to obtain detailed characteristics of a specific loop. CLECs may use BellSouth's LMU-SI/LSR to determine if a specific loop is capable of supporting xDSL and other advanced data services, as applicable. BellSouth provides CLECs access to loop make-up information that consists of: the composition of the loop material (copper/fiber); the existence, location and type of equipment on the loop, including but not limited to digital loop carrier or other remote concentration devices, feeder/distribution interfaces, bridge taps, load coils, pair-gain devices, disturbers in the same or adjacent binder groups; the loop length; the wire gauge; and the electrical parameters of the loop.

CLECs e-mail or transmit by facsimile (fax) the LMU-SI/LSR form to BellSouth's Complex Resale Support Group (CRSG) account team. BellSouth personnel from the CRSG collect the necessary information from the appropriate BellSouth central office for the requested loop. If spare facilities are available, Outside Plant & Engineering (OSPE) provides the cable and pair information including detailed characteristics of the loop. Additionally, if the CLEC requests that the loop be reserved, OSPE populates the Facilities Reservation Number (FRN) on the returned response to the LMU-SI. If spare facilities are not available, OSPE returns the LMU with reasons for the unavailability of compatible facilities for the loop type being ordered by the CLEC (e.g., facilities are out of range, no compatible facilities). The CRSG forwards the CLEC a response to the LMU-SI within seven business days of receiving the LMU-SI. Specific guidelines for

[4] KCI evaluated the xDSL ordering processes and documentation associated with BellSouth's TCIF issue 9.

[5] Details of the process can be found in the BellSouth Document entitled *BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide For Manual Loop Makeup* (Issue 1.0 September 15, 2000).

[6] Details of the process can be found in the BellSouth Document entitled *Unbundled Loop Modifications CLEC Information Package*, Version 2, September 15, 2000.

[7] Details of the process can be found in BellSouth Interconnection Services Document entitled *BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package*, Version 3, August 25, 2000.

submission of both faxed and e-mailed LMU-SI can be found in *BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide For Manual Loop Makeup*[8].

The ULM[9] is submitted to BellSouth when a CLEC requests modification of loop characteristics (e.g., removal of bridge taps or load coils). Based on the LMU-SI/LSR process, a CLEC may wish to modify an existing loop if the loop cannot accommodate the specific DSL capabilities desired.

The SI/LSR is the form by which a CLEC orders an xDSL capable loop. CLECs prepare and send via e-mail or fax an SI accompanied by an LSR with the FRN populated to BellSouth's Local Carrier Service Center (LCSC). The FRN identifies the specific loop that has been reserved during the LMU-SI/LSR process. The SI links the pre-order LMU-SI to the LSR. The SI also indicates if a ULM has been requested on the BellSouth loop. The CLEC must specify the loop type (Asymmetric DSL [ADSL] or High-bit-rate DSL [HDSL]) on the LSR by using the proper Network Channel Code (NC) and Network Channel Interface Code (NCI). Once a complete and correct LSR has been processed, the LCSC forwards a Firm Order Confirmation (FOC) to the CLEC. The requested loop type is provisioned through the ordering and provisioning systems according to the targeted intervals stated in the interval section of the *BellSouth Unbundled ADSL/HDSL Compatible Loop CLEC Information Package*[10]. Once provisioning has been completed, the CLEC must obtain completion information through the BellSouth CLEC Service Order Tracking System (CSOTS) via the Internet.

2.2.1 Ordering Process Flow (xDSL)

KCI utilized three primary inputs to create order test instances:

Test Bed Information

See Section 2.3 "Test Bed" for a description of test bed requirements and the Customer Service Record (CSR) delivery process.

Pre-Order Data

For each xDSL test instance, KCI submitted LMU-SIs to obtain detailed characteristics of a specific loop. KCI reviewed the LMU-SI response information and used this information to populate subsequent service request, (LSR/SI).

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[8] Issue 1.0, September 15, 2000.

[9] Unbundled Loop Modifications were not tested due to test bed limitations. Loops utilized in PO&P12 terminated within the BellSouth Central Office facilities.

[10] BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package, Version 3, August 25, 2000, page 15.

[11] Details of the process can be found in the BellSouth Document entitled *BellSouth Loop Makeup (LMU) CLEC Information Package Version 1, July 28, 2000.*

[12] Details of the process can be found in BellSouth Interconnection Services Document entitled *BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package Version 2, July 25, 2000.*

[13] Details of the process can be found in the BellSouth Document entitled *Unbundled Loop Modifications CLEC Information Package, March 10, 2000.*

[14] *BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package Version 2, July 25, 2000,* Page 14.

Additionally, KCI used actual CLEC end-user customer addresses for pre-order testing. This was required to obtain actual customer loop characteristics that could not be simulated in the testing environment.

BellSouth Ordering Documentation (xDSL)

BellSouth xDSL LMU-SI and LSR/SI documentation provide the pre-ordering and ordering forms as well as the data characteristics, usage requirements, and valid entries for each data element.

Using test bed and pre-order information, and applying the ordering rules defined in BellSouth documentation, KCI developed an order test instance, or LSR. Each LSR was assigned a unique PON for BellSouth and KCI tracking purposes. The LSR was transmitted via facsimile or e-mail to BellSouth's Complex Resale Support Group (CRSG) account team.

When BellSouth receives the LSR/SI, BellSouth representatives perform validations to determine if the CLEC's service request is properly formatted and contains accurate data. In response to an erred LSR, BellSouth transmits a clarification or error message back to KCI. In response to a valid LSR/SI, BellSouth returns a Firm Order Confirmation (FOC) back to the CLEC.

2.2.2 Provisioning (xDSL)

ADSL[15] orders are provisioned either as new lines or as conversions[16]. For some conversions, BellSouth is unable to reuse the existing voice grade facilities because the ADSL orders require non-loaded copper loops. For technical reasons, ADSL service must be provisioned on a loop that is free of load coils, bridge taps, or repeaters.

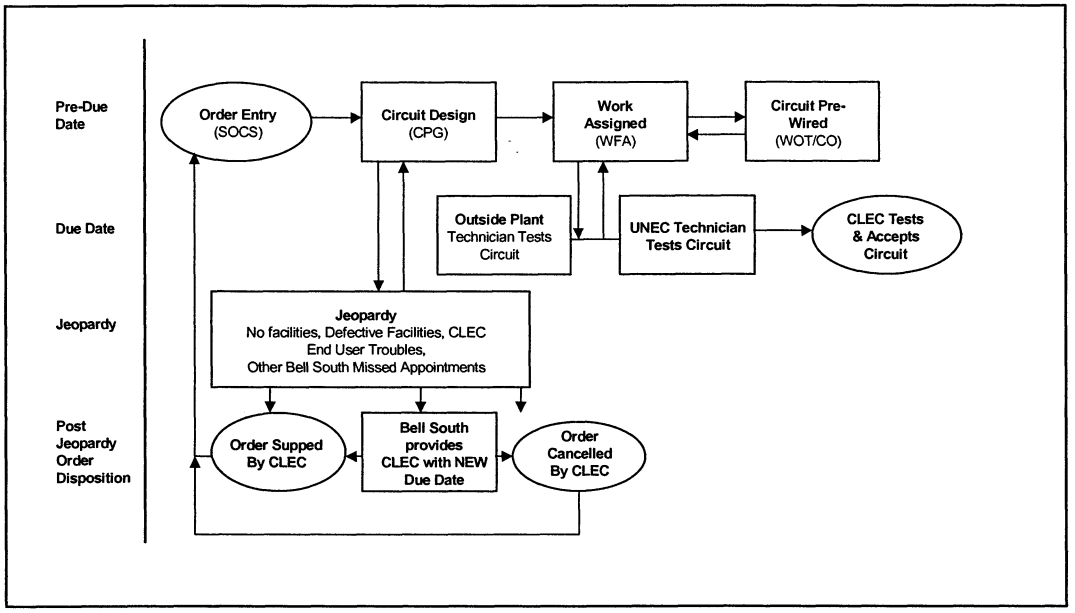
The ADSL provisioning process is overseen by the Unbundled Network Element Center (UNEC). BellSouth divides the provisioning process into two stages: 1) Pre-due date and 2) On due date.

The ADSL provisioning process flow is depicted in Figure IV-3.1 and described below.

[15] KCI observed the provisioning of actual CLEC orders due to limitations of the Psuedo-CLEC. The CLECs observed by KCI ordered ADSL capable loops.

[16] A "conversion" converts an existing BellSouth retail customer to a BellSouth wholesale customer.

Figure IV-3.1: ADSL Provisioning Process Flow



2.2.2.1 Pre-due date

The UNEC is required to check the work list in the Work Force Administration Control System (WFA/C) on the Operating Support System Order Information (OSSOI) screen for all new service orders three times a day. The new service order is verified in the Service Order Control System (SOCS), the Work Order Record Detail (WORD) document, and the Loopan Screen. The SOCS verification ensures that the order has passed through the required groups within BellSouth and the customer can be billed. The WORD document gives a detail record of the order including the required service and loop design. The Loopan Screen uses the information from the WORD.doc screen to verify the circuit including loop length and cable limits. The verification in these three areas ensures that the cable pair meets the Design Cable Limits and is ready for provisioning.

These requirements and procedures are defined in the Product Information section of the *Unbundled Network Elements Products, References, Systems and Links* book of the UNEC collection in Corporate Document and Information Access (CDIA) and the TR73600 (CDIA and TR73600 are BellSouth internal documentation tools used to define the provisioning processes, procedures, and design requirements). If the cable pair does not meet the requirements, the pair is then changed. To ensure coordination, the CLEC is contacted 24 to 48 hours before the due date to negotiate the time for the conversion. This step occurs even if new facilities are used. The final test is the Wire Office Test/Central Office (WOT/CO). This test ensures that the main distribution frame connecting the CLEC equipment to the customer cable pair has been wired.

2.2.2.2 On Due Date

The UNEC is responsible for ensuring that a field technician is assigned the order on the due date. The field technician completes the outside plant wiring and then calls the UNEC from the demarcation location (demarc) to complete the loop testing. The UNEC representative verifies that the load coil test has been completed by the technician. If load coils are found, the pair must be changed. The technician then supplies a short of 135 ohms termination at the demarcation. The UNEC uses the short to perform a loop test to verify continuity, foreign voltage, resistance, capacitance, and loop length. The UNEC performs calculations to derive the actual loop length. If the pair does not fall within the design requirements for any of these tests, the pair is changed. During the final test, the UNEC and the technician check the decibel loss limit to ensure that it does not exceed the limit specified for the type of circuit provided. The design requirements are presented in Table 1 below.

Table IV-3.1: ADSL Line Parameters

Type of service	Capacitance	Resistance	Loop Length	Foreign Voltage	DB Test
ADSL	<.286mF	< 1300 ohms	< 18Kft	<5VDC & 50VAC	<42DB@40Khz

These line parameters are taken from the *Unbundled Network Elements Products, Reference, Systems, and Links* book of the UNEC collection in CDIA and the TR73600. If the loss on the cable pair exceeds any of the defined limits, the pair should be changed. Once testing is completed, the demarcation location is recorded at the UNEC on the Operating Support System Circuit Notes (OSSCN) screen within the WFA/C system, and the CLEC is contacted to complete the line acceptance process. The UNEC and technician are required to wait 15 minutes for the CLEC to respond to a verification call. On the phone, the CLEC, UNEC, and technician verify that the circuit is acceptable and work together to address any issues that require additional action. After the circuit is tested and accepted, the demarcation location is relayed to the CLEC. The UNEC then updates the order in the WFA/C system and changes the status in SOCS to completed.

2.2.2.3 Jeopardy

When ADSL orders are delayed past the due date, the UNEC employs specific procedures to handle missed due dates depending on the cause of the delay. Delayed orders are defined to be in jeopardy and the orders follow the processes below until the issues are resolved.

There are three types of jeopardy covered in the BellSouth procedures: 1) BellSouth causes the delay, 2) the CLEC causes the delay, or 3) the End User causes the delay.

1. *BLS causes the delay.* (Generally, this is caused by the limitation of facilities available at the customer's location).

   A. *Conversion delay, (Non-Pending Facilities [PF]):*

   The UNEC informs the CLEC of the new date on which BellSouth will be ready to complete the installation. When the CLEC agrees that this date is acceptable, the UNEC enters a supplemental due date on all associated orders using the appropriate appointment code. The UNEC records the CLEC contact name on the service order. The information is entered in the WFA/C log and includes the jeopardy code and missed function code on the OSSOI or OSSGI screens.

   B. New Service Order delay, (Non-PF condition):

   The UNEC keeps the order in a pending status in SOCS, reflecting the present due date. BellSouth continues to escalate to the responsible BellSouth work centers until the order can be completed. When the due date is missed, the UNEC inputs the MFC (Missed Function Code) in the WFA log and the missed appointment code in SOCS. The CLEC is advised of the service order status and entries are placed into both the WFA log and SOCS.

   C. Pending Facility (PF) condition delay:

   PF delays due to BellSouth provided equipment or facilities are considered to be a BellSouth "miss" for the service order. Most PF statuses are applied to the service order early in the provisioning process before a due date is assigned. When the AFIG and outside plant engineers do not have the facilities for the service order, the order is placed in a PF status.

   PF conditions also occur on the due date, when the outside technician discovers defects[17] in either: a) the connection from the Main Distribution Frame to the first accessible cross connect box or customer terminal (F1) or b) the connection from the F1 termination to either the next cross connect box or customer terminal (F2) facility assigned to the order. The technician notifies the Address Facility Inventory Group (AFIG), which resolves cable discrepancies on service orders that fall out, of the need to place the order into a PF status. This drives the PF'd order to the Outside Plant Engineer (OSPE). The UNEC calls the CLEC to inform appropriate personnel of the service order status change, and advises the LCSC (Local Carrier Service Center) to contact the CLEC with a new due date when new facilities are identified.

[17] When defects are identified, the technician checks for additional spare facilities before assigning a PF condition.

2. *CLEC causes delay* (Generally occurs when the CLEC is unavailable to accept the completed order on the coordinated due date).

   A. For a new service order:

   When the CLEC causes the delay, the UNEC places the orders in a missed appointment status and enters the appropriate customer missed appointment code. In each of these cases, the CLEC is required to send in a supplemental order to re-establish a new due date. The UNEC then records the CLEC contact information in the SOCS remarks section of the service order. If the order is present in the WFA/C system, the contact information, in addition to the jeopardy and missed function codes, must be entered.

   B. For conversion service orders:

   When the CLEC causes the delay, the UNEC center places all orders except "Listing orders" into a missed appointment status. The UNEC then enters the appropriate customer missed appointment code. "Listing orders" must be assigned a supplemental order by the UNEC with a due date that exceeds a 60 day interval. The CLEC then must submit a supplemental service order to re-establish a new conversion due date. The UNEC records the CLEC contact information on the service order remarks screen in SOCS. If the order is present in WFA/C, the contact information, in addition to the jeopardy and missed function codes, must be entered.

3. *End-User causes delay* (Generally occurs when the demarcation location needed for installation is not accessible to the BellSouth technician and the customer is not available).

   A. For a new service order:

   When the end-user customer causes the delay, the UNEC places the order in a missed appointment status and enters the appropriate customer missed appointment code. In each of these cases the CLEC must submit a supplemental order to re-establish a new due date. The UNEC then records the end user contact information in the SOCS remarks section of the service order. If the order is present in the WFA/C system, the contact information, in addition to the jeopardy and missed function codes, must be entered.

   B. For conversion service orders:

   When the end user causes the delay, the UNEC center places all orders except "Listing orders" into a missed appointment status. The UNEC then enters the appropriate customer missed appointment code. "Listing orders" must be assigned a supplemental order by the UNEC with a due date that exceeds a 60-day interval. The CLEC then must submit a supplemental service order to re-establish a new conversion due date. The UNEC will record the end-user

contact information on the service order remarks screen in SOCS. If the order is present in WFA/C, the contact information, in addition to the jeopardy and missed function codes, must be entered.

2.3 *Scenarios*

Various PO&P-related scenarios were used to evaluate the PO&P processes and systems for Resale and xDSL. The *BellSouth - Georgia OSS Evaluation Supplemental Test Plan (STP)* defined the TAG/EDI resale pre-order and order scenarios to be tested in PO&P-11, and the xDSL pre-order and order scenarios to be tested in PO&P-12. The scenarios outline, at a high level, the specific products and services to be ordered and activity types to be requested. The scenarios also defined requirements for testing of different customer types (business and residential) and migration activity (partial and full migration[18]). Using these test scenario descriptions, KCI developed test cases for each scenario. The test cases contain a more-detailed description of the order. Each test case was used to generate one or more distinct service requests, or test instances, for specific end users.

The EDI and TAG Resale Functional Evaluation (PO&P11) scenarios covered the following Resale activity types:

Table IV-A: Resale Scenarios

Activity	Res. POTS	Bus. POTS	Res. ISDN-BRI	Bus. ISDN-BRI	PBX	Syn-chronet
Migration from BLS "as is"	X	X	X	X	X	
Feature changes to existing customer	X	X				
Migration from BLS "as specified"	X	X	X	X		
New customer	X	X			X	X[19]
Telephone number change	X	X				
Directory change	X	X				
Add lines/trunks/ circuits	X	X			X	
Suspend/restore service	X	X				
Disconnect (full and partial)	X	X	X	X	X	X
Moves (inside and outside)	X	X				

[18] A full migration converts all of a customer's lines to a new service provider. A CLEC requests a partial migration for a multi-line customer that wishes to retain at least one line with BellSouth.

[19] BLS supports electronic orders for new Synchronet service at speeds of 2.4, 4.8, and 9.6Kbps.

The xDSL Functional Evaluation (PO&P12) scenarios covered the following xDSL activity types:

Table IV-B: xDSL Scenarios

Activity	Res. xDSL-Capable Loop	Bus. xDSL-Capable Loop
Pre-Order		
Loop Makeup Service Inquiry	X	X
Order		
Migration from BLS to CLEC	X	X
Add new loops to existing customer	X	X
Purchase loops for a new customer	X	X
Disconnect	X	X

2.4 Test Bed

In order to provide KCI with a set of customers against which to submit service requests, BellSouth provided KCI with a test bed. BellSouth provisioned the test bed accounts according to specifications submitted by KCI. These requirements covered a range of customer starting states (e.g., BellSouth retail, CLEC resale), line counts (single and multi-line), service types (business, residential), and features (e.g., call waiting, return call, speed dial). The test bed accounts were established across a range of Central Offices (COs), covering different rate centers and switch types.

The test bed specifications submitted to BellSouth provided no indication of the subsequent order activity planned by KCI. In addition to the test bed accounts, BellSouth provided KCI with facility and customer information (cable-pair assignments, telephone numbers, and addresses) required to populate specific service requests.

The test bed was comprised of specific customer accounts and facility information provided by BellSouth. KCI received test bed account (built according to KCI specifications) information in the form of Customer Service Records (CSRs) that identified the end user's initial state, including information on the address, billing accounts, and existing services and equipment. BellSouth delivered test bed CSRs to KCI via a direct database extract process.

To execute xDSL activities, KCI, in collaboration with the GPSC, solicited the participation of actual CLECs currently doing business with BellSouth Georgia. As a pseudo-CLEC, KCI lacked access to the facilities needed to provision xDSL service. Therefore, KCI obtained assistance from CLECs possessing xDSL capability. These CLECs provided KCI with the opportunity to observe the provisioning activities of both the CLEC and BellSouth associated with randomly selected xDSL orders. Additionally,

KCI used live CLEC end-user customer addresses for pre-order testing. This practice was conducted to obtain actual customer loop characteristics that could not be simulated in the testing environment.

A. EDI and TAG Resale Functional Evaluation (PO&P11)

1.0 Description

The objective of the Electronic Data Interchange (EDI) and Telecommunications Access Gateway (TAG) Resale Functional Evaluation (PO&P11) was to evaluate the BellSouth Operational Support Systems (OSS) and processes associated with pre-ordering and ordering of Resale services by Competitive Local Exchange Carriers (CLECs). This test assessed the functionality of BellSouth's pre-ordering and ordering systems in processing pre-order queries and Local Service Requests (LSRs).

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a description of the BellSouth ordering process via TAG and EDI.

2.2 Scenarios

KCI generated and transmitted LSRs based on the Resale scenarios outlined in the BellSouth - Georgia OSS *Supplemental Test Plan* (*STP*). The EDI and TAG Resale Functional Evaluation (PO&P11) scenarios covered the following Resale activity types:

Table IV-1.1: Resale Test Scenarios

Activity	Res. POTS	Bus. POTS	Res. ISDN-BRI	Bus. ISDN-BRI	PBX	Syn-chronet
Migration from BLS "as is"	X	X	X	X	X	
Feature changes to existing customer	X	X				
Migration from BLS "as specified"	X	X	X	X		
New customer	X	X			X	X[1]
Telephone number change	X	X				
Directory change	X	X				
Add lines/trunks/ circuits	X	X			X	
Suspend/restore service	X	X				
Disconnect (full and partial)	X	X	X	X	X	X
Moves (inside and outside)	X	X				

[1] BellSouth supports electronic orders for new Synchronet® service at speeds of 2.4, 4.8, and 9.6Kbps.

Pre-Order activity was limited to the submission of requests for information required to complete the Resale orders.

2.3 *Test Targets & Measures*

The test target was the pre-ordering and ordering processes and sub-processes for Resale via the TAG and EDI interfaces. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addresses in Section 3.1 "Results & Analysis."

Table IV-1.2: Test Target Cross-Reference: EDI and TAG Resale Functional Evaluation

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Submit a Pre-Order	Send a pre-order	Presence of Functionality	PO&P-11-2-2
	Retrieve required information for submission of Resale order	Accuracy of Response	PO&P-11-4-1 PO&P-11-4-2
Submit an Order	Send order in LSR format	Presence of Functionality	PO&P-11-2-1 PO&P-11-2-3
	Receive acknowledgment	Timeliness of Response	PO&P-11-3-1a PO&P-11-3-1b
	Receive FOC/error/reject notification	Accuracy of Response	PO&P-11-4-3 PO&P-11-4-4 PO&P-11-4-5
		Clarity of Information	PO&P-11-4-3
		Timeliness of Response	PO&P-11-3-2a PO&P-11-3-2b PO&P-11-3-3a PO&P-11-3-3b PO&P-11-3-4a PO&P-11-3-4b PO&P-11-3-5a PO&P-11-3-5b
	Send expedited order transaction	Presence of Functionality	PO&P-11-2-1 PO&P-11-2-3
Submit a Supplement	Send supplement	Presence of Functionality	PO&P-11-2-1 PO&P-11-2-3
	Receive acknowledgment	Timeliness of Response	PO&P-11-3-1a PO&P-11-3-1b
	Receive FOC/error/reject notification	Accuracy of Response	PO&P-11-4-3 PO&P-11-4-4 PO&P-11-4-5

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Clarity of Information	PO&P-11-4-3 PO&P-11-4-4
		Timeliness of Response	PO&P-11-3-2a PO&P-11-3-2b PO&P-11-3-3a PO&P-11-3-3b PO&P-11-3-4a PO&P-11-3-4b PO&P-11-3-5a PO&P-11-3-5b
	Correct error(s)	Clarity of Information	PO&P-11-4-4
	Re-send supplement	Presence of Functionality	PO&P-11-2-1 PO&P-11-2-3
	Receive FOC	Accuracy of Response	PO&P-11-4-3
		Clarity of Information	PO&P-11-4-3
		Timeliness of Response	PO&P-11-3-4a PO&P-11-3-4b PO&P-11-3-5a PO&P-11-3-5b
Receive Completion Notice (CN)	Receive CN transaction	Accuracy of Response	PO&P-11-4-6
		Clarity of Information	PO&P-11-4-6
		Timeliness of Response	PO&P-11-3-6a PO&P-11-3-6b
Receive Jeopardy Notification	Receive Jeopardy notification/Missed Appointment transaction	Accuracy of Response	PO&P-11-3-5 PO&P-11-3-6
		Clarity of Information	PO&P-11-3-5 PO&P-11-3-6
		Timeliness of Response	PO&P-11-3-7 PO&P-11-3-8
Submit an Error	Send error in LSR format	Presence of Functionality	PO&P-11-2-1 PO&P-11-2-3
	Receive acknowledgement	Timeliness of Response	PO&P-11-3-1a PO&P-11-3-1b
	Receive planned error/reject notification	Accuracy of Response	PO&P-11-4-4
		Clarity of Information	PO&P-11-4-4
		Timeliness of Response	PO&P-11-3-2a PO&P-11-3-2b PO&P-11-3-3a PO&P-11-3-3b
	Correct error(s)	Clarity of Information	PO&P-11-4-4
	Re-send order	Presence of Functionality	PO&P-11-2-1 PO&P-11-2-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Receive FOC	Accuracy of Response	PO&P-11-4-3
		Clarity of Information	PO&P-11-4-3
		Timeliness of Response	PO&P-11-3-4a PO&P-11-3-4b PO&P-11-3-5a PO&P-11-3-5b

2.4 *Data Sources*

The data collected for this test are summarized in the table below.

Table IV-1.3: Data Sources for EDI and TAG Functional Evaluation

Document	File Name	Location in Work Papers	Source
Local Exchange Ordering (LEO) Implementation Guide, Volume 1. Issues 7L, 7M, 7N, 7O and 7P were utilized.	No Electronic Copy	PO&P-11-A-25	BLS
LEO Implementation Guide, Volume 2. Issue 6B, July 99	No Electronic Copy	PO&P-11-A-26	BLS
LEO Implementation Guide, Volume 3. Issue 3A, August 98	No Electronic Copy	PO&P-11-A-27	BLS
LEO Implementation Guide, Volume 4. Issue 7F October 99	No Electronic Copy	PO&P-11-A-28	BLS
Product and Services Interval Guide	No Electronic Copy	PO&P-11-A-29	BLS
Local Service Request Error Messages (Version TCIF 7)	POP11_errors.pdf	PO&P-11-A-4	BLS
CLEC Service Order Tracking System (CSOTS) *Users Guide*	POP11_csots.pdf	PO&P-11-A-1	BLS
KCI Company Codes and Billing Account Numbers	POP11_OCN.xls	PO&P-11-A-6	BLS
Initial State Customer Service Records (CSRs)	POP11_PreCSR.mdb	PO&P-11-A-10	BLS
Post-Order Activity CSRs	POP11_PostCSR.mdb	PO&P-11-A-11	BLS
Pending Order Status Job Aid	POP11_Pendingstat.pdf	PO&P-11-A-13	BLS
Additional Test Bed Addresses	POP11_newad.doc	PO&P-11-A-14	BLS
Resale Test Case Master	POP11_Testcasemaster.xls	PO&P-11-A-17	KCI
Order Transaction Submission Schedule	POP11_editagsced.xls	PO&P-11-A-18	KCI
KCI Help Desk Log	POP11_HelpDesklog.xls	PO&P-11-A-19	KCI
KCI Issues Log	POP11_TestIssues.xls	PO&P-11-A-20	KCI

Document	File Name	Location in Work Papers	Source
EDI System Availability Logs	POP11_EDIsystem.mdb	PO&P-11-A-22	HP
Expected Results Analysis - EDI	POP11_EDIExpected	PO&P-11-A-25	KCI
TAG System Availability Logs	POP11_TAGsystem.mdb	PO&P-11-A-26	HP
Expected Results Analysis - TAG	POP11_TAGExpected.mdb	PO&P-11-A-27	KCI

2.4.1 Data Generation/Volumes

Data for this test were generated through order transaction submission via EDI and TAG. The number of transactions submitted during functional testing was determined based on the number of different requisition and activity (REQ ACT) type combinations available to CLECs via the EDI and TAG interfaces.

This test is a feature function test and did not rely on volume testing.

2.5 Evaluation Methods

To allow for service request submission, BellSouth provided KCI with test bed accounts that were provisioned according to KCI's specification[2]. Test cases and instances, equivalent to Local Service Requests (LSRs), were developed using test bed accounts, pre-order data and BellSouth ordering documentation, which included the *Local Exchange Ordering Guide (LEO), Volume 1.*

KCI submitted order transactions according to a pre-defined schedule. Pre-order queries were submitted for requests for information required to complete the Resale orders. KCI evaluated transaction responses to determine if BellSouth systems and representatives provided the pre-order and order functionality described in BellSouth documentation. Transaction responses were evaluated for consistency with the BellSouth pre-order and order Business Rules. In addition, KCI evaluated the timeliness, accuracy, and completeness of transaction responses.

2.6 Analysis Methods

The EDI and TAG Functional Evaluation included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth - GA OSS Evaluation. The evaluation criteria provided the framework of norms, standards, and guidelines for the EDI and TAG Functional Evaluation.

The Georgia Public Service Commission (GPSC) voted on June 6, 2000 to approve a set of Service Quality Measurement- (SQM-) related measures and standards to be used for

[2] See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a detailed description of the Ordering and Provisioning test bed.

purposes of this evaluation[3]. Where applicable, results for this evaluation that map to an SQM were calculated based on Hewlett Packard/KCI time stamps, which may differ significantly from the time measurement points reported in the SQMs[4]. For those evaluation criteria that do not map to the GPSC-approved measures, or where BellSouth does not specify and publish a standard business interval for a given procedure, KCI applied its own standard, based on our professional judgment.

For quantitative evaluation criteria where the test result did not meet or exceed the established standard or KCI benchmark, KCI conducted a review to determine whether the differential was statistically significant.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

[3] On October 30, 2000, the GPSC issued an order requiring BellSouth to report for business purposes a set of measures that differs in some cases from the requirements of the June 6, 2000 test standards.

[4] For example, for an LSR, BellSouth records the time received and the time a corresponding FOC or ERR is sent. HP/KCI measures the time an LSR is sent, and the time a corresponding FOC or ERR is received. In most cases, we would expect these times to correspond roughly, allowing for factors such as queuing and transmission time. In some cases, these times may differ significantly as a result of system downtime, network congestion, etc.

Table IV-1.4: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Interface Availability			
PO&P-11-1-1	TAG and EDI order transaction capability is consistently available during scheduled hours of operation.	Satisfied	The GPSC approved standard is 99.5% system availability during scheduled hours of operation[5]. During the course of this test, Hewlett Packard attempted to maintain a constant connection to BLS's EDI and TAG interfaces by implementing regular system 'pinging'. Based on an analysis of HP's EDI system availability logs between 2/7/00 and 7/27/00[6], KCI observed that the EDI interface was available during 98.6% of scheduled hours of availability[7]. Based on an analysis of HP's TAG system availability logs between 2/15/00 and 7/27/00[8], KCI observed that the TAG interface was available during 99.5% of scheduled hours of availability.
System Functionality			
PO&P-11-2-1	The TAG and EDI interface provides expected system responses.	Satisfied	The KCI standard is 99% of expected system and representative response received. Of the 644[9] order transactions submitted during the Functional Evaluation, 99.7% received responses (functional acknowledgements, subsequent errors or confirmations, and expected completion

[5] Regular scheduled hours of availability for the TAG interface are published on the Interconnection Web site (www.interconnection.bellsouth.com/oss/oss_hour.html). Notices of specific scheduled system downtime (e.g., for a new system release or fix) are communicated through Carrier Notifications posted on the BellSouth Web site.

[6] HP maintained detailed logs of EDI system availability beginning on 2/7/00. Comprehensive system availability data for the test period prior to this date is unavailable.

[7] KCI could not conclusively determine the root cause (BellSouth or CLEC) of all recorded downtime.

[8] HP maintained detailed logs of TAG system availability beginning on 2/15/00. Comprehensive system availability data for the test period prior to this date is unavailable.

[9] This number does not include those transactions receiving interface errors (i.e., those that did not reach BellSouth back-end systems).

[10] Responses (FOCs) for two electronically-submitted LSRs were received via Fax. Of these, one LSR subsequently received an electronic FOC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			notifications) from BLS[10].
PO&P-11-2-2	BLS systems and representatives provide required Pre-order functionality for Resale-specific inquiries.[11]	Satisfied	BLS systems and representatives provided appropriate functionality to process Resale-related pre-order transaction types evaluated during the course of this test.
PO&P-11-2-3	BLS systems and representatives provide required Resale order functionality.	Satisfied	BLS systems and representatives provided appropriate functionality to process electronically-orderable Synchronet, PBX, ISDN, and OS/DA transaction types. The following deficiencies in Resale ordering functionality were observed: Some Universal Service Order Code (USOC) changes were not communicated to the CLEC in an adequate or timely manner. When attempting to assign USOCs NXMCR and ESXDC, KCI discovered that they had been replaced with USOC N1ACR[12]. KCI was unable to find any documentation related to this change at the time the order was placed. See Exception 49 for additional information on this issue. In response to this exception, BLS developed a policy of providing monthly advanced carrier notification of new and obsolete USOCs. Based on testing of this procedural change, KCI has recommended closure of Exception 49 to the GPSC. Exception 49 is closed. On 10 occasions, BLS ordering representatives modified the TNs requested on an LSR[13]. BLS returned the newly assigned/replacement TNs

[11] KCI performed a number of pre-order transaction types in order to validate customer information or to obtain data needed to process subsequent orders. Complete results of pre-order testing are presented in PRE-1: Pre-Order Functional Evaluation. Functionality associated with those pre-order transaction types containing Resale-specific indicators (CSRQ, CDD, and SAQ) were evaluated in this POP-11 report.

[12] USOC NXMCR is Caller ID Name and Number with Anonymous Call Rejection (ACR). ESXDC is Call Waiting Deluxe with conferencing. N1ACR is Enhanced Caller ID with Call Management, with ACR.

[13] KCI selected these TNs through electronic pre-order queries. BellSouth determined these TNs to be unavailable or invalid at the time of service request receipt (KCI's reservations had 'expired').

Test Cross-Reference	Evaluation Criteria	Result	Comments
			on the FOC response. BLS documentation does not outline this procedure. The deficiencies noted are not significant enough to affect the overall evaluation.
Timeliness of Response [14]			
PO&P-11-3-1a	BLS's EDI interface provides timely Functional Acknowledgements (FAs)[15].	Satisfied	The KCI standard is 95% of FAs received within 30 minutes. LSRs submitted via EDI during initial testing received FAs within the following timeframes: • 58% of 359 FAs were received in less than 30 minutes. • An additional 25% were received within 60 minutes and 9% more within 90 minutes. • The remaining 8% were received in greater than 90 minutes. KCI initiated a re-test of FA Timeliness on January 19, 2001. This re-test was designed to evaluate BLS's recent EDI infrastructure changes[16]. LSRs submitted during re-testing received FAs within the following timeframes: • 99% of 230 FAs were received within 30 minutes. See Exception 60 for additional information on this issue. KCI has recommended closure of Exception

[14] During the course of this evaluation, KCI conducted a re-test to address BellSouth performance relative to select 'response timeliness' criteria. The re-test commenced on January 19, 2001, following BellSouth EDI infrastructure changes. A description of the BellSouth EDI infrastructure modifications can be found in BellSouth's Carrier Notification SN91082007. BellSouth also implemented an EDI change *during the course of* the re-test. On February 2, 2001, BellSouth modified the time intervals for the process consolidating EDI transactions into a single file for pickup by the LEO system. The process was modified to run every 5 minutes (between 6AM-8PM CST) and every 10 minutes (after 8PM and before 6AM); previously, this process ran every 15 minutes. While KCI's evaluation result is determined based on total results for the latest related re-test, data on BellSouth performance after implementation of a mid-test fix is provided for information purposes.

[15] BellSouth documentation does not provide any information on the expected interval for return of an FA.

[16] A description of the BellSouth EDI infrastructure modifications can be found in BellSouth's Carrier Notification SN91082007.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			60 to the GPSC.
PO&P-11-3-1b	BLS's TAG interface provides timely Functional Acknowledgements (FAs)[17].	Satisfied	The KCI standard is 95% of FAs received within 30 minutes. LSRs submitted via TAG received FAs within the following timeframes: • 99% of 285 FAs were received in less than 30 minutes. • 100% of 285 FAs were received in less than one hour.
PO&P-11-3-2a	BLS's EDI interface provides timely Fully Mechanized (FM) order errors (Fatal Rejects and Auto Clarifications).	Not Satisfied	The GPSC-approved standard for fully mechanized (FM) errors is 97% received within one hour[18]. LSRs submitted during initial EDI functional testing received FM errors within the following time frames (See Table IV-1.5): • 9% of FM errors were received in less than one hour. • An additional 61% were received within 2 hours. KCI initiated a re-test of FM error timeliness on January 19, 2001. LSRs submitted during re-testing received FM errors via EDI within the following timeframes (See Table IV-1.6): • 85% of FM errors were received in less than 1 hour. An additional 8% were received within 2 hours.[19] See Exception 77 for additional information on this issue. As no subsequent re-testing activities are planned, KCI has recommended closure of Exception 77 to the GPSC.

[17] BellSouth documentation does not provide any information on the expected interval for return of an FA.

[18] Results are based on the actual Flow-Through status of LSRs submitted by KCI. KCI determined that an error was fully mechanized (FM) or partially/non-mechanized (PM) by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. KCI also created an algorithm, based on BellSouth Flow-Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FM/PM classification.

[19] BellSouth implemented a modification to its EDI systems on 2/2/01 (see Footnote 14 for additional information). 84% of FM errors received via EDI following this fix were delivered within 1 hour.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-11-3-2b	BLS's TAG interface provides timely Fully Mechanized (FM) order errors (Fatal Rejects and Auto Clarifications).	Satisfied	The GPSC-approved standard for fully mechanized (FM) errors is 97% received within one hour[18]. LSRs submitted for TAG functional testing received FM errors within the following timeframes (See Table IV-1.5): ▪ 100% of FM errors were received in less than one hour.
PO&P-11-3-3a	BLS's EDI interface provides timely Partially Mechanized (PM) order clarifications (CLRs).	Satisfied[20]	The GPSC-approved standard for partially mechanized (PM) CLRs is 85% received within 24 hours[18]. LSRs submitted for EDI functional testing received PM CLRs within the following timeframes (See Table IV-1.5): ▪ 83% of PM CLRs were received in less than 24 hours. ▪ An additional 16% were received within 48 hours.
PO&P-11-3-3b	BLS's TAG interface provides timely Partially Mechanized (PM) order clarifications (CLRs).	Not Satisfied	The GPSC-approved standard for partially mechanized (PM) CLRs is 85% received within 24 hours[18]. LSRs submitted for TAG functional testing received PM CLRs within the following timeframes (See Table IV-1.5): ▪ 72% of PM CLRs were received in less than 24 hours. ▪ An additional 22% were received within 48 hours. See Exception 98 for additional information on this issue[21]. As no subsequent re-testing activities are planned, KCI has recommended closure of Exception 98 to the GPSC.

[20] Although the test percentage is below the benchmark of 85%, the statistical evidence is NOT strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the substandard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0. 1339, above the .0500 cutoff for a statistical conclusion of failure.

[21] KCI did not perform a re-test of Resale PM CLR timeliness. KCI did submit transactions for UNE service to re-test error timeliness. See O&P-1-3-2b and O&P-2-3-2b for additional information and results of UNE re-test activities.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-11-3-4a	BLS's EDI interface provides timely Flow-Through (FT) Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for Flow- Through (FT) FOCs is 95% received within three hours[22]. LSRs submitted during initial EDI functional testing received FT FOCs within the following timeframes (See Table IV-1.7): ▪ 76% of FOCs were received in less than 3 hours. ▪ An additional 11% were received within 4 hours. KCI initiated a re-test of FT FOC timeliness on January 15, 2001. LSRs submitted during retesting received FT FOCs via EDI within the following timeframes (See Table IV-1.8): ▪ 95% of FOCs were received in less than 3 hours.[23] See Exception 78 for additional information on this issue. The issues in Exception 78 that relate to this criterion are resolved.
PO&P-11-3-4b	BLS's TAG interface provides timely Flow-Through (FT) Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for Flow- Through (FT) FOCs is 95% received within three hours[22]. LSRs submitted for TAG functional testing received FOCs within the following timeframes (See Table IV-1.7): ▪ 99% of FOCs were received in less than three hours for FT LSRs.
PO&P-11-3-5a	BLS's EDI interface provides timely Non-Flow-Through (NFT) Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for Non-Flow-Through (NFT) FOCs is 85% received within 36 hours[22]. LSRs submitted for EDI functional testing received NFT FOCs within the

[22] Results are based on actual Flow-Through (FT) and Non-Flow-Through (NFT) performance of LSRs submitted by KCI. KCI determined that a FOC was FT or NFT by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. KCI also created an algorithm, based on BellSouth Flow-Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FT/NFT classification.

[23] BellSouth implemented a modification to its EDI systems on 2/2/01 (see Footnote 14 for additional information). 93% of FT FOCs received via EDI following this fix were delivered within 3 hours.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			following timeframes (See Table IV-1.7): ▪ 88% of FOCs were received in less than 36 hours for NFT LSRs. ▪ An additional 9% were received within 48 hours.
PO&P-11-3-5b	BLS's TAG interface provides timely Non-Flow-Through (NFT) Firm Order Confirmations (FOCs).	Satisfied	The GPSC-approved standard for Non-Flow-Through (NFT) FOCs is 85% received within 36 hours[22]. LSRs submitted for TAG functional testing received NFT FOCs within the following timeframes (See Table IV-1.7): ▪ 91% of FOCs were received in less than 36 hours for NFT LSRs. ▪ An additional 7% were received within 48 hours.
PO&P-11-3-6a	BLS's EDI interface provides timely Completion Notifications (CNs).	No Result Determination Made[24]	BLS delivers CNs upon the conclusion of "field provisioning"[25] activities as well as all subsequent downstream (listing and billing) provisioning activities. Within the CN, BLS provides the field provisioning completion date (located in the 'DD' field). BLS does not offer a guideline for the standard interval between field and billing completion activities. LSRs submitted for functional testing received CNs within the following timeframes (See Tables IV-1.9)[26]: ▪ 98% of CNs delivered via EDI were received within one business day after the field provisioning completion date. ▪ 1% was received within three to five business days. ▪ The remaining 2% were received within six or more days following field provisioning completion.

[24] KCI is unable to provide a result for this criterion and provides the test results as diagnostic information. Although the GPSC Service Quality Measurement (SQM), 'Average Completion Notice Interval' is related to CN delivery and has an associated standard of "Parity with Retail," KCI is unable to accurately compare its functional

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-11-3-6b	BLS's TAG interface provides timely Completion Notifications (CNs).	No Result Determination Made[24]	BLS delivers CNs upon the conclusion of "field provisioning"[27] activities as well as all subsequent downstream (listing and billing) provisioning activities. Within the CN, BLS provides the field provisioning completion date (located in the 'DD' field). BLS does not offer a guideline for the standard interval between field and billing completion activities. LSRs submitted for functional testing received CNs within the following timeframes (See Tables IV-1.9): ▪ 89% of CNs delivered via TAG were received one business day after the field provisioning completion date. ▪ 3% were received within 2 business days after field provisioning completion. ▪ 4% were received within three-to-five business days following field provisioning completion. ▪ The remaining 3% were received in six or more business days following field provisioning completion.

transaction results to this SQM within a reasonable degree of accuracy. BellSouth calculates this metric using the following data points: 1) Completion date and time (as entered by a BellSouth field technician for dispatched orders or 5pm on the due date for non-dispatched orders); and 2) Date and time of conclusion of all downstream (listing, billing, and - for LNP orders - TN porting) activities. Within the CN response file delivered to CLECs, BellSouth provides the work completion date (but not the time); BellSouth does not provide a date/time stamp associated with downstream provisioning completion. While the CN Timeliness results calculated using CLEC data measurement points (and presented in the comment section of this criterion) provide a reasonable representation of the time between receipt of a CN and completion of field provisioning activities, the differences between KCI and BLS calculation points is large enough to prevent an accurate assignment of a Satisfied/Not Satisfied result relative to the SQM standard.

[25] The "field provisioning" date is defined as the date on which actual service completion occurred.

[26] Totals do not equal 100% due to rounding.

[27] The "field provisioning" date is defined as the date on which actual service completion occurred.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-11-3-7	BLS's TAG and EDI interface provides timely Jeopardy Notifications.	No Result Determination Made[28]	The GPSC-approved standard is 95% of Jeopardy Notifications received at least 48 hours before the confirmed Due Date (DD). KCI received one Jeopardy Notification during the course of this Resale test. The Jeopardy was delivered one month after the Due Date provided on BLS's confirmation response.
PO&P-11-3-8	BLS's TAG and EDI interface provides Missed Appointment (MA) notifications within agreed upon standard intervals.	No Result Determination Made [28]	The KCI standard is 95% of MA notifications received within one business day after the latest confirmed Due Date (DD). The two MA notices received during the course of this test were returned within one business day after the DD.
Accuracy of Response			
PO&P-11-4-1	BLS systems and representatives provide clear, accurate, and complete pre-order responses.	Satisfied	A sample of pre-order responses was examined for clarity, completeness, and accuracy relative to the BLS Business Rules. Pre-order responses were complete with respect to BLS Business Rule requirements in most cases. CDD query responses were missing the value in the INQNUM data element, a value initially required according to the Pre-Order Business Rules. BLS updated its Business Rules on 10/9/00 to remove this field from the CDD response list. See Exception 66 for additional information on this issue. Exception 66 is closed. KCI also encountered discrepancies between service due date intervals obtained via CDD queries and those presented in BLS documentation for the same order type. See Exception 71 for additional information on this issue. BLS performed several activities to correct these discrepancies: ▪ A change was implemented on

[28] Result not provided due to statistically insignificant sample size.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			July 21, 2000 to update internal tables used to generate CDD response intervals. ▪ BLS introduced modifications in TAG Version 2.2.11 to correct errors in generating CDD intervals for Resale requests. ▪ BLS updated its Product and Services Interval Guide to include standard intervals for Directory Listing requests (REQ TYPE J). KCI performed a re-test to evaluate BLS changes in TAG 2.2.0.11. CDD queries covering the range of electronically-available Resale order types were submitted, and the CDD interval responses were compared to the intervals provided in BLS documentation. Following this re-test, KCI observed a continued interval discrepancy on line feature addition service requests. While the CDD pre-order provides intervals in line with BLS documentation for standard order types, the CDD query does not allow data inputs to sufficiently identify a more detailed service request type variation. For example, the service interval for a feature change differs based on whether the change requires a technician dispatch or not. No field within the CDD pre-order allows the CLEC to provide the level of detail needed to differentiate between a non-dispatch and a dispatch service request. The deficiency noted is not significant enough to affect the overall evaluation. See Exception 71 for additional information on this issue. KCI has recommended closure of Exception 71 to the GPSC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-11-4-2	BLS systems and representatives provide clear, accurate, and complete Pre-Order error messages.	Satisfied	A sample of pre-order errors was examined for clarity, completeness, and accuracy relative to the BLS Business Rules. Error messages were received only in response to invalid pre-order requests. Pre-order error responses were complete with respect to BLS Business Rule requirements. Additionally, error remarks provided an adequate level of information to determine the cause of error.
PO&P-11-4-3	BLS systems and representatives provide clear, accurate, and complete Firm Order Confirmations (FOCs).	Not Satisfied	A sample of FOCs received via TAG and EDI was examined for clarity, accuracy, and completeness relative to the BLS business rules (*Local Exchange Ordering [LEO] Implementation Guide*, Volume 1). In some cases, the FOCs analyzed were received in response to invalid LSRs. During initial functional testing, a number of FOCs were received in response to invalid service requests for Directory Listing changes. BLS should have delivered error messages in these instances. In response to this issue, BLS submitted an internal change request for prioritization into a future software release. This system edit is designed to clarify an order when the only activity is a listing change and the REQTYP is other than J. During KCI's functional re-test, additional occurrences of inaccurate Resale FOCs were noted.[29] LSRs submitted with incorrect information in required data fields received FOCs. See Exception 95 for additional information. During KCI's initial review of FOC

[29] This re-test was initiated to address deficiencies identified in other evaluation criteria; however, results were monitored across all relevant evaluation criteria.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			completeness, the *LEO Guide* (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[30]. On 1/31/01, BLS issued a modified *LEO Guide* (Issue 7U) that included additional usage information for response transactions. Based on this updated documentation, KCI validated that all expected data fields were populated on FOC responses. See Exception 68 for additional information on this issue. KCI has recommended closure of Exception 68 to the GPSC.
PO&P-11-4-4	BLS systems and representatives provide clear, accurate and complete order errors and clarifications (CLRs).	Not Satisfied	A sample of error messages received via TAG and EDI was examined for clarity, accuracy, and completeness relative to the BLS business rules. During initial testing, KCI observed a number of inaccurate CLRs received for valid transactions. Of the CLRs reviewed, 97% were confirmed as accurate (i.e., received for transactions containing errors). For the remaining 3%, BLS informed KCI that the ordering representatives had incorrectly issued clarifications. KCI was able to receive FOCs on supplemental service requests submitted to these instances. During the functional re-test, however, KCI noted additional inaccurate CLRs on EDI orders.[31] The majority of these CLRs contained an error message stating that KCI had invalid data in its RTR (Response Type Requested) data element. KCI's RTR entry of "C" conformed to BLS business rules requirements[32]. BLS has indicated that these invalid CLRs

[30] The following response fields had inadequate usage requirements: ORD, RORD, FDT, EBD, LOCBAN, BAN1, BAN2. For these fields, KCI was unable to determine what the "expected" results should be.

[31] This re-test was initiated to address deficiencies identified in other evaluation criteria; however, results were monitored across all relevant evaluation criteria.

[32] Prior to transmission to BellSouth, this RTR value of "C" gets translated into "AT" in conformance with EDI technical specifications.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			resulted from ordering representative errors. On 2/9/01, BLS provided training for its representatives on appropriate RTR entries.[33] See Exception 132 for additional information on this issue. KCI has recommended closure of Exception 132 to the GPSC. During KCI's initial review of error completeness, the *LEO Guide* (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[34]. On 1/31/01, BLS issued a modified *LEO Guide* (Issue 7U) that included additional usage information for response transactions. Based on this updated documentation, KCI validated that all expected data fields were populated on error responses. See Exception 68 for additional information on this issue. KCI has recommended closure of Exception 68 to the GPSC. This criterion has been assigned a Not Satisfied as a result of the inaccurate CLRs noted above.
PO&P-11-4-5	Service order provisioning due dates identified within BLS's order confirmation (FOC DDs[35]) delivered through TAG and EDI are consistent with the CLEC's valid due date (LSR DDD[36]) request	No Result Determination Made[37]	KCI obtained valid DDD information for population on an LSR from one of two sources: BLS *Product and Services Interval Guide.* A combination of pre-order queries. KCI performed a Calculate Due Date (CDD) query to determine the earliest

[33] BellSouth representatives were viewing KCI RTR entries as "AT", the EDI field value, and sending Clarifications because the value did not match "C", the Business Rule requirement. BellSouth training on 2/9/01 covered representatives on valid EDI entries for this field. KCI did not have a large enough sample size of transactions submitted following 2/9/01 to evaluate the effects of BellSouth representative training.

[34] The following response fields have inadequate usage requirements: ORD, RORD, FDT, EBD, LOCBAN, BAN1, BAN2. For these fields, KCI was unable to determine what the "expected" results should be.

[35] FOC Due Date (DD) is defined as the due date provided in the FOC. It is the date on which BellSouth commits to complete provisioning of a customer's service.

[36] LSR Desired Due Date (LSR DDD) is defined as the due date requested in a customer's LSR. KCI calculated this date using BellSouth' *Product and Services Interval Guide.*

Test Cross-Reference	Evaluation Criteria	Result	Comments
	(e.g., a due date selected in accordance with the product's standard interval or acquired from a Calculate Due Date [CDD] pre-order query.)		possible due date for an order type. An Appointment Availability Query (AAQ) was then run to confirm that the appointment time was available in the necessary Central Office[38]. For EDI LSRs populated with a DDD obtained from BLS documentation[39]: ▪ 88% of DDs were equal to the LSR DDD; ▪ 7% of DDs were earlier than the LSR DDD; ▪ 5% of DDs were later than the LSR DDD. For EDI LSRs populated with a DDD obtained from electronic pre-order queries: ▪ 83% of DDs were equal to the LSR DDD; ▪ 17% of DDs were later than the LSR DDD. For TAG LSRs populated with a DDD obtained from BLS documentation: ▪ 82% of DDs were equal to the LSR DDD; ▪ 15% of DDs were earlier than the LSR DDD; ▪ 3% of DDs were later than the LSR DDD. For TAG LSRs populated with a DDD obtained from electronic pre-order queries: ▪ 77% of DDs were equal to the

[37] A Georgia Service Quality Measurement (SQM) addressing the correlation between confirmed due dates and requested due dates does not exist. In addition, BellSouth does not have an established commitment or guideline for the percentage of confirmed due dates that should equal the requested due date. In the absence of an SQM-related benchmark, a BellSouth-defined guideline, or general industry-approved standards or business rule thresholds that can be used for evaluation purposes, KCI provided the test results as diagnostic information only.

[38] See PO&P-11-4-1 and Exception 71 for additional information on discrepancies uncovered between CDD pre-order responses and standard interval documentation. BellSouth implemented system enhancements in TAG Version 2.2.11 to address the service intervals returned in response to a CDD query for Resale services. Due Date accuracy results for those LSRs using pre-order responses as input for the DDD are likely affected by these discrepancies.

[39] LSRs for which KCI requested an invalid DDD (i.e., earlier than the documented or pre-order-obtained standard interval) have been excluded from this analysis.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			LSR DDD; ▪ 23% of DDs were later than the LSR DDD. See Exception 38 and Table V-1.10 for additional detail on due date accuracy. KCI has recommended closure of Exception 38 to the GPSC.
PO&P-11-4-6	BLS systems and representatives provide clear, accurate, and complete Completion Notifications (CNs).	Satisfied	A sample of CNs received via TAG and EDI was examined for clarity, accuracy, and completeness relative to the BLS Business Rules. CNs received were accurate response types relative to the LSR (i.e., received in response to a completed order). During KCI's initial review of CN completeness, the *BellSouth Business Rules* (Issue 7S) did not adequately define usage requirements, by specific order types, for some response fields[40]. On 1/31/01, BLS issued a modified *LEO Guide* (Issue 7U) that included additional usage information for response transactions. Based on this updated documentation, KCI validated that all expected data fields were populated on CN responses. See Exception 68 for additional information on this issue. KCI has recommended closure of Exception 68 to the GPSC.

[40] The following response fields have inadequate usage requirements: ORD, RORD, FDT, EBD, LOCBAN, BAN1, BAN2. For these fields, KCI was unable to determine what the "expected" results should be.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-11-4-7	BLS service orders tracking systems (CSOTS) provide accurate LSR status.	Satisfied	KCI compared a sample of order status queries in CSOTS to the order status reflected in KCI's Order Management Tool (i.e., the most recent response file message received by KCI). Based on this sampling, CSOTS queries (Confirmed, Pending, or Completed) matched the responses received by KCI in most cases. On two orders, KCI received completion dates that did not match the completion date identified in CSOTS. On an additional three orders, CSOTS showed a complete status although KCI did not receive electronic completion notification. The deficiencies noted are not enough to affect the overall evaluation. In response to this issue, BLS opened a feature change request to populate the CN completion date with the date on which the last BLS service order completes. A target date for implementation of this feature has not yet been established. See Exception 125 for additional information on this issue. KCI has recommended closure of Exception 125 to the GPSC.

Table IV-1.5 Part 1: Error/Clarification Timeliness, Summary View - Initial Test Data

Clarification Timeliness Detail - EDI Aggregate								
Fully Mechanized								
	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	>48 hrs	>72 hrs
FM	4	27	10	3	0	0	0	0
% FM	9%	61%	23%	7%	0%	0%	0%	0%
Partially Mechanized								
				<24hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
PM				88	16	1	1	0
% PM				83%	15%	1%	1%	0%

Clarification Timeliness Detail - TAG Aggregate								
Fully Mechanized								
	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	>48 hrs	>72 hrs
FM	32	0	0	0	0	0	0	0
% FM	100%	0%	0%	0%	0%	0%	0%	0%
Partially Mechanized								
				<24hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
PM				72	11	11	2	4
% PM				72%	11%	11%	2%	4%

Table IV-1.5 Part 2: Clarification Timeliness, Disaggregated View - Initial Test Data

Clarification Timeliness Detail - EDI Disaggregated View								
Fully Mechanized								
Service Type	**<1 hr**	**1-2 hrs**	**2-4 hrs**	**4-12 hrs**	**12-24 hrs**	**24-48 hrs**	**>48 hrs**	**>72 hrs**
Bus. POTS circuits <10	2	15	4	1	0	0	0	0
% Bus. POTS circuits <10	9%	68%	18%	5%	0%	0%	0%	0%
Res. POTS circuits <10	2	11	6	2	0	0	0	0
% Res. POTS circuits <10	10%	52%	29%	10%	0%	0%	0%	0%
Res. ISDN	0	1	0	0	0	0	0	0
% Res. ISDN	0%	100%	0%	0%	0%	0%	0%	0%
TOTALS	**4**	**27**	**10**	**3**	**0**	**0**	**0**	**0**
	9%	**61%**	**23%**	**7%**	**0%**	**0%**	**0%**	**0%**
Partially Mechanized								
Service Type					**< 24 hrs**	**24-48 hrs**	**>48 hrs**	**>72 hrs**
Bus. POTS circuits <10					41	8	0	0
% Bus. POTS circuits <10					84%	16%	0%	0%
Bus. POTS circuits >= 10					1	1	0	0
% Bus. POTS circuits >= 10					50%	50%	0%	0%
Bus. ISDN					6	1	0	0
% Bus. ISDN					86%	14%	0%	0%
Bus. PBX >= 10					2	0	0	0
% Bus. PBX >= 10					100%	0%	0%	0%
Res. POTS circuits < 10					29	5	1	2
% Res. POTS circuits < 10					78%	14%	3%	5%
Res. ISDN					8	2	0	1
% Res. ISDN					73%	18%	0%	9%
TOTALS					**87**	**17**	**1**	**3**
					81%	**16%**	**1%**	**3%**
Clarification Timeliness Detail - TAG Disaggregated View								
Fully Mechanized								
Service Type	**<1 hr**	**1-2 hrs**	**2-4 hrs**	**4-12 hrs**	**12-24 hrs**	**24-48 hrs**	**>48 hrs**	**>72 hrs**
Bus. POTS circuits <10	12	0	0	0	0	0	0	0
% Bus. POTS circuits <10	100%	0%	0%	0%	0%	0%	0%	0%
Bus. ISDN circuits <10	2	0	0	0	0	0	0	0
% Bus. ISDN circuits <10	100%	0%	0%	0%	0%	0%	0%	0%
Res. POTS circuits <10	13	0	0	0	0	0	0	0
% Res. POTS circuits <10	100%	0%	0%	0%	0%	0%	0%	0%
Res. POTS circuits < 10	5	0	0	0	0	0	0	0

Clarification Timeliness Detail - EDI Disaggregated View								
%Res. POTS circuits < 10	100%	0%	0%	0%	0%	0%	0%	0%
TOTALS	32	0	0	0	0	0	0	0
	100%	0%	0%	0%	0%	0%	0%	0%
Partially Mechanized								
Service Type					< 24 hrs	24-48 hrs	>48 hrs	>72 hrs
Bus. POTS circuits <10					39	9	1	1
% Bus. POTS circuits <10					78%	18%	2%	2%
Bus. ISDN circuits < 10					3	1	0	1
% Bus. ISDN circuits < 10					60%	20%	0%	20%
Bus. PBX circuits < 10					0	1	0	0
% Bus. PBX circuits < 10					0%	100%	0%	0%
Bus. PBX circuits >= 10					1	1	1	0
% Bus. PBX circuits >= 10					33%	33%	33%	0%
Res. POTS circuits < 10					20	2	0	3
% Res. POTS circuits < 10					80%	8%	0%	12%
Res. ISDN					7	4	0	1
% Res. ISDN					58%	33%	0%	8%
TOTALS					70	18	2	6
					73%	19%	2%	6%

Notes:
(Notes apply to Table IV-1.5, Parts 1 and 2)

1. A fully mechanized (FM) response occurs when an electronically submitted LSR receives a clarification generated by BellSouth systems with no manual intervention. FM responses include Fatal Rejects and Auto Clarifications.
2. A partially mechanized (PM) response occurs when an electronically submitted LSR falls out for manual handling and receives a clarification generated by a BellSouth representative. PM responses include LCSC-issued Clarifications.
3. Results are based on the actual performance of LSRs submitted by KCI. KCI determined that a clarification was fully mechanized or partially/non-mechanized by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. KCI also created an algorithm, based on BellSouth Flow Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FM/PM classification.
4. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
5. The disaggregated breakdown of Clarification timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 - test-specific Service Quality Measurements.
6. Totals may not equal 100% due to rounding.

Table IV-1.6 Part 1: Error/Clarification Timeliness, Summary View - Re-test Data

Clarification Timeliness Detail - EDI Aggregate								
Fully Mechanized								
	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	>48 hrs	>72 hrs
FM	61	6	1	4	0	0	0	0
% FM	85%	8%	1%	6%	0%	0%	0%	0%

Table IV-1.6 Part 2: Clarification Timeliness, Disaggregated View - Re-test Data

Clarification Timeliness Detail – Disaggregated View								
Fully Mechanized								
Service Type	<1 hr	1-2 hrs	2-4 hrs	4-12 hrs	12-24 hrs	24-48 hrs	48-72 hrs	>72 hrs
Business POTS <10 Circuits	29	3	1	1	0	0	0	0
% Business POTS <10 Circuits	85%	9%	3%	3%	0%	0%	0%	0%
Residence POTS <10 Circuits	32	3	0	3	0	0	0	0
% Residence POTS <10 Circuits	84%	8%	0%	8%	0%	0%	0%	0%
TOTALS	61	6	1	4	0	0	0	0
	85%	8%	1%	6%	0%	0%	0%	0%

Notes:
(Notes apply to Table IV-1.6, Parts 1 and 2)

1. Second re-test results reflect data from January 19 through February 27, 2001.
2. Results are based on actual Fully Mechanized (FM) performance of LSRs submitted by KCI. FM responses include Fatal Rejects and Auto Clarifications. KCI determined that an error was FM by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. KCI also created an algorithm, based on BellSouth Flow Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FM classification.
3. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
4. The disaggregated breakdown of Clarification timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 test-specific Service Quality Measurements.
5. Totals may not equal 100% due to rounding.

Table IV-1.7 Part 1: Firm Order Confirmation Timeliness, Summary View - Initial Test Data

Firm Order Confirmation Timeliness Detail - EDI Aggregate						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	62	20	0	0	0	0
% FT	76%	24%	0%	0%	0%	0%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	17	42	20	6	2	0
% NFT	20%	48%	23%	7%	2%	0%
Firm Order Confirmation Timeliness Detail - TAG Aggregate						
Flow Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	69	1	0	0	0	0
% FT	99%	1%	0%	0%	0%	0%
Non-Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
NFT	18	43	11	7	1	2
% NFT	22%	52%	13%	9%	1%	2%

Table IV-1.7, Part Two: Firm Order Confirmation Timeliness, Disaggregated View – Initial Test Data

Firm Order Confirmation Timeliness Detail – EDI Disaggregated View						
Flow-Through						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
Bus. POTS circuits < 10	23	5	0	0	0	0
% Bus. POTS circuits < 10	82%	18%	0%	0%	0%	0%
Res. POTS circuits < 10	39	15	0	0	0	0
% Res. POTS circuits < 10	72%	28%	0%	0%	0%	0%
TOTALS	**62**	**20**	**0**	**0**	**0**	**0**
	76%	**24%**	**0%**	**0%**	**0%**	**0%**
Non-Flow-Through						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
Bus. POTS circuits < 10	8	22	8	0	2	0
% Bus. POTS circuits < 10	20%	55%	20%	0%	5%	0%
Bus. POTS circuits >= 10	0	4	2	0	0	0
% Bus. POTS circuits >= 10	0%	67%	33%	0%	0%	0%
Bus. ISDN circuits < 10	0	3	3	0	0	0
% Bus. ISDN circuits < 10	0%	50%	50%	0%	0%	0%
Bus. PBX circuits >= 10	0	1	0	0	0	0
% Bus. PBX circuits >= 10	0%	100%	0%	0%	0%	0%
Res. POTS circuits < 10	8	8	5	6	0	0
% Res. POTS circuits < 10	30%	30%	19%	22%	0%	0%
Res. ISDN circuits < 10	1	4	2	0	0	0
% Res. ISDN circuits < 10	14%	57%	29%	0%	0%	0%
TOTALS	**17**	**42**	**20**	**6**	**2**	**0**
	20%	**48%**	**23%**	**7%**	**2%**	**0%**
Firm Order Confirmation Timeliness Detail – TAG Disaggregated View						
Flow-Through						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
Bus. POTS circuits < 10	36	0	0	0	0	0
% Bus. POTS circuits < 10	100%	0%	0%	0%	0%	0%
Res. POTS circuits < 10	33	1	0	0	0	0
% Res. POTS circuits < 10	97%	3%	0%	0%	0%	0%
TOTALS	**69**	**1**	**0**	**0**	**0**	**0**
	99%	**1%**	**0%**	**0%**	**0%**	**0%**

Firm Order Confirmation Timeliness Detail – EDI Disaggregated View						
Non-Flow-Through						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
Bus. POTS circuits < 10	9	21	4	2	0	0
% Bus. POTS circuits < 10	25%	58%	11%	6%	0%	0%
Bus. POTS circuits >= 10	0	5	0	1	0	0
% Bus. POTS circuits >= 10	0%	83%	0%	17%	0%	0%
Bus. ISDN circuits < 10	3	2	1	3	0	0
% Bus. ISDN circuits < 10	33%	22%	11%	33%	0%	0%
Bus. PBX circuits < 10	1	0	0	0	0	0
%Bus. PBX circuits < 10	100%	0%	0%	0%	0%	0%
Bus. PBX circuits >= 10	0	0	1	0	1	0
% Bus. PBX circuits >= 10	0%	0%	50%	0%	50%	0%
Res. POTS circuits < 10	5	8	1	0	0	1
% Res. POTS circuits < 10	33%	53%	7%	0%	0%	7%
Res. ISDN circuits < 10	0	6	3	1	0	0
% Res. ISDN circuits < 10	0%	60%	30%	10%	0%	0%
TOTALS	**18**	**42**	**10**	**7**	**1**	**1**
	23%	**53%**	**13%**	**9%**	**1%**	**1%**

Notes:
(Notes apply to Table IV-1.7, Parts 1 and 2)

1. Results are based on actual Flow-Through (FT) and Non-Flow-Through (NFT) performance of LSRs submitted by KCI. KCI determined that a FOC was FT or NFT by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. KCI also created an algorithm, based on BellSouth Flow-Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FT/NFT classification.
2. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
3. The disaggregated breakdown of Clarification timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 – test-specific Service Quality Measurements.
4. Totals may not equal 100% due to rounding.

Table IV-1.8 Part 1: Firm Order Confirmation Timeliness, Summary View - Re-test Data

Firm Order Confirmation Timeliness Detail - EDI Aggregate						
Flow-Through						
	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
FT	79	4	0	0	0	0
% FT	95%	5%	0%	0%	0%	0%

Table IV-1.8 Part 2: Firm Order Confirmation Timeliness, Disaggregated View - Re-test Data

Firm Order Confirmation Timeliness Detail – Disaggregated View						
Flow-Through						
Service Type	<3 hrs	3-24 hrs	24-36 hrs	36-48 hrs	48-72 hrs	>72 hrs
Business POTS <10 circuits	39	2	0	0	0	0
% Business POTS <10 circuits	95%	5%	0%	0%	0%	0%
Residence POTS <10 circuits	40	2	0	0	0	0
% Residence POTS <10 circuits	95%	5%	0%	0%	0%	0%
TOTALS	79	4	0	0	0	0
	95%	5%	0%	0%	0%	0%

Notes:
(Notes apply to Table IV-1.8, Parts 1 and 2)

1. Re-test results reflect data from January 19 through February 27, 2001.
2. Results are based on actual Flow Through (FT) performance of LSRs submitted by KCI. KCI determined that a FOC was FT by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. KCI also created an algorithm, based on BellSouth Flow Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FT classification.
3. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
4. The disaggregated breakdown of FOC timeliness reflects the GPSC's disaggregation levels outlined in the June 6, 2000 - test-specific Service Quality Measurements.
5. Totals may not equal 100% due to rounding.

Table IV-1.9 Part 1, EDI: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date

	TOTAL		Flow-Through					
	CNs Received	% of Total CN	Flow -Through[1]	% Flow-Through[2]	% of Total Flow -Through[3]	Non- Flow-Through[4]	% Non-Flow-Through[5]	% of Total Non-Flow -Through[6]
CN Date Received = CN DD	112	92%	56	50%	98%	56	50%	86%
CN Date Received = CN DD + 1 day	7	6%	1	14%	2%	6	86%	9%
CN Date Received = CN DD + 2 days	0	0%	0	0%	0%	0	0%	0%
CN Date Received = CN DD + 3-5 days	1	1%	0	0%	0%	1	100%	2%
CN Date Received = CN DD + >=6 days	2	2%	0	0%	0%	2	100%	3%
TOTAL	**122**	**100%**	**57**		**100%**	**65**		**100%**

Notes:

1. Flow-Through = The number of CNs received within the specified timeframe that were Flow-Through LSRs.
2. % Flow-Through = The percentage of CNs received within the specified timeframe that were Flow-Through LSRs.
3. % of Total Flow-Through = The percentage of total Flow-Through LSRs that received CNs within the specified timeframe.
4. Non-Flow-Through = The number of CNs received within the specified timeframe that were Non-Flow-Through LSRs.
5. % Non-Flow-Through = The percentage of CNs received within the specified timeframe that were Non-Flow-Through LSRs.
6. % of Total Non-Flow-Through = The percentage of total Non-Flow-Through LSRs that received CNs within the specified timeframe.
7. Results are based on actual Flow-Through (FT) and Non-Flow-Through (NFT) performance of LSRs submitted by KCI. KCI determined that a FOC was FT or NFT by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. Using an algorithm, KCI determined whether an LSR actually flowed through BellSouth systems or fell out for manual processing. BellSouth has not validated the algorithm used by KCI.
8. Calculations are based on business days (i.e. weekends and BellSouth holidays are not counted).
9. Totals may not equal 100% due to rounding.

Table IV-1.9 Part 2, TAG: Completion Notice Due Date (CN DD) vs. Completion Notification Delivery Date

	TOTAL		Flow -Through					
	CNs Received	% of Total CN	Flow -Through[1]	% Flow -Through[2]	% of Total Flow -Through[3]	Non- Flow - Through[4]	% Non-Flow-Through[5]	% of Total Non-Flow -Through[6]
CN Date Received = CN DD	98	80%	44	45%	81%	52	53%	79%
CN Date Received = CN DD + 1 day	11	9%	4	36%	7%	7	64%	11%
CN Date Received = CN DD + 2 days	4	3%	0	0%	0%	4	100%	6%
CN Date Received = CN DD + 3-5 days	5	4%	2	40%	4%	3	60%	5%
CN Date Received = CN DD + >=6 days	4	3%	4	100%	7%	0	0%	0%
TOTAL	**122**	**100%**	**54**		**100%**	**66**		**100%**

Notes:

1. Flow-Through = The number of CNs received on within the specified timeframe that were Flow-Through LSRs.
2. % Flow-Through = The percentage of CNs received within the specified timeframe that were Flow-Through LSRs.
3. % of Total Flow-Through = The percentage of total Flow-Through LSRs that received CNs within the specified timeframe.
4. Non-Flow-Through = The number of CNs received within the specified timeframe that were Non-Flow-Through LSRs.
5. % Non-Flow-Through = The percentage of CNs received within the specified timeframe that were Non-Flow-Through LSRs.
6. % of Total Non-Flow-Through = The percentage of total Non-Flow-Through LSRs that received CNs within the specified timeframe.
7. Results are based on actual Flow-Through (FT) and Non-Flow-Through (NFT) performance of LSRs submitted by KCI. KCI determined that a FOC was FT or NFT by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team. Using an algorithm, KCI determined whether an LSR actually flowed through BellSouth systems or fell out for manual processing. BellSouth has not validated the algorithm used by KCI.
8. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
9. Totals may not equal 100% due to rounding.

Table IV-1.10 Part 1, EDI: Desired Due Date from KCI's Local Service Request (LSR DDD) vs. Committed Due Date from BellSouth's Firm Order Confirmation (FOC DD)

	Total		Flow-Through Analysis			
	Number	Percent	FT	% FT	NFT	%NFT
LSR DDD = FOC DD	121	88%	54	86%	67	89%
LSR DDD not = FOC DD	17	12%	9	14%	8	11%
Total	**138**	**100%**	**63**	**100%**	**75**	**100%**
DD = DDD - 1 day	3	33%	1	33%	2	33%
DD = DDD - 2 days	2	22%	0	0%	2	33%
DD = DDD - 3-5 days	4	44%	2	67%	2	33%
DD = DDD - >=6 days	0	0%	0	0%	0	0%
Total Earlier (DD before DDD)	**9**	**7%**	**3**	**5%**	**6**	**8%**
DD = DDD + 1 day	5	63%	3	50%	2	100%
DD = DDD + 2 days	3	38%	3	50%	0	0%
DD = DDD + 3-5 days	0	0%	0	0%	0	0%
DD = DDD + >=6 days	0	0%	0	0%	0	0%
Total Later (DD after DDD)	**8**	**6%**	**6**	**50%**	**2**	**3%**

Notes:

1. LSRs on which KCI's Desired Due Date was earlier than the standard interval for the order type (as documented in BellSouth's *Product and Services Interval Guide*) were excluded from this report.
2. The table above represents Due Date accuracy results from LSRs submitted using standard intervals documentation and pre-order queries to obtain a DDD.
3. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
4. Results are based on actual Flow-Through (FT) and Non-Flow Through (NFT) performance of LSRs submitted by KCI. KCI determined that a FOC was FT or NFT by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team KCI also created an algorithm, based on BellSouth Flow-Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FT/NFT classification.
5. LSRs for which KCI requested an invalid DDD (i.e., earlier than the documented or pre-order-obtained standard interval) have been excluded from this analysis.
6. Totals may not equal 100% due to rounding.

Table IV-1.10 Part 2, TAG: Desired Due Date from KCI's Local Service Request (LSR DDD) vs. Committed Due Date from BellSouth's Firm Order Confirmation (FOC DD)

	Total		Flow-Through Analysis			
	Number	Percent	FT	% FT	NFT	% NFT
LSR DDD = FOC DD	100	83%	46	96%	54	74%
LSR DDD not = FOC DD	21	17%	2	4%	19	26%
Total	**121**	**100.0%**	**48**	**100.0%**	**73**	**100.0%**
DD = DDD - 1 day	4	27%	1	100%	3	21%
DD = DDD - 2 days	6	40%	0	0%	6	43%
DD = DDD - 3-5 days	5	33%	0	0%	5	36%
DD = DDD - >=6 days	0	0%	0	0%	0	0%
Total Earlier (DD before DDD)	**15**	**12%**	**1**	**2%**	**14**	**19%**
DD = DDD + 1 day	5	83%	1	100%	4	80%
DD = DDD + 2 days	1	17%	0	0%	1	20%
DD = DDD + 3-5 days	0	0%	0	0%	0	0%
DD = DDD + >=6 days	0	0%	0	0%	0	0%
Total Later (DD after DDD)	**6**	**5%**	**1**	**2%**	**5**	**7%**

Notes:

1. LSRs on which KCI's Desired Due Date was earlier than the standard interval for the order type (as documented in BellSouth's *Product and Services Interval Guide*) were excluded from this report.
2. Calculations are based on business days (i.e., weekends and BellSouth holidays are not counted).
3. Results are based on actual Flow Through (FT) and Non-Flow-Through (NFT) performance of LSRs submitted by KCI. KCI determined that a FOC was FT or NFT by analyzing BellSouth back-end system data provided to KCI's Flow-Through Evaluation team KCI also created an algorithm, based on BellSouth Flow-Through definitions, used to obtain actual performance data on KCI-issued service requests. KCI validated the BellSouth-provided data against the KCI-obtained data for consistency in FT/NFT classification.
4. LSRs for which KCI requested an invalid DDD (i.e., earlier than the documented or pre-order-obtained standard interval) have been excluded from this analysis.
5. Totals may not equal 100% due to rounding.

IV. Pre-Ordering, Ordering and Provisioning (PO&P) Domain Results and Analysis

1.0 Description

The purpose of this section is to present the specific tests, results, and analysis from KCI's evaluation of the systems, processes, and other operational elements associated with BellSouth's support for wholesale pre-ordering and ordering functions. The Pre-Ordering, Ordering and Provisioning (PO&P) tests evaluated the systems and processes associated with BellSouth's ability to provide Competitive Local Exchange Carriers (CLECs) with non-discriminatory access to its Operational Support Systems (OSS). The pre-ordering and ordering portion of the test assessed the adequacy of BellSouth's ordering processes / systems and support procedures to efficiently process Local Service Request (LSRs) for Resale and Digital Subscriber Line (xDSL) services. The provisioning verification portion of the test included a review of BellSouth's ability to accurately complete the provisioning of CLEC Resale and xDSL orders.

2.0 Methodology

The scope of the PO&P tests encompassed the review and analysis of BellSouth's processes, procedures, interfaces, and systems for pre-ordering, ordering and provisioning Resale and xDSL accounts. This was accomplished by reviewing and assessing relevant documentation, testing the functionality of BellSouth's pre-ordering, ordering and provisioning processes / systems, testing the capability to increase system capacity, and evaluating provisioning performance for BellSouth's CLEC customers. Additionally, a parity analysis was conducted to compare the BellSouth processes and systems that support xDSL services for wholesale and retail customers.

2.1 Business Process Description (Resale)

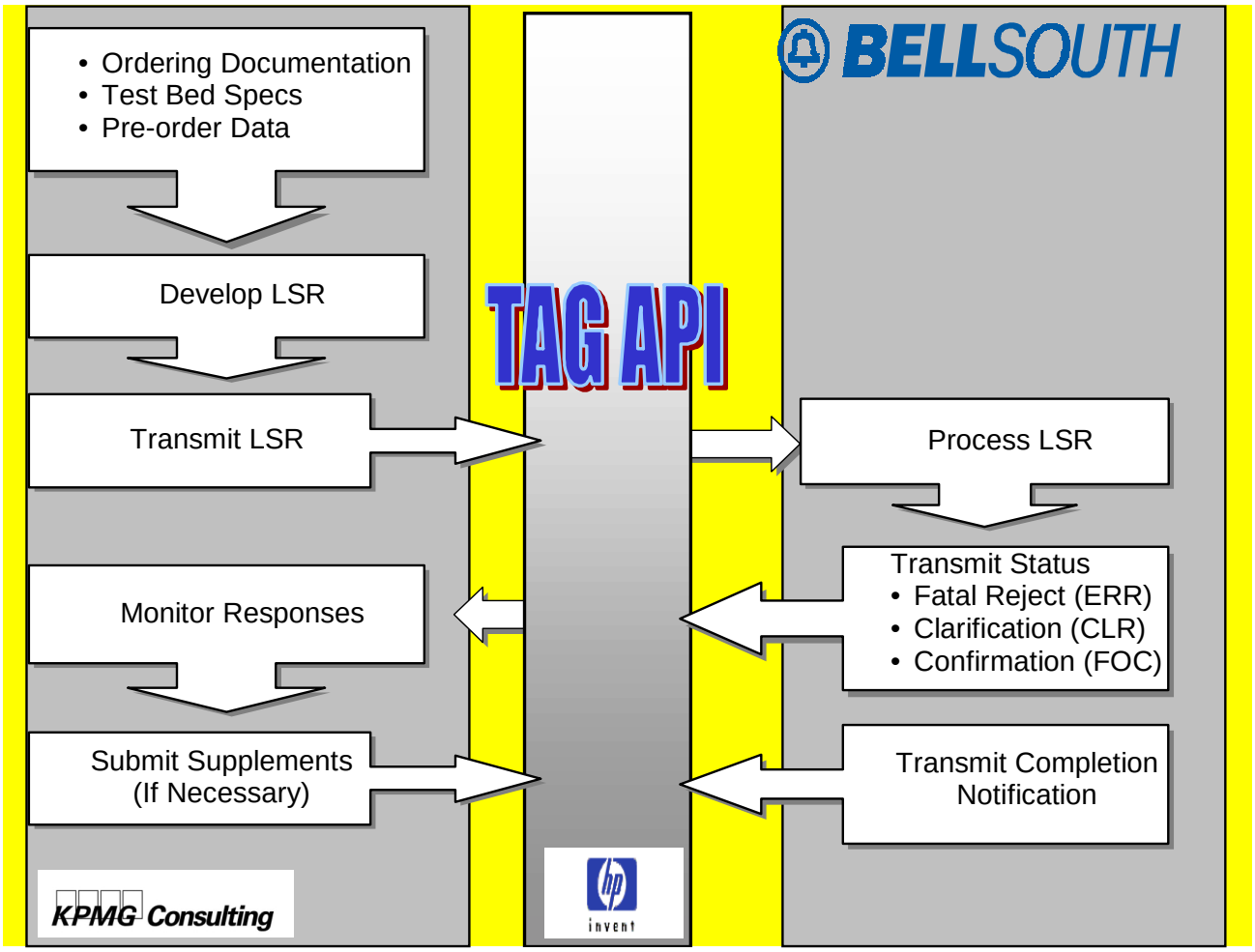
Two BellSouth electronic ordering interfaces, the Telecommunications Access Gateway (TAG) and the Electronic Data Interchange (EDI), were tested.

The TAG and EDI environments are described in more detail below.

TAG

Pre-Order queries, and orders, can be submitted electronically to BellSouth through TAG, a BellSouth-developed CORBA-based machine-to-machine interface. TAG allows for bi-directional flow of information between BellSouth's OSS and CLEC customers. CLECs develop their own software applications to obtain information from BellSouth's OSS through TAG, and can incorporate various internal functions, such as down loading information directly to their own inventory / billing systems, creating their own customer databases and generating internal reports.

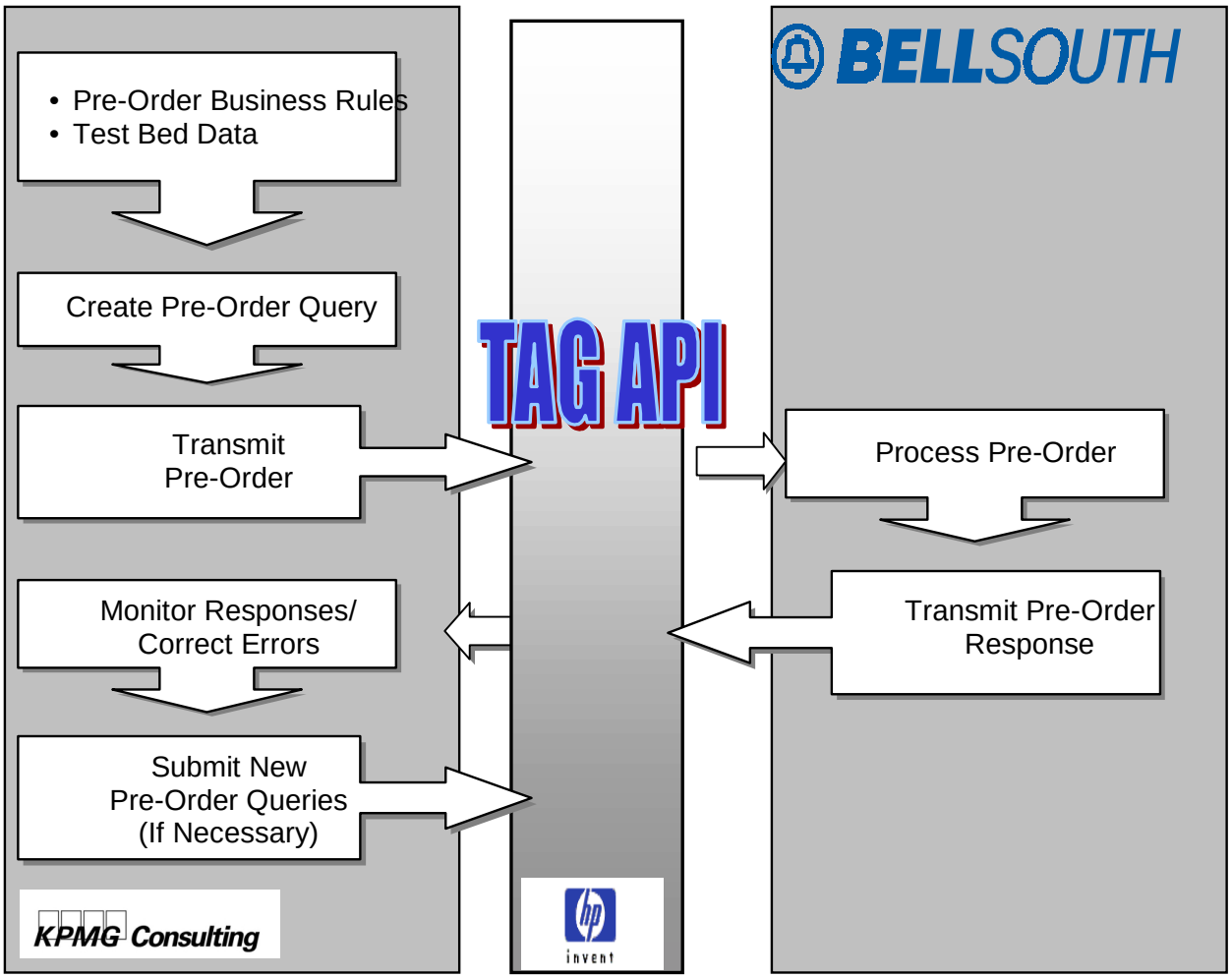
Figure IV-A: TAG Order Process Flow



Additionally, TAG provides a standard Application Program Interface (API) to BellSouth's pre-ordering OSS. TAG transactions are real time. TAG allows CLECs to execute the following pre-order queries:

- Telephone Number Selection / Reservations / Assignment
- Appointment Availability
- Service Availability
- Customer Records
- Due Date Calculation

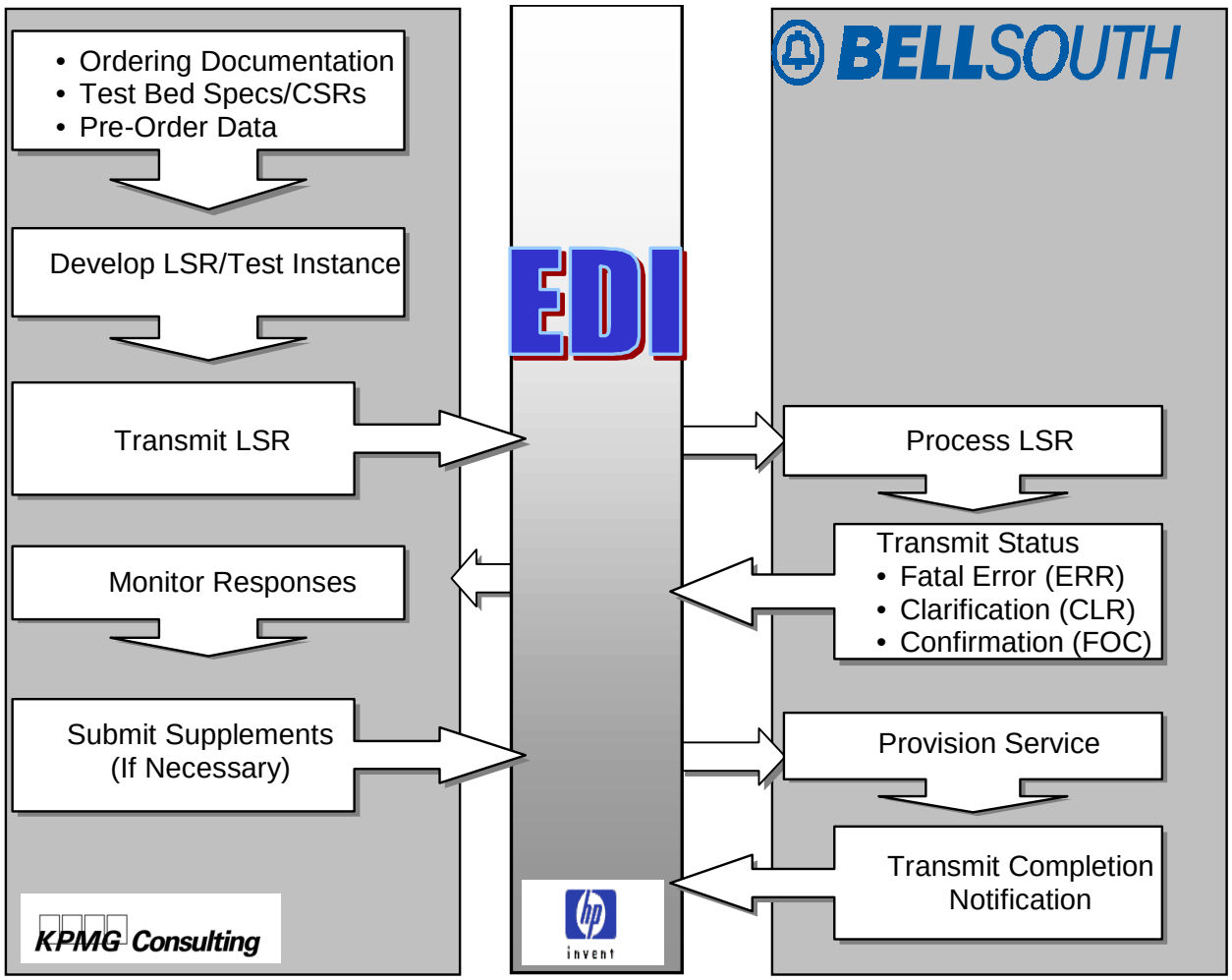
Figure IV-B: TAG Pre-Order Process Flow



EDI

Electronic Data Interchange (EDI) is a batch driven machine-to-machine interface designed to allow BellSouth's computer applications to exchange business files with CLEC computer applications. BellSouth defines the information that is needed to successfully submit each order type. This information is encoded to fit the standard EDI transaction set for data transmission. EDI uses industry standards, which define the format and data content of each transaction sent between CLECs and BellSouth. BellSouth determines how and when each data element is transferred (or mapped) into a BellSouth Service Order.

Figure IV-C: EDI Order Process Flow



Transaction Types

TAG and EDI allow CLECs to process the following ordering transactions types through BellSouth's OSS:

- Submit Local Service Requests (LSRs)
- Receive Functional Acknowledgements (FA)
- Receive Firm Order Confirmations (FOCs)
- Receive Completion Notices (CNs)
- Receive Rejects (ERRs), Clarifications (CLRs), and Status Messages (e.g., Jeopardy and Missed Appointment Notifications)

2.1.1 Ordering Process Flow (Resale)

KCI utilized three primary inputs to create order test instances: test bed information, pre-order data, and BellSouth's ordering documentation.

Test Bed Information

Test bed information consists of data on the baseline accounts against which order and pre-order transactions were executed. These accounts included customers in BellSouth and CLEC "start states." See Section 2.3 "Test Bed" for a description of test bed requirements and the Customer Service Record (CSR) delivery process.

Pre-Order Data

For a defined number of Resale test instances, KCI performed pre-order queries to validate customer address and service information, validate specific switch capabilities, select and reserve telephone numbers (TNs), and obtain valid due dates. KCI reviewed the pre-order response information and used this information to validate or add data to the subsequent service request.

BellSouth Ordering Documentation (Resale)

BellSouth Resale pre-ordering and ordering documentation contains two main components: 1) The technical specifications include programming instructions for creating TAG or EDI transaction sets; and 2) The business rules provide the pre-ordering and ordering forms and data elements that comprise a pre-order query or service request, as well as the data characteristics, usage requirements, and valid entries for each data element.

Using test bed and pre-order information, and applying the ordering rules defined in BellSouth documentation, KCI developed an order test instance, or Local Service Request (LSR). Each LSR was assigned a unique Purchase Order Number (PON) for BellSouth and KCI tracking purposes. The LSR was transmitted in a text file to Hewlett Packard (HP), which utilized the BellSouth technical specifications to map the text file into TAG or EDI data[2], and transmitted the LSR to BellSouth's EDI or TAG gateway.

When BellSouth receives the LSR, an FA is automatically returned to the CLEC, confirming that the file has been successfully received. As the LSR passes through the BellSouth back-end OSS systems, BellSouth systems or representatives perform validations to determine if the CLEC's service request is properly formatted and

[2] HP reported and delivered errors encountered during the text file-to-TAG/EDI mapping to KCI. LSRs containing errors identified at the text file level were never transmitted to the BellSouth EDI or TAG Gateway. In these cases, KCI investigated the errors, made appropriate modifications to the LSR, and resubmitted the service request/text file to HP for processing.

contains accurate data. In response to an erred LSR, BellSouth transmits one of the following error responses[3]:

Fatal Reject (ERR)

BellSouth returns an ERR when a CLEC electronically submits an LSR that is unreadable or lacks correct information in all required fields. BellSouth categorizes fatal rejects as fully-mechanized responses.

Auto Clarification ("auto" CLR)

BellSouth returns an auto CLR when an electronically-submitted LSR does not pass second level system edit checks for order accuracy. BellSouth categorizes auto CLRs as fully-mechanized responses.

Clarification (CLR)

BellSouth returns a CLR after an electronically-submitted LSR "falls out" for manual handling. When an LSR falls out, a representative from BellSouth's Local Carrier Service Center (LCSC) reviews the LSR. If it is determined that the request fell out due to a CLEC error, the representative sends a request for clarification back to the CLEC. BellSouth classifies CLRs as partially-mechanized responses.

In response to an ERR, the CLEC must re-submit the original LSR after correcting any errors. Following receipt of a CLR (system- or representative-generated), the CLEC must submit a supplemental service request ("Sup") that modifies the original order.

Once an LSR passes through the ordering validation process, it is logged in the BellSouth Service Order Communication System (SOCS), which coordinates downstream provisioning activity and monitors the status of the order. SOCS generates a Firm Order Confirmation (FOC) response that is delivered to the CLEC. This FOC confirms that BellSouth has validated the LSR and provides a Due Date (DD) on which BellSouth commits to provisioning the requested service.

2.1.2 Provisioning (Resale)

The provisioning process begins once SOCS produces a complete and accurate service order. Once SOCS receives the order information, it is transmitted to the Service Order Analysis & Control System (SOAC). SOAC determines which downstream assignment and control systems require information necessary to complete order provisioning, based on information contained in the service order.

A Local Service Request (LSR) passes through several stages after confirmation and prior to completion. The LSR status changes to indicate the order's progress through provisioning validation and completion activities. With each change in status,

[3] Definitions of error categories taken from the BellSouth Service Quality Measurements (SQM) Georgia Performance Reports, 10/22/99, p. 14 (Percent Rejected Service Request report definition).

BellSouth transmits a Status Message to the CLEC. Notification is also provided in the event that provisioning activities cannot be completed on the committed due date as a result of a CLEC or BellSouth issue. BellSouth delivers a Missed Appointment (MA) notice when the due date on a service order is missed. Status and MA codes, definitions, and information on required CLEC action are provided on the BellSouth Web site. Upon completion of provisioning activities, BellSouth transmits a Completion Notification (CN) to the CLEC indicating successful activation of the order.

2.2 Business Process Description (xDSL)

KCI tested the existence and functionality of the manual interfaces established by BellSouth for pre-ordering and ordering of xDSL capable loops[4]. KCI tested two BellSouth manual processes for DSL ordering: e-mail and facsimile.

The pre-order/order process for xDSL capable loops is a manual process, encompassing three steps. These steps include submission of three forms: 1) Loop Make-Up Service Inquiry[5] (LMU-SI)/Local Service Request (LSR); 2) Unbundled Loop Modification (ULM)[6]; and 3) Local Service Request/Service Inquiry[7] (LSR/SI).

The LMU-SI/LSR is the pre-order query utilized by CLECs to obtain detailed characteristics of a specific loop. CLECs may use BellSouth's LMU-SI/LSR to determine if a specific loop is capable of supporting xDSL and other advanced data services, as applicable. BellSouth provides CLECs access to loop make-up information that consists of: the composition of the loop material (copper/fiber); the existence, location and type of equipment on the loop, including but not limited to digital loop carrier or other remote concentration devices, feeder/distribution interfaces, bridge taps, load coils, pair-gain devices, disturbers in the same or adjacent binder groups; the loop length; the wire gauge; and the electrical parameters of the loop.

CLECs e-mail or transmit by facsimile (fax) the LMU-SI/LSR form to BellSouth's Complex Resale Support Group (CRSG) account team. BellSouth personnel from the CRSG collect the necessary information from the appropriate BellSouth central office for the requested loop. If spare facilities are available, Outside Plant & Engineering (OSPE) provides the cable and pair information including detailed characteristics of the loop. Additionally, if the CLEC requests that the loop be reserved, OSPE populates the Facilities Reservation Number (FRN) on the returned response to the LMU-SI. If spare facilities are not available, OSPE returns the LMU with reasons for the unavailability of compatible facilities for the loop type being ordered by the CLEC (e.g., facilities are out of range, no compatible facilities). The CRSG forwards the CLEC a response to the LMU-SI within seven business days of receiving the LMU-SI. Specific guidelines for

[4] KCI evaluated the xDSL ordering processes and documentation associated with BellSouth's TCIF issue 9.

[5] Details of the process can be found in the BellSouth Document entitled *BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide For Manual Loop Makeup* (Issue 1.0 September 15, 2000).

[6] Details of the process can be found in the BellSouth Document entitled *Unbundled Loop Modifications CLEC Information Package*, Version 2, September 15, 2000.

[7] Details of the process can be found in BellSouth Interconnection Services Document entitled *BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package*, Version 3, August 25, 2000.

submission of both faxed and e-mailed LMU-SI can be found in *BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide For Manual Loop Makeup*[8].

The ULM[9] is submitted to BellSouth when a CLEC requests modification of loop characteristics (e.g., removal of bridge taps or load coils). Based on the LMU-SI/LSR process, a CLEC may wish to modify an existing loop if the loop cannot accommodate the specific DSL capabilities desired.

The SI/LSR is the form by which a CLEC orders an xDSL capable loop. CLECs prepare and send via e-mail or fax an SI accompanied by an LSR with the FRN populated to BellSouth's Local Carrier Service Center (LCSC). The FRN identifies the specific loop that has been reserved during the LMU-SI/LSR process. The SI links the pre-order LMU-SI to the LSR. The SI also indicates if a ULM has been requested on the BellSouth loop. The CLEC must specify the loop type (Asymmetric DSL [ADSL] or High-bit-rate DSL [HDSL]) on the LSR by using the proper Network Channel Code (NC) and Network Channel Interface Code (NCI). Once a complete and correct LSR has been processed, the LCSC forwards a Firm Order Confirmation (FOC) to the CLEC. The requested loop type is provisioned through the ordering and provisioning systems according to the targeted intervals stated in the interval section of the *BellSouth Unbundled ADSL/HDSL Compatible Loop CLEC Information Package*[10]. Once provisioning has been completed, the CLEC must obtain completion information through the BellSouth CLEC Service Order Tracking System (CSOTS) via the Internet.

2.2.1 Ordering Process Flow (xDSL)

KCI utilized three primary inputs to create order test instances:

Test Bed Information

See Section 2.3 "Test Bed" for a description of test bed requirements and the Customer Service Record (CSR) delivery process.

Pre-Order Data

For each xDSL test instance, KCI submitted LMU-SIs to obtain detailed characteristics of a specific loop. KCI reviewed the LMU-SI response information and used this information to populate subsequent service request, (LSR/SI).

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[8] Issue 1.0, September 15, 2000.

[9] Unbundled Loop Modifications were not tested due to test bed limitations. Loops utilized in PO&P12 terminated within the BellSouth Central Office facilities.

[10] BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package, Version 3, August 25, 2000, page 15.

[11] Details of the process can be found in the BellSouth Document entitled *BellSouth Loop Makeup (LMU) CLEC Information Package Version 1, July 28, 2000.*

[12] Details of the process can be found in BellSouth Interconnection Services Document entitled *BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package Version 2, July 25, 2000.*

[13] Details of the process can be found in the BellSouth Document entitled *Unbundled Loop Modifications CLEC Information Package, March 10, 2000.*

[14] *BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package Version 2, July 25, 2000,* Page 14.

Additionally, KCI used actual CLEC end-user customer addresses for pre-order testing. This was required to obtain actual customer loop characteristics that could not be simulated in the testing environment.

BellSouth Ordering Documentation (xDSL)

BellSouth xDSL LMU-SI and LSR/SI documentation provide the pre-ordering and ordering forms as well as the data characteristics, usage requirements, and valid entries for each data element.

Using test bed and pre-order information, and applying the ordering rules defined in BellSouth documentation, KCI developed an order test instance, or LSR. Each LSR was assigned a unique PON for BellSouth and KCI tracking purposes. The LSR was transmitted via facsimile or e-mail to BellSouth's Complex Resale Support Group (CRSG) account team.

When BellSouth receives the LSR/SI, BellSouth representatives perform validations to determine if the CLEC's service request is properly formatted and contains accurate data. In response to an erred LSR, BellSouth transmits a clarification or error message back to KCI. In response to a valid LSR/SI, BellSouth returns a Firm Order Confirmation (FOC) back to the CLEC.

2.2.2 Provisioning (xDSL)

ADSL[15] orders are provisioned either as new lines or as conversions[16]. For some conversions, BellSouth is unable to reuse the existing voice grade facilities because the ADSL orders require non-loaded copper loops. For technical reasons, ADSL service must be provisioned on a loop that is free of load coils, bridge taps, or repeaters.

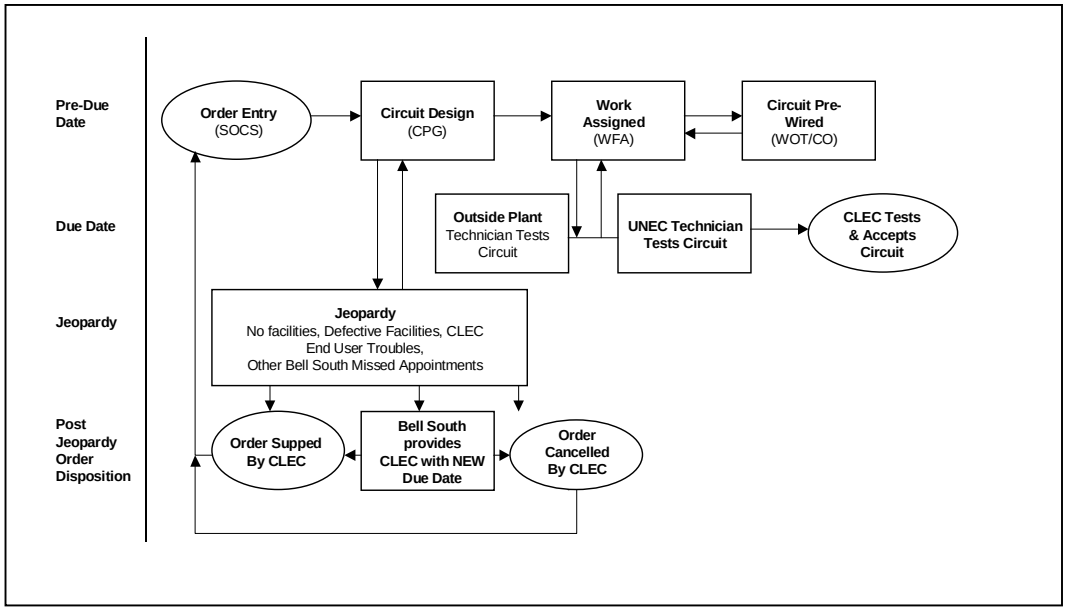
The ADSL provisioning process is overseen by the Unbundled Network Element Center (UNEC). BellSouth divides the provisioning process into two stages: 1) Pre-due date and 2) On due date.

The ADSL provisioning process flow is depicted in Figure IV-3.1 and described below.

[15] KCI observed the provisioning of actual CLEC orders due to limitations of the Psuedo-CLEC. The CLECs observed by KCI ordered ADSL capable loops.

[16] A "conversion" converts an existing BellSouth retail customer to a BellSouth wholesale customer.

Figure IV-3.1: ADSL Provisioning Process Flow



2.2.2.1 Pre-due date

The UNEC is required to check the work list in the Work Force Administration Control System (WFA/C) on the Operating Support System Order Information (OSSOI) screen for all new service orders three times a day. The new service order is verified in the Service Order Control System (SOCS), the Work Order Record Detail (WORD) document, and the Loopan Screen. The SOCS verification ensures that the order has passed through the required groups within BellSouth and the customer can be billed. The WORD document gives a detail record of the order including the required service and loop design. The Loopan Screen uses the information from the WORD.doc screen to verify the circuit including loop length and cable limits. The verification in these three areas ensures that the cable pair meets the Design Cable Limits and is ready for provisioning.

These requirements and procedures are defined in the Product Information section of the *Unbundled Network Elements Products, References, Systems and Links* book of the UNEC collection in Corporate Document and Information Access (CDIA) and the TR73600 (CDIA and TR73600 are BellSouth internal documentation tools used to define the provisioning processes, procedures, and design requirements). If the cable pair does not meet the requirements, the pair is then changed. To ensure coordination, the CLEC is contacted 24 to 48 hours before the due date to negotiate the time for the conversion. This step occurs even if new facilities are used. The final test is the Wire Office Test/Central Office (WOT/CO). This test ensures that the main distribution frame connecting the CLEC equipment to the customer cable pair has been wired.

2.2.2.2 On Due Date

The UNEC is responsible for ensuring that a field technician is assigned the order on the due date. The field technician completes the outside plant wiring and then calls the UNEC from the demarcation location (demarc) to complete the loop testing. The UNEC representative verifies that the load coil test has been completed by the technician. If load coils are found, the pair must be changed. The technician then supplies a short of 135 ohms termination at the demarcation. The UNEC uses the short to perform a loop test to verify continuity, foreign voltage, resistance, capacitance, and loop length. The UNEC performs calculations to derive the actual loop length. If the pair does not fall within the design requirements for any of these tests, the pair is changed. During the final test, the UNEC and the technician check the decibel loss limit to ensure that it does not exceed the limit specified for the type of circuit provided. The design requirements are presented in Table 1 below.

Table IV-3.1: ADSL Line Parameters

Type of service	Capacitance	Resistance	Loop Length	Foreign Voltage	DB Test
ADSL	<.286mF	< 1300 ohms	< 18Kft	<5VDC & 50VAC	<42DB@40Khz

These line parameters are taken from the *Unbundled Network Elements Products, Reference, Systems, and Links* book of the UNEC collection in CDIA and the TR73600. If the loss on the cable pair exceeds any of the defined limits, the pair should be changed. Once testing is completed, the demarcation location is recorded at the UNEC on the Operating Support System Circuit Notes (OSSCN) screen within the WFA/C system, and the CLEC is contacted to complete the line acceptance process. The UNEC and technician are required to wait 15 minutes for the CLEC to respond to a verification call. On the phone, the CLEC, UNEC, and technician verify that the circuit is acceptable and work together to address any issues that require additional action. After the circuit is tested and accepted, the demarcation location is relayed to the CLEC. The UNEC then updates the order in the WFA/C system and changes the status in SOCS to completed.

2.2.2.3 Jeopardy

When ADSL orders are delayed past the due date, the UNEC employs specific procedures to handle missed due dates depending on the cause of the delay. Delayed orders are defined to be in jeopardy and the orders follow the processes below until the issues are resolved.

There are three types of jeopardy covered in the BellSouth procedures: 1) BellSouth causes the delay, 2) the CLEC causes the delay, or 3) the End User causes the delay.

1. *BLS causes the delay*. (Generally, this is caused by the limitation of facilities available at the customer's location).

   A. *Conversion delay, (Non-Pending Facilities [PF]):*

   The UNEC informs the CLEC of the new date on which BellSouth will be ready to complete the installation. When the CLEC agrees that this date is acceptable, the UNEC enters a supplemental due date on all associated orders using the appropriate appointment code. The UNEC records the CLEC contact name on the service order. The information is entered in the WFA/C log and includes the jeopardy code and missed function code on the OSSOI or OSSGI screens.

   B. New Service Order delay, (Non-PF condition):

   The UNEC keeps the order in a pending status in SOCS, reflecting the present due date. BellSouth continues to escalate to the responsible BellSouth work centers until the order can be completed. When the due date is missed, the UNEC inputs the MFC (Missed Function Code) in the WFA log and the missed appointment code in SOCS. The CLEC is advised of the service order status and entries are placed into both the WFA log and SOCS.

   C. Pending Facility (PF) condition delay:

   PF delays due to BellSouth provided equipment or facilities are considered to be a BellSouth "miss" for the service order. Most PF statuses are applied to the service order early in the provisioning process before a due date is assigned. When the AFIG and outside plant engineers do not have the facilities for the service order, the order is placed in a PF status.

   PF conditions also occur on the due date, when the outside technician discovers defects[17] in either: a) the connection from the Main Distribution Frame to the first accessible cross connect box or customer terminal (F1) or b) the connection from the F1 termination to either the next cross connect box or customer terminal (F2) facility assigned to the order. The technician notifies the Address Facility Inventory Group (AFIG), which resolves cable discrepancies on service orders that fall out, of the need to place the order into a PF status. This drives the PF'd order to the Outside Plant Engineer (OSPE). The UNEC calls the CLEC to inform appropriate personnel of the service order status change, and advises the LCSC (Local Carrier Service Center) to contact the CLEC with a new due date when new facilities are identified.

[17] When defects are identified, the technician checks for additional spare facilities before assigning a PF condition.

2. *CLEC causes delay* (Generally occurs when the CLEC is unavailable to accept the completed order on the coordinated due date).

   A. For a new service order:

   When the CLEC causes the delay, the UNEC places the orders in a missed appointment status and enters the appropriate customer missed appointment code. In each of these cases, the CLEC is required to send in a supplemental order to re-establish a new due date. The UNEC then records the CLEC contact information in the SOCS remarks section of the service order. If the order is present in the WFA/C system, the contact information, in addition to the jeopardy and missed function codes, must be entered.

   B. For conversion service orders:

   When the CLEC causes the delay, the UNEC center places all orders except "Listing orders" into a missed appointment status. The UNEC then enters the appropriate customer missed appointment code. "Listing orders" must be assigned a supplemental order by the UNEC with a due date that exceeds a 60 day interval. The CLEC then must submit a supplemental service order to re-establish a new conversion due date. The UNEC records the CLEC contact information on the service order remarks screen in SOCS. If the order is present in WFA/C, the contact information, in addition to the jeopardy and missed function codes, must be entered.

3. *End-User causes delay* (Generally occurs when the demarcation location needed for installation is not accessible to the BellSouth technician and the customer is not available).

   A. For a new service order:

   When the end-user customer causes the delay, the UNEC places the order in a missed appointment status and enters the appropriate customer missed appointment code. In each of these cases the CLEC must submit a supplemental order to re-establish a new due date. The UNEC then records the end user contact information in the SOCS remarks section of the service order. If the order is present in the WFA/C system, the contact information, in addition to the jeopardy and missed function codes, must be entered.

   B. For conversion service orders:

   When the end user causes the delay, the UNEC center places all orders except "Listing orders" into a missed appointment status. The UNEC then enters the appropriate customer missed appointment code. "Listing orders" must be assigned a supplemental order by the UNEC with a due date that exceeds a 60-day interval. The CLEC then must submit a supplemental service order to re-establish a new conversion due date. The UNEC will record the end-user contact information on the service order remarks screen in SOCS. If the order is

present in WFA/C, the contact information, in addition to the jeopardy and missed function codes, must be entered.

2.3 Scenarios

Various PO&P-related scenarios were used to evaluate the PO&P processes and systems for Resale and xDSL. The *BellSouth – Georgia OSS Evaluation Supplemental Test Plan* (*STP*) defined the TAG/EDI resale pre-order and order scenarios to be tested in PO&P-11, and the xDSL pre-order and order scenarios to be tested in PO&P-12. The scenarios outline, at a high level, the specific products and services to be ordered and activity types to be requested. The scenarios also defined requirements for testing of different customer types (business and residential) and migration activity (partial and full migration[18]). Using these test scenario descriptions, KCI developed test cases for each scenario. The test cases contain a more-detailed description of the order. Each test case was used to generate one or more distinct service requests, or test instances, for specific end users.

The EDI and TAG Resale Functional Evaluation (PO&P11) scenarios covered the following Resale activity types:

Table IV-A: Resale Scenarios

Activity	Res. POTS	Bus. POTS	Res. ISDN-BRI	Bus. ISDN-BRI	PBX	Syn-chronet
Migration from BLS "as is"	X	X	X	X	X	
Feature changes to existing customer	X	X				
Migration from BLS "as specified"	X	X	X	X		
New customer	X	X			X	X[19]
Telephone number change	X	X				
Directory change	X	X				
Add lines/trunks/ circuits	X	X			X	
Suspend/restore service	X	X				
Disconnect (full and partial)	X	X	X	X	X	X
Moves (inside and outside)	X	X				

The xDSL Functional Evaluation (PO&P12) scenarios covered the following xDSL activity types:

[18] A full migration converts all of a customer's lines to a new service provider. A CLEC requests a partial migration for a multi-line customer that wishes to retain at least one line with BellSouth.

[19] BLS supports electronic orders for new Synchronet service at speeds of 2.4, 4.8, and 9.6Kbps.

Table IV-B: xDSL Scenarios

Activity	Res. *x*DSL-Capable Loop	Bus. *x*DSL-Capable Loop
Pre-Order		
Loop Makeup Service Inquiry	**X**	**X**
Order		
Migration from BLS to CLEC	**X**	**X**
Add new loops to existing customer	**X**	**X**
Purchase loops for a new customer	**X**	**X**
Disconnect	**X**	**X**

2.4 Test Bed

In order to provide KCI with a set of customers against which to submit service requests, BellSouth provided KCI with a test bed. BellSouth provisioned the test bed accounts according to specifications submitted by KCI. These requirements covered a range of customer starting states (e.g., BellSouth retail, CLEC resale), line counts (single and multi-line), service types (business, residential), and features (e.g., call waiting, return call, speed dial). The test bed accounts were established across a range of Central Offices (COs), covering different rate centers and switch types.

The test bed specifications submitted to BellSouth provided no indication of the subsequent order activity planned by KCI. In addition to the test bed accounts, BellSouth provided KCI with facility and customer information (cable-pair assignments, telephone numbers, and addresses) required to populate specific service requests.

The test bed was comprised of specific customer accounts and facility information provided by BellSouth. KCI received test bed account (built according to KCI specifications) information in the form of Customer Service Records (CSRs) that identified the end user's initial state, including information on the address, billing accounts, and existing services and equipment. BellSouth delivered test bed CSRs to KCI via a direct database extract process.

To execute xDSL activities, KCI, in collaboration with the GPSC, solicited the participation of actual CLECs currently doing business with BellSouth Georgia. As a pseudo-CLEC, KCI lacked access to the facilities needed to provision xDSL service. Therefore, KCI obtained assistance from CLECs possessing xDSL capability. These CLECs provided KCI with the opportunity to observe the provisioning activities of both the CLEC and BellSouth associated with randomly selected xDSL orders. Additionally, KCI used live CLEC end-user customer addresses for pre-order testing.

This practice was conducted to obtain actual customer loop characteristics that could not be simulated in the testing environment.

B. *x*DSL Functional Evaluation (PO&P12)

1.0 Description

The objective of the *x*DSL Order Processing Functional Evaluation (PO&P12) was to evaluate the functional elements of the Pre-Order and Order process for *x*DSL (Digital Subscriber Line) products as delivered to Competitive Local Exchange Carriers (CLECs) through the BellSouth supported manual process[1]. The pre-ordering component included the evaluation of the BellSouth Service Inquiry process, also referred to as the Loop Make-Up (LMU) process, to obtain detailed characteristics of the loop. This test also assessed the functionality of BellSouth's ordering procedures for processing local service requests (LSRs), which are submitted concurrently with BellSouth Service Inquiries, for *x*DSL products via the manual ordering process[2].

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a description of BellSouth's xDSL ordering process.

2.2 Scenarios

KCI generated and manually submitted LMUs and LSRs based on the xDSL scenarios outlined in the BellSouth OSS – Georgia *Supplemental Test Plan* (*STP*). The xDSL Functional Evaluation (PO&P12) scenarios covered the following xDSL activity types:

Table IV-2.1: xDSL Scenarios

Activity	Res. *x*DSL-Capable Loop	Bus. *x*DSL-Capable Loop
Pre-Order		
Loop Makeup Service Inquiry	**X**	**X**
Order		
Migration from BLS to CLEC (Full and Partial)	**X**	**X**

[1] BellSouth introduced electronic pre-ordering and ordering of xDSL capable loops in TCIF issue 9. BellSouth began BETA testing electronic functionality for xDSL capable loops on July 29, 2000. The electronic ordering processes were not tested by KCI in Georgia.

[2] The xDSL Manual ordering process KCI tested was based on the BellSouth Business Rules for Local Ordering — OSS99 TCIF9 and LSOG4 Network & Carrier Services, Issue 9G, August 30, 2000.

Activity	Res. *x*DSL-Capable Loop	Bus. *x*DSL-Capable Loop
Add new loops to existing customer	**X**	**X**
Purchase loops for a new customer	**X**	**X**
Disconnect	**X**	**X**

2.3 Test Targets & Measures

The table below outlines the processes and sub-processes involved in evaluating BellSouth *x*DSL Ordering functionality and performance.

Table IV-2.2: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Submit Loop Make-Up	Submit a Loop Inquiry	Interface availability	PO&P-12-1-1
	Receive a response to Loop Inquiry	Timeliness of response	PO&P-12-3-1 PO&P-12-3-2
		System functionality	PO&P-12-2-1 PO&P-12-2-2
		Accuracy and completeness of response	PO&P-12-4-1 PO&P-12-4-2
Submit an Order	Submit Service Inquiry /Local Service Request (LSR)	Interface availability	PO&P-12-1-1
	Receive acknowledgment	Timeliness of response	PO&P-12-3-3
		Systems functionality	PO&P-12-2-3
	Receive Reject / Clarification notification	Timeliness of response	PO&P-12-3-4
		Accuracy and completeness of response	PO&P-12-4-4
	Receive Firm Order Confirmation (FOC)	Timeliness of response	PO&P-12-3-5
		Systems functionality	PO&P-12-2-3
		Accuracy and completeness of response	PO&P-12-4-3 PO&P-12-4-5
Submit an Error	Create error transaction(s)	Interface availability	PO&P-12-1-1
		Systems functionality	PO&P-12-2-1
		Accuracy of completeness of response	PO&P-12-2-2 PO&P-12-2-3 PO&P-12-4-4
	Re-send integrated LSR	Interface availability	PO&P-12-1-1
	Receive FOC	Timeliness of response	PO&P-12-3-6
		Accuracy and completeness of response	PO&P-12-4-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Obtain Completion Information	Obtain Completion Status	Accuracy and completeness of response	PO&P-12-4-6
Receive Jeopardy Notification	Receive jeopardy notification transaction	Timeliness of response Accuracy and completeness of response	PO&P-12-3-6 PO&P-12-4-7
Receive Missed Appointment	Receive missed appointment (MA) notification	Timeliness of response Accuracy and completeness of response	PO&P-12-3-7 PO&P-12-4-8
Check Service Order Status	Receive Check Service Order Status notification	Timeliness of response	PO&P-12-3-8

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table IV-2.3: Data Sources for Manual xDSL Functional Evaluation

Document	File Name	Location in Work Papers	Source
BellSouth Business Rules for Local Ordering – OSS99 TCIF9 and LSOG 4 Network and Carrier Services, Issue 9G, August 30, 2000	No Electronic Copy	O&P-12-B-1 O&P-12-C-1	BLS
BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide For Manual Loop Makeup (Issue 1.0, September 15, 2000)	No Electronic Copy	O&P-12-A-1	BLS
Unbundled Asymmetrical Digital Subscriber Line (ADSL) Compatible Loop and Unbundled High-Bit-Rate Digital Subscriber Line (HDSL) Compatible Loop CLEC Information Package (Version 32)	No Electronic Copy	O&P-12-A-2	BLS
BellSouth Loop Makeup (LMU) CLEC Information Package (Version 1)	No Electronic Copy	O&P-12-A-3	BLS
BellSouth Loop Makeup (LMU) CLEC Information Package (Version 2, September 15, 2000)	No Electronic Copy	O&P-12-A-4	BLS
Unbundled Loop Modifications CLEC Information Package March 10, 2000	No Electronic Copy	O&P-12-A-5	BLS
BellSouth Unbundled Loop – Technical Specifications TR73600	No Electronic Copy	O&P-12-A-6	BLS

Document	File Name	Location in Work Papers	Source
BellSouth & Data CLEC's Partnering for the Future Facility Based Advisory Guide (FBAG-Issue 4.1, August 30, 1999)	No Electronic Copy	O&P-12-A-7	BLS
BellSouth Internal Documents For Pre-Order / Order Of xDSL	No Electronic Copy	O&P-12-A-8	BLS
KCI Company Codes and Billing Account Numbers	O&P_OCN.xls	O&P-12-A-9	BLS
Initial State Customer Service Records (CSRs)	O&P_PreCSR.zip	O&P-12-A-10	BLS
Additional Test Bed Addresses	O&P_newad.xls	O&P-12-A-11	BLS
BellSouth Georgia OSS Testing Evaluation Observation's and Exceptions	O&P_Obs_Exc.zip	O&P-12-A-12	KCI
Additional Test Bed Addresses for Live LMU Submission	O&P_LiveLMU.xls	O&P-12-A-13	KCI
Detailed Test Plan (DTP): Pre-Order & Order of xDSL Version 1.1, May 9, 2000	O&P_DTP.doc	O&P-12-A-13	KCI
xDSL Test Case Master	O&P_Testcasemaster.xls	O&P-12-A-13	KCI
Order Transaction Submission Schedule	O&P_editagsced.xls	O&P-12-A-13	KCI
KCI Help Desk / Issues Log	O&P_HelpDesklog.xls	O&P-12-A-13	KCI

2.4.1 Data Generation/Volumes

Data for this test were generated through order transaction submission via the xDSL manual ordering process. The number of transactions submitted was determined based on an analysis of the number of different requisition and activity (REQ ACT) type combinations available to CLECs.

This test did not rely on volume testing.

2.5 Evaluation Methods

To allow for service request submission, BellSouth built test bed[3] accounts according to KCI specifications and provided KCI with Customer Service Records (CSRs) for those accounts. KCI verified the CSRs against specifications provided to BellSouth. An initial test schedule was developed for order submission based on the scenarios to be tested for both pre-order and order.

KCI created pre-order LMU-SI / LSR queries using test bed account information and BellSouth pre-order documentation for xDSL. KCI submitted LMU-SI / LSRs

[3] See Section IV, "PO&P Overview" for a description of the test bed.

via both fax and e-mail to BellSouth's Complex Resale Support Group (CRSG) for xDSL-capable loop orders (excluding disconnects). Responses from LMU-SI/LSRs were received via both fax and e-mail. Responses included either a clarification/rejection back to KCI for additional information, or detailed characteristics of the loop. Additionally, KCI used actual CLEC end-user customer addresses for pre-order testing in order to obtain actual customer loop characteristics that could not be simulated in the testing environment. Submission of LMU-SI/LSRs and receipt of all responses for pre-order LMU-SI/LSRs were logged. Help Desk issues arising from submission of the LMU-SI/LSR were directed to either the CRSG or to KCI's account representative. Responses to these queries were also logged.

To create orders for xDSL capable loops, test cases and instances, equivalent to Local Service Requests (LSRs), were developed using test bed accounts, data from responses to the LMU-SI/LSR pre-order, and BellSouth ordering documentation. LSR-SIs were submitted to the BellSouth LCSC via both fax and e-mail. Correspondingly, responses from LSR-SIs were received via fax. Responses included a clarification/rejection back to KCI for additional information or a Firm Order Confirmation (FOC) to confirm the due date for service provisioning. For orders where loop facilities had been reserved, a FRN was included on the LSR. Submission of LSR-SIs and receipt of all responses for order LSR-SIs were logged. Help Desk issues arising from submission of the LSR-SI were directed to either the CRSG or to the KCI account representative at BellSouth. Responses to these queries were also logged. Provisioning of xDSL capable loops was tested in the xDSL Provisioning Verification Evaluation (PO&P13)[4]. PO&P12 transactions were not tested for provisioning[5].

2.6 Analysis Methods

The xDSL Functional Evaluation included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth - Georgia OSS Evaluation. The evaluation criteria provided the framework of norms, standards, and guidelines for the xDSL Functional Evaluation.

The Georgia Public Service Commission (GPSC) voted on June 6, 2000 to approve a set of Service Quality Measurement- (SQM-) related measures and standards to be used for purposes of this evaluation[6]. For those evaluation criteria that do not map to the GPSC-approved measures, or where BellSouth does not specify and publish a standard business interval for a given procedure, KCI applied its own standard, based on our professional judgment.

[4] Provisioning was tested on actual CLEC end-user customer accounts.

[5] As KCI's test bed facilities terminated within the Central Office, observations of actual CLEC end-user customer provisioning activity were conducted in PO&P13.

[6] On January 16, 2001, the GPSC issued an order requiring BellSouth to report for business purposes a set of measures that differs in some cases from the requirements of the June 6, 2000 test standards.

For quantitative evaluation criteria where the test result did not meet or exceed the established standard or KCI benchmark, KCI conducted a review to determine whether the differential was statistically significant.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II. This test includes results obtained through January 2, 2001.

Table IV-2.4: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Interface Availability			
PO&P-12-1-1	Facsimile / e-mail access is consistently available during scheduled hours of operation.	Satisfied	The KCI standard is 99.5% availability during scheduled hours of operation. KCI submitted a total of 370 pre-order and order transactions. No period of system unavailability was experienced[7].
System Functionality			
PO&P-12-2-1	BLS's Representative provides expected responses.	Not Satisfied	The KCI standard is 99% of expected responses received. During initial testing, a total of 370 transactions were submitted to BLS (112 via facsimile, 258 via email). Of these 111 (30%) received an acknowledgment, and 354 (96%) received a subsequent response. BLS did not implement a formal process for returning acknowledgments for email submission until 9/11/00. After implementation of this process, 112 transactions were submitted to BLS via email. Of these, 111 (99%) of KCI transactions received an

[7] KCI testing of systems availability was limited to the time intervals when submission of pre-order and order transactions occurred. Transactions were submitted during the course of the test between the hours of 8:00 am and 6:00 pm Monday through Friday.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			acknowledgment. Of the 370 total transactions sent, 96% received a subsequent response (error or confirmation) from BLS. Of the 162 LMU-SIs submitted to the BLS CRSG, 157 (97%) received the expected response from the BLS CRSG. Of the 208 LSR / SIs submitted to the BLS CRSG, 197 (95%) received a response from the BLS CRSG. KCI detailed these deficiencies in Exception 112 and Exception 134. From January 2000 through March 2001 KCI conducted a re-test of BLS delivery of expected responses. Of the total of 1,006 transactions submitted to BLS during this timeframe, 915 (91%) received expected responses. Of the total 447 pre-order LMU–SI and order LSR / SIs submitted via email to the BLS CRSG, 387 (87%) received an acknowledgement from the BLS CRSG. Of the 559 total transactions submitted (via e-mail and facsimile) 528 (95%) received a subsequent response. Of the 275 pre-order LMU-SI[8] submitted to BLS, 248 (90%) received the expected response from BLS. Of the 284 LSR / SIs submitted to BLS, 280 (99%) received a response from BLS. See Exception 112 and Exception 134 for additional information on these issues. Exception 112 is closed.

[8] In response to a LMU-SI, a CLEC would receive a FOC, once the FOC has been rendered, the CRSG / Account Team returns the LMU (and RESID / FRN if applicable) to the CLEC – *BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide for Manual Loop Makeup (Issue 1.1 January 31, 2001)* Section 5.1.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-12-2-2	BLS's Representative provides required pre-order functionality for xDSL Loops.	Satisfied	Based on functional testing results, BLS provides required pre-order functionality in support of xDSL relevant pre-orders. Detailed loop make-up information including loop characteristics (i.e., loop length, gauge, and existence of equipment) was returned in the LMU responses.
PO&P-12-2-3	BLS's Representative provides required order functionality for xDSL product.	Satisfied	BLS provides adequate core ordering functionality in support of xDSL orders. Based on functional testing results, BLS provides adequate core ordering functionality in support of xDSL orders. BLS does not support the ordering of Designed and Non-Designed Loops submitted to the LCSC and CRSG with a Related Purchase Order Number (RPON). CLECs are required to submit two separate LSRs. See Exception 121 for additional information on this issue. In response to this exception, BLS updated its *BellSouth Business Rules for Local TCIF 9/ LSOG 4 Ordering* on 12/22/00 (Section 28.2.2) to accurately reflect RPON ordering rules. As a result, KCI has recommended closure of Exception 121 to the GPSC.
Response Timeliness			
PO&P-12-3-1	BLS's Representative provides pre-order rejections / clarifications (CLRs) within agreed upon standard intervals.	Satisfied	The KCI standard is 95% of pre-order rejections/clarifications (CLRs) received within seven days[9]. During initial testing, 60 LMU-SIs received rejection/clarification notices from BLS. Of these, 45 (75%) received the rejection/clarification notice within seven days. As a

[9] The Standard Service Interval for return of Manual LMU-SI, as stated in the BellSouth Loop Make-up (LMU) CLEC Information Package (Version 3), is seven days. KCI used this Standard Service Interval to measure the timeliness of response for both completed LMUSI and Rejections/Clarifications of LMUSI.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			result of this deficiency, KCI issued Exception 117. KCI initiated a re-test of BLS in January, 2001 for providing rejections / clarifications within seven days. Of the 149 responses received from the LCSC and CRSG, 149 (100%) received the rejection / clarification within seven days. See Exception 117 for additional information on this issue. KCI has recommended closure ofException 117 to the GPSC.
PO&P-12-3-2	BLS's Representative provides Loop Make-Up Service Inquiry Information (LMU-SI) within agreed-upon intervals.	Satisfied	The KCI standard is 95% of LMU-SIs responses received within seven days[9]. During initial testing, 132 LMU-SIs were submitted to the BLS CRSG. Of these, 90 (68%) received detailed characteristics returned on LMU-SI within seven days. As a result of this deficiency, KCI issued Exception 115. KCI retested BLS for providing Loop Make-up information within seven days. 56 LMU-SI received responses from BLS. Of these, 54 (96%) received the LMU-SI response within seven days. See Exception 115 for additional information on this issue. KCI has recommended closure of Exception 115 to the GPSC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-12-3-3	BLS's Representative provides Acknowledgements for Service Inquiries accompanied by Local Service Requests (LSR / SIs) within agreed upon standard intervals.	Satisfied	The KCI standard is 95% of Acknowledgements to LSR / SIs received within eight business hours[10]. During initial testing, KCI received 111 Acknowledgements for LSR / SIs from BLS. Of these, 108 (97%) were delivered within eight business hours. KCI conducted additional testing[11] for providing Acknowledgments for LSR / SIs submitted to the CRSG within eight business hours. 190 Acknowledgments for LSR / SIs were received from BLS. Of these, 186 (98%) were delivered within eight business hours.
PO&P-12-3-4	BLS's Representative provides order rejections / clarifications (CLRs) within agreed-upon standard intervals.	Satisfied[12]	The KCI standard is 95% of order rejections / clarifications (CLRs) received within seven days[13]. During initial testing, 82 LSR / SIs received a rejection or clarification notice from the BLS CRSG / LCSC. Of these, 75 (92%) received the rejection / clarification notice within seven days. KCI conducted additional testing[14] for providing rejections / clarifications within seven days. 172 LSR / SIs received a rejection or clarification notice from the BLS CRSG / LCSC. Of these, 172 (100%) received the rejection / clarification notice within seven days.

[10] Business hours for the ordering centers processing xDSL service requests, as defined by BellSouth's ADSL Info Package (Version 4), are 8:00 AM – 5:00 PM.

[11] Initial test results were satisfied (as stated above). Additional testing was conducted based on deficiencies in other xDSL-related test criteria. The results of the additional testing are presented here for information purposes only.

[12] Although the test percentage is below the benchmark of 95%, the statistical evidence is not strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the sub-standard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0.1160 , above the .0500 cut-off for a statistical conclusion of failure.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-12-3-5	BLS's Representative provides Firm Order Confirmations (FOCs) within agreed upon standard intervals.	Satisfied[15]	The KCI standard is 95% of FOCs received within nine[16] days. 90 LSR / SIs received FOC notices from the BLS LCSC. Of these, 85 (94.4%) received the FOC notice within nine days[17].
PO&P-12-3-6	BLS's Representative provides Jeopardy Notifications within agreed upon standard intervals.	No Result Determination Made[18]	The KCI standard is 95% of Jeopardy Notifications received at least 48 hours before the confirmed Due Date (DD). KCI did not receive any Jeopardy Notifications via e-mail or facsimile for LSR / SIs submitted to the BLS CRSG. BLS provided KCI with information regarding two orders being placed in Jeopardy Status via phone. Calls were received regarding Jeopardy Status on the FOC Due Date.

[13] KCI set the Standard Response Interval for return of Rejections / Clarifications at seven days based on review of both the BellSouth Loop Make-up (LMU) CLEC information Package (Version 3), which requires a seven day timeline to return a pre-order, and the BellSouth Unbundled ADSL / HDSL Compatible Loops CLEC Information Package (Version 4), which states that a 1-5 Loops will receive a FOC within two days of receipt of an accurate LSR and SI (Service Inquiry).

[14] Initial test results were satisfied (as stated above). Additional testing was conducted based on deficiencies in other xDSL-related test criteria. The results of the additional testing are presented here for information purposes only.

[15] Although the test percentage is below the benchmark of 95%, the statistical evidence is not strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the substandard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0.4703 , above the .0500 cut-off for a statistical conclusion of failure.

[16] LSRs are submitted in concurrence with the LMU / SI forms to the CRSG. The BellSouth CRSG is required to return LMU / SIs within a seven day interval, as stated in the *BellSouth Loop Make-up (LMU) CLEC Information Package* (Version 1). The CRSG forwards the LSR-SI to the LCSC once completed along with the LMU-SI information. The LCSC is required to return a FOC to the CLEC within two days of receipt of the LSR. The total allowable time for a FOC to be returned to a CLEC is nine business days.

[17] 91% of FOCs were received within seven days; 90% of FOCs were received within five days.

[18] Result are not provided due to statistically insignificant sample size. KCI was unable to control or anticipate the sample size of Jeopardy Notifications within its test design. Jeopardy Notifications are provided in the event that BellSouth does not have adequate facilities in place to provision a customer's request on the confirmed due date. KCI did not have access to this real-time material during the course of test design and execution.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-12-3-7	BLS's Representative provides Missed Appointment (MA) notifications within agreed upon standard intervals.	No Result Determination Made[19]	The KCI proposed standard is 95% of MA notifications received within one business day after the confirmed Due Date (DD). KCI did not receive any Missed Appointment notifications for LSR/SIs submitted to the BLS CRSG.
PO&P-12-3-8	BLS's Representative provides Order status updates within agreed upon standard intervals.	Satisfied	The KCI standard is 95% of order status updates requested will be provided to CLECs the same day for e-mails sent prior to 3pm CST, or the following business day for e-mails sent after 3pm. 20 requests for order status were submitted to the BLS CRSG via e-mail. Status was received by KCI within one business day of submission for all 20 orders.
Accuracy of System Response			
PO&P-12-4-1	BLS systems and representatives provide clear, accurate, and complete LMU-SI/LSR responses.	Satisfied	A sample of LMU-SI/LSR responses were examined for clarity, accuracy, and completeness relative to the BLS Business Rules. Data returned on LMU-SI/LSR responses provided clear, accurate and complete information based on the BellSouth Loop Makeup (LMU) CLEC Information Package. While the loop make-up information returned on LMU-SI/LSR responses was not consistently returned in the same format, the data provided critical information to place subsequent orders for xDSL loops.

[19] Result are not provided due to statistically insignificant sample size. KCI was unable to control or anticipate the sample size of Missed Appointments within its test design. Missed Appointment are provided in the event that the CLEC is not prepared on the FOC due date. KCI did not have access to this real-time material during the course of test design and execution..

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-12-4-2	BLS's Representative provides clear, accurate and complete pre-order LMU-SI rejections / clarifications (CLRs).	Satisfied	A sample of pre-order LMU-SI / LSR rejection / clarifications were examined for clarity, accuracy, and completeness relative to the BLS Business Rules. Based on review of this sample, BLS provides clear and accurate information on pre-order LMU-SI rejection / clarification notifications.
PO&P-12-4-3	BLS's Representative provides clear, accurate, and complete Firm Order Confirmations (FOCs).	Satisfied	A sample of FOC responses was examined for clarity, accuracy, and completeness relative to the BLS Business Rules. Based on review of this sample, the BLS CRSG / LCSC provides clear, accurate, and complete information on FOC responses.
PO&P-12-4-4	BLS's Representative provides clear, accurate and complete order LSR-SI rejections / clarifications.	Satisfied	A sample of LSR-SI rejection / clarifications was examined for clarity, accuracy, and completeness relative to the BLS Business Rules. BLS provides clear and accurate information on LSR-SI rejection / clarification notifications.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-12-4-5	Service order provisioning due dates[20] identified within BLS's firm order confirmation (FOC) delivered through manual processes are in accordance with the product's standard interval.	No Result Determination Made[21]	KCI reviewed provisioning due dates identified within FOC responses against the standard service intervals contained within BLS documentation. Of the 83 LSR-SI FOC notices received from BLS's LCSC, 95% contained FOC DDs in accordance with the *BellSouth Products and Services Interval Guide*.
PO&P-12-4-6	BLS provides status on order Completion.	Satisfied	According to the *BellSouth Business Rules for Local Ordering — OSS99 TCIF9 and LSOG4 Network & Carrier Services* guide, Completion Notices are provided for electronically submitted requests only. Information regarding completion of the order can be found via the Internet on the BLS CLEC Service Order Trackings (CSOTs) secure site. KCI was able to successfully obtain the status of 87 completed orders queried through CSOTs.
PO&P-12-4-7	BLS's Representative returns clear, accurate, and complete Jeopardy Notifications.	No Result Determination Made[22]	KCI did not receive any Jeopardy Notices via e-mail or facsimile for LSR / SIs submitted to the BLS CRSG. BLS provided KCI with information regarding two orders being placed in Jeopardy Status via phone.

[20] FOC Due Date (DD) is defined as the due date provided in the FOC. It is the date on which BellSouth commits to complete provisioning of a customer's service.

[21] A Georgia Service Quality Measurement (SQM) addressing the correlation between confirmed due dates and requested due dates does not exist. In addition, BellSouth does not have an established commitment or guideline for the percentage of confirmed due dates that should equal the requested due date. In the absence of an SQM-related benchmark, a BellSouth-defined guideline, or general industry standards or business rule thresholds that can be used for evaluation purposes, KCI provides the test results as diagnostic information only.

[22] Result are not provided due to statistically insignificant sample size. KCI was unable to control or anticipate the sample size of Jeopardy Notifications within its test design. Jeopardy Notifications are provided in the event that BellSouth does not have adequate facilities in place to provision a customer's request on the confirmed due date. KCI did not have access to this real-time material during the course of test design and execution.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-12-4-8	BLS's Representative provides clear, accurate, and complete Missed Appointment notifications.	No Result Determination Made[22]	KCI did not receive Missed Appointment Notificaitons for LSR / SIs submitted to the BLS CRSG.

C. Provisioning Verification Evaluation – Resale and *x*DSL (PO&P13)

1.0 Description

The objective of the Provisioning Verification Evaluation (PO&P13) was to evaluate BellSouth's processes and performance in provisioning Asymmetrical Digital Subscriber Loops (ADSL) and Resale Services.

The ADSL component of the evaluation focused on manually ordered ADSL products, and involved physical observations of BellSouth's provisioning process. To test the end-to-end ADSL provisioning process KCI observed live Competitive Local Exchange Carrier (CLEC) orders that had been submitted for provisioning.

The Resale Provisioning Verification component of the evaluation assessed BellSouth's ability to accurately and expeditiously complete the provisioning of CLEC Resale orders. The test incorporated orders submitted as part of the Electronic Data Interchange (EDI) and Telecommunications Access Gateway (TAG) Resale Functional Evaluation (PO&P11).

The Resale Provisioning Verification Evaluation included comparisons of confirmed orders against Directory Listings, Switch Translations, and Customer Service Records (CSRs). This evaluation included orders supplemented and cancelled, as well as those submitted with known errors.

2.0 Methodology

This section summarizes the test methodology.

2.1.1 Business Process Description (ADSL)

See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a description of the BellSouth provisioning process for ADSL.

2.1.2 Business Process Description (Resale)

See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a description of the BellSouth provisioning process for Resale.

2.2 Scenarios

ADSL

The scenarios executed as part of the ADSL component of the test are presented below.

Table IV-3.2: Detailed ADSL Test Scenarios

	Scenario Detailed Description
1	Migrate a one-line business retail customer to CLEC UNE ADSL loop without number portability.
2	Migrate a one-line residential retail customer to CLEC UNE ADSL without number portability.
3	Migration of a two-line business retail customer to CLEC UNE ADSL loop without number portability. One line remains as a POTS line and the other line becomes an ADSL line.
4	Migration of a two-line residential retail customer to CLEC UNE loop without number portability. One line remains as a POTS line and the other line becomes an ADSL line.
5	Migration of a two-line business retail customer to a CLEC UNE 4-wire HDSL loop without number portability. One line remains as a POTS line and the other line becomes a HDSL loop.
6	Disconnect a UNE HDSL four-wire business customer.
7	Disconnect a UNE ADSL one-line residential customer.
8	New CLEC UNE HDSL business customer orders one two-wire HDSL loop. XDSL loop qualification is required.
9	New CLEC UNE ADSL business customer orders one two-wire ADSL loop. XDSL loop qualification is required.
10	New CLEC UNE HDSL business customer orders one four-wire HDSL loop. XDSL loop qualification is required.
11	Add a loop to a CLEC UNE Loop one-line business customer. Loop will be used for two-wire ADSL.
12	Add a loop to a CLEC UNE Loop one-line residential customer. Loop will be used for two-wire ADSL.
13	Add a loop to a CLEC UNE Loop one-line business customer. Loop will be used for four-wire HDSL. Loop qualification required.

Resale

Scenarios for the Resale component of the test are presented in Section 2.2 of the PO&P11: EDI & TAG Resale Functional Evaluation.

2.3 Test Targets & Measures

The test target was the provisioning of ADSL & Resale orders processed manually and through the EDI/TAG interfaces, respectively. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addresses in Section 3.1 "Results & Analysis."

Table IV-3.3: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Receive Completion Notification	Receive completion notification transaction	Timeliness of response Timeliness of dates Accuracy of data	PO&P-13-1-1
	Match response to order transaction and confirmation	Accuracy of provisioning	PO&P-13-1-1
	Verify receipt of completion notification	Completion notification received for all transactions	PO&P-13-1-1
Provision BLS Service	Confirm provisioning date and time – determine coordinated / non-coordinated / coordinated-time specific.	Accuracy of data	PO&P-13-1-2
	Perform provisioning activities.	Timeliness of dates Timeliness of completion	PO&P-13-1-1 PO&P-13-1-2 PO&P-13-4-1
	Perform testing activities.	Accuracy of provisioning Timeliness of response	PO&P-13-2-1 PO&P-13-4-2 PO&P-13-4-3 PO&P-13-4-4
	Turn up service.	Accuracy of data Timeliness of closure Timeliness of notification	PO&P-13-2-1 PO&P-13-4-2 PO&P-13-4-3 PO&P-13-4-4
Receive Jeopardy Notification	Receive jeopardy notification	Timeliness of notification Timeliness of dates Accuracy of data Frequency of notification	PO&P-13-3-1 PO&P-13-3-2
	Identify reason for jeopardy	Accuracy of response	PO&P-13-3-3
	Monitor follow-up activities	Timeliness of closure Compliance with procedures	PO&P-13-3-2

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table IV-3.4: Data Sources for Provisioning Verification Test

Document	File Name	Location in Work Papers	Source
UNEC Method and Procedures for Unbundled ADSL Capable Loops, Unbundled HDSL Capable Loops, and Unbundled Copper Loops Draft 1.1, Issue 5/4/00	No Electronic Copy	PO&P-13-A-1	BLS
UAL, UHL, and UCL New Install Checklist ISO Issue Number 1	AHUCLCK.doc	PO&P-13-A-2	BLS
SD/MA Policy Interconnection Services UG-SDMA-001 Issue 3a, March, 2000	SDMA2.doc	PO&P-13-A-3	BLS
Provisioning Verification Benchmarks	Provisioningbenchmarks.doc	PO&P-13-A-4	KCI
KCI Provisioning Tracking Sheet	No Electronic Copy	PO&P-13-A-5	KCI

2.4.1 Data Generation/Volumes

This test relied on observations, interviews with BellSouth personnel, and documentation reviews.

2.5. Evaluation Methods

ADSL

Operational analysis techniques were used to evaluate BellSouth processes. Selected test instances utilized in pre-order and order functional testing were verified for provisioning accuracy and coordination.

KCI testers completed ADSL provisioning validation by conducting observations of (1) outside plant technicians on truck rolls to the customer premise and (2) UNE-C technicians as they worked with the OST technicians and CLECs to verify that the loop met the physical characteristics required to support ADSL service.

Interviews were also held with BellSouth provisioning personnel and with personnel from CLECs that purchase ADSL service from BellSouth. These interviews were conducted to provide a better understanding of the ADSL end-to-end provisioning process.

Resale

Operational analysis techniques were used to evaluate BellSouth systems and processes. Selected test instances utilized in pre-order and order functional testing were verified for provisioning accuracy and coordination.

The Provisioning Verification Evaluation was conducted through post-order activity validation of Customer Service Records (CSRs), switch translation reports, and Directory Listing database verification.

2.6 Analysis Methods

The Provisioning Verification Evaluation (PO&P13) included a checklist of evaluation measures developed by KCI during the early stages of the BellSouth – GA OSS Evaluation. These evaluation measures provided the framework of norms, standards, and guidelines for thetest.

The Georgia Public Service Commission voted on June 6, 2000 to approve a set of Service Quality Measurement- (SQM-) related measures and standards to be used for purposes of this evaluation.[1] For those evaluation criteria that do not map to the PSC-approved measures, KCI has applied its own standard, based on our professional judgment.

For quantitative evaluation criteria where the test result did not meet or exceed the established standard or KCI benchmark, KCI conducted a review to determine whether the differential was statistically significant.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

[1] On January 16, 2001, the GPSC issued an order requiring BellSouth to report for business purposes a set of measures that differs in some cases from the requirements of the June 6, 2000 test standards.

Table IV-3.5: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Provisioning Validation (ADSL)			
PO&P-13-1-1	The ADSL completion dates accurately reflect the completion due date contained in the order confirmation.	Satisfied	Since there is no GPSC-approved or BLS documented standard for timeliness of provisioning, KCI applied a standard of 95% for provisioning timeliness.[2] During initial testing, 87 ADSL orders were reviewed to determine if the completion date was consistent with the FOC due date. KCI measured provisioning timeliness. 77 (89%) of these orders completed on the FOC due date. Completion information was obtained through the BLS Customer Service Order Tracking System (CSOTS). KCI detiled these issues in Exception 126. KCI retested BLS for accuracy of provisioning on the due date contained in the order. 96 ADSL orders were reviewed to determine if the completion date was consitent with the FOC due date. 95 (99%) of the orders completed on the FOC due date. Completion information was obtained through CSOTS. See Exception 126 for additional information on this issue. KCI has recommended closure of Exception 126 to the GPSC.

[2] KCI applied standards based on its professional judgment in the absence of 1) GPSC-approved standards or 2) documented BellSouth guidelines.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-13-1-2	ADSL coordinated provisioning procedures are conducted in accordance with stated timing intervals.	Satisfied	Since there is no GPSC-approved or BLS documented standard for provisioning timeliness, KCI applied a standard for timely and accurate ADSL installations of 95%[3]. KCI observed 27 ADSL installations. KCI measured BLS's ability to meet provisioning Firm Order Confirmation(FOC dates. 26 ADSL installations (96%) were provisioned at the agreed upon FOC time.
Methods and Procedures (ADSL)			
PO&P-13-2-1	ADSL coordination provisioning procedures are conducted in adherence with methodologies prescribed in internal Method and Procedure documentation.	Satisfied	BLS was evaluated on its adherence to tasks identified in *UNEC Method and Procedures for Unbundled ADSL Capable Loops, Unbundled HDSL Capable Loops, and Unbundled Cooper Loops*, Document # 1.1, Issue 5/4/00. Since there is no GPSC-approved or documented BLS standard for adherence to M&P tasks, KCI applied a standard for adherence to M&P tasks for ADSL installations of 85%. KCI observed 27 ADSL installations (25 installations at the UNE-C in Birmigham, Alabama, two installations with Georgia Outside Field Technicians) with a total of 287 tasks. KCI measured BLS's ability to adhere to tasks defined in their internal Methods and Procedures documentation. 286 tasks (99%) were performed in accordance with BLS's internal Methods and Procedures.

[3] An installation was considered to be timely and accurate if BellSouth's provisioning activities allowed the CLEC to turn-up ADSL service on the loop on the FOC date.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Jeopardy Notification (ADSL)			
PO&P-13-3-1	A complete (e.g., beginning-to-end) decsription of the ADSL Jeopardy Notification process is defined.	Satisfied	A complete description of the ADSL Jeopardy Notification process can be found in BellSouth's: SDMA Policy Interconnection Services document.
PO&P-13-3-2	ADSL provisioning Jeopardy Notifications are returned in adherence to stated timing intervals.	No Result Determination Made[4]	Since there is no GPSC-approved or BLS documented standard for timely of receipt of Jeopardy Notifications, KCI applied a standard for timeliness of receipt of Jeopardy Notifications of 95%. One ADSL Jeopardy Notification was placed in Pending Facilities status (PF'd). KCI testers observed BLS notify the CLEC of this PF condition in accordance with the defined guidelines as stated in the "SDMA Policy Interconnection Services" document. The ADSL Jeopardy Notification was returned within the stated timing interval.
PO&P-13-3-3	ADSL provisioning Jeopardy Notifications are returned with accurate field entries.	No Result Determination Made[5]	One ADSL Jeopardy Notification was PF'd . KCI testers observed BLS accurately make the required field entries in the Jeopardy Notice as defined in the "SDMA Policy Interconnection Services" document. The ADSL Jeopardy Notification was submitted accurately.

[4] No result has been assigned due to insignificant sample sizes. The Jeopardy Notification test was not engineered by KCI to produce a pre-determined quantity of notifications. KCI testers were dependent on the results from "live" CLEC commercial installations. BellSouth generates a Jeopardy notice when an ADSL provisioning order can't be provisioned on the agreed upon installation date. KCI testers observed twenty-seven "live" CLEC commercial orders during this test. Only one Jeopardy Notice was returned.

[5] No result has been assigned due to insignificant sample sizes. The Jeopardy Notification test was not engineered by KCI to produce a pre-determined quantity of notifications. KCI testers were dependent on the results from "live" CLEC commercial installations. BellSouth generates a Jeopardy notice when an ADSL provisioning order can't be provisioned on the agreed upon installation date. KCI testers observed twenty-seven "live" CLEC commercial orders during this test. Only one Jeopardy Notice was returned.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Resale			
PO&P-13-4-1	Provisioning activity occurs on the date confirmed to the CLEC.	Satisfied[6]	Since there is no GPSC-approved or documented BLS standard for timeliness of provisioning, KCI applied a standard of 95% for provisioning timeliness. KCI reviewed 225 orders that completed for timeliness of provisioning. Of these, 212 (94.2%) completed on the confirmed due date provided on the Firm Order Confirmation (FOC) (See Table IV-3.6).
PO&P-13-4-2	Provisioning was completed accurately for orders placed on PO&P-11 EDI & TAG Functional Evaluation - Directory Listings .	Not Satisfied	Since there is no GPSC-approved or documented BLS standard for accuracy of provisioning, KCI applied a standard of 95% for provisioning accuracy for directory listings. 88 Directory Listings were reviewed to determine if BLS provisioned the listings correctly. Of those reviewed, 77 listings (88%) were provisioned correctly. As a result, KCI issued Exception 114. See Exception 114 for additional information on this issue. Exception 114 is closed.
PO&P-13-4-3	Provisioning was completed accurately for orders placed in PO&P-11 EDI & TAG Resale Functional Evaluation– Switch Translations Verification.	Not Satisfied	Since there is no GPSC-approved or documented BLS standard for accuracy of provisioning, KCI applied a standard of 95% for provisioning accuracy for switch translations. 174 switch translations were reviewed to determine if the data retrieved from the switch matched the information requested in corresponding, confimed LSRs. 159

[6] Although the test percentage is below the benchmark of 95%, the statistical evidence is not strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the substandard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0.3367, above the .0500 cutoff for a statistical conclusion of failure.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			(91%) of the switch translations provided information consistent with the corresponding LSR. See Exception 114 for additional information on this issue. Exception 114 is closed.
PO&P-13-4-4	Provisioning was completed accurately for orders placed in PO&P-11 EDI & TAG Resale Functional Evaluation–Customer Service Record (CSR) Validation	Satisfied[7]	Since there is no GPSC-approved or documented BLS standard for provisioning accuracy, KCI applied a standard of 95%for provisioning accuracyfor CSRs. 70 CSRs were reviewed to determine if the CSRs matched the information requested in corresponding, comfirmed LSRs. 63 (90%) of the CSRs provided information consistent with the corresponding LSR.

[7] Although the test percentage is below the benchmark of 95%, the statistical evidence is not strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the substandard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0. 0604, above the .0500 cutoff for a statistical conclusion of failure.

Table IV-3.6: Provisioned Date[8] vs. FOC Due Date[9]

(Provisioning Date) – (FOC Due Date)	Number of Instances	Percent of Total
-1	2	15%
1	4	31%
2	3	23%
3	2	15%
4	1	8%
>5	1	8%
Total	13	100%

Table IV-3.7: Summary of Resale Provisioning Validation Results[10]

	Total Tested	Accurately Provisioned	% of Total	Number of Errors - Flow Through[11]	% of Total Errors	Number of Errors- Non-Flow Through	% of Total Errors
Customer Service Record	70	63	90.0%	3	42.9%	4	57.1%
Switch Translation	174	159	91.37%	5	33.3%	10	66.7%
Directory Listing	88	77	87.5%	8	72.7%	3	27.3%

[8] Provisioned date is the date defined by BellSouth on which provisioning work, inclusive of systems, Central Office and field activity, has been completed.

[9] FOC Due Date is defined as the due date provided in the FOC. It is the date on which BellSouth commits to complete provisioning of a customer's service.

[10] For CSRs and Directory Listings, validation was conducted on a per-order basis. For switch translations, validation was conducted on a per-line basis

[11] For electronically submitted LSRs, a flow through service request proceeds through BellSouth's OSS to generate an FOC without manual intervention. A non-flow through service request falls out for manual handling prior to generation of an FOC.

C. Provisioning Verification Evaluation – Resale and *x*DSL (PO&P13)

1.0 Description

The objective of the Provisioning Verification Evaluation (PO&P13) was to evaluate BellSouth's processes and performance in provisioning Asymmetrical Digital Subscriber Loops (ADSL) and Resale Services.

The ADSL component of the evaluation focused on manually ordered ADSL products, and involved physical observations of BellSouth's provisioning process. To test the end-to-end ADSL provisioning process KCI observed live Competitive Local Exchange Carrier (CLEC) orders that had been submitted for provisioning.

The Resale Provisioning Verification component of the evaluation assessed BellSouth's ability to accurately and expeditiously complete the provisioning of CLEC Resale orders. The test incorporated orders submitted as part of the Electronic Data Interchange (EDI) and Telecommunications Access Gateway (TAG) Resale Functional Evaluation (PO&P11).

The Resale Provisioning Verification Evaluation included comparisons of confirmed orders against Directory Listings, Switch Translations, and Customer Service Records (CSRs). This evaluation included orders supplemented and cancelled, as well as those submitted with known errors.

2.0 Methodology

This section summarizes the test methodology.

2.1.1 Business Process Description (ADSL)

See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a description of the BellSouth provisioning process for ADSL.

2.1.2 Business Process Description (Resale)

See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a description of the BellSouth provisioning process for Resale.

2.2 Scenarios

ADSL

The scenarios executed as part of the ADSL component of the test are presented below.

Table IV-3.2: Detailed ADSL Test Scenarios

	Scenario Detailed Description
1	Migrate a one-line business retail customer to CLEC UNE ADSL loop without number portability.
2	Migrate a one-line residential retail customer to CLEC UNE ADSL without number portability.
3	Migration of a two-line business retail customer to CLEC UNE ADSL loop without number portability. One line remains as a POTS line and the other line becomes an ADSL line.
4	Migration of a two-line residential retail customer to CLEC UNE loop without number portability. One line remains as a POTS line and the other line becomes an ADSL line.
5	Migration of a two-line business retail customer to a CLEC UNE 4-wire HDSL loop without number portability. One line remains as a POTS line and the other line becomes a HDSL loop.
6	Disconnect a UNE HDSL four-wire business customer.
7	Disconnect a UNE ADSL one-line residential customer.
8	New CLEC UNE HDSL business customer orders one two-wire HDSL loop. XDSL loop qualification is required.
9	New CLEC UNE ADSL business customer orders one two-wire ADSL loop. XDSL loop qualification is required.
10	New CLEC UNE HDSL business customer orders one four-wire HDSL loop. XDSL loop qualification is required.
11	Add a loop to a CLEC UNE Loop one-line business customer. Loop will be used for two-wire ADSL.
12	Add a loop to a CLEC UNE Loop one-line residential customer. Loop will be used for two-wire ADSL.
13	Add a loop to a CLEC UNE Loop one-line business customer. Loop will be used for four-wire HDSL. Loop qualification required.

Resale

Scenarios for the Resale component of the test are presented in Section 2.2 of the PO&P11: EDI & TAG Resale Functional Evaluation.

2.3 Test Targets & Measures

The test target was the provisioning of ADSL & Resale orders processed manually and through the EDI/TAG interfaces, respectively. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addresses in Section 3.1 "Results & Analysis."

Table IV-3.3: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Receive Completion Notification	Receive completion notification transaction	Timeliness of response Timeliness of dates Accuracy of data	PO&P-13-1-1
	Match response to order transaction and confirmation	Accuracy of provisioning	PO&P-13-1-1
	Verify receipt of completion notification	Completion notification received for all transactions	PO&P-13-1-1
Provision BLS Service	Confirm provisioning date and time – determine coordinated / non-coordinated / coordinated-time specific.	Accuracy of data	PO&P-13-1-2
	Perform provisioning activities.	Timeliness of dates Timeliness of completion	PO&P-13-1-1 PO&P-13-1-2 PO&P-13-4-1
	Perform testing activities.	Accuracy of provisioning Timeliness of response	PO&P-13-2-1 PO&P-13-4-2 PO&P-13-4-3 PO&P-13-4-4
	Turn up service.	Accuracy of data Timeliness of closure Timeliness of notification	PO&P-13-2-1 PO&P-13-4-2 PO&P-13-4-3 PO&P-13-4-4
Receive Jeopardy Notification	Receive jeopardy notification	Timeliness of notification Timeliness of dates Accuracy of data Frequency of notification	PO&P-13-3-1 PO&P-13-3-2
	Identify reason for jeopardy	Accuracy of response	PO&P-13-3-3
	Monitor follow-up activities	Timeliness of closure Compliance with procedures	PO&P-13-3-2

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table IV-3.4: Data Sources for Provisioning Verification Test

Document	File Name	Location in Work Papers	Source
UNEC Method and Procedures for Unbundled ADSL Capable Loops, Unbundled HDSL Capable Loops, and Unbundled Copper Loops Draft 1.1, Issue 5/4/00	No Electronic Copy	PO&P-13-A-1	BLS
UAL, UHL, and UCL New Install Checklist ISO Issue Number 1	AHUCLCK.doc	PO&P-13-A-2	BLS
SD/MA Policy Interconnection Services UG-SDMA-001 Issue 3a, March, 2000	SDMA2.doc	PO&P-13-A-3	BLS
Provisioning Verification Benchmarks	Provisioningbenchmarks.doc	PO&P-13-A-4	KCI
KCI Provisioning Tracking Sheet	No Electronic Copy	PO&P-13-A-5	KCI

2.4.1 Data Generation/Volumes

This test relied on observations, interviews with BellSouth personnel, and documentation reviews.

2.5. Evaluation Methods

ADSL

Operational analysis techniques were used to evaluate BellSouth processes. Selected test instances utilized in pre-order and order functional testing were verified for provisioning accuracy and coordination.

KCI testers completed ADSL provisioning validation by conducting observations of (1) outside plant technicians on truck rolls to the customer premise and (2) UNE-C technicians as they worked with the OST technicians and CLECs to verify that the loop met the physical characteristics required to support ADSL service.

Interviews were also held with BellSouth provisioning personnel and with personnel from CLECs that purchase ADSL service from BellSouth. These interviews were conducted to provide a better understanding of the ADSL end-to-end provisioning process.

Resale

Operational analysis techniques were used to evaluate BellSouth systems and processes. Selected test instances utilized in pre-order and order functional testing were verified for provisioning accuracy and coordination.

The Provisioning Verification Evaluation was conducted through post-order activity validation of Customer Service Records (CSRs), switch translation reports, and Directory Listing database verification.

2.6 Analysis Methods

The Provisioning Verification Evaluation (PO&P13) included a checklist of evaluation measures developed by KCI during the early stages of the BellSouth – GA OSS Evaluation. These evaluation measures provided the framework of norms, standards, and guidelines for thetest.

The Georgia Public Service Commission voted on June 6, 2000 to approve a set of Service Quality Measurement- (SQM-) related measures and standards to be used for purposes of this evaluation.[1] For those evaluation criteria that do not map to the PSC-approved measures, KCI has applied its own standard, based on our professional judgment.

For quantitative evaluation criteria where the test result did not meet or exceed the established standard or KCI benchmark, KCI conducted a review to determine whether the differential was statistically significant.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

[1] On January 16, 2001, the GPSC issued an order requiring BellSouth to report for business purposes a set of measures that differs in some cases from the requirements of the June 6, 2000 test standards.

Table IV-3.5: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Provisioning Validation (ADSL)			
PO&P-13-1-1	The ADSL completion dates accurately reflect the completion due date contained in the order confirmation.	Satisfied	Since there is no GPSC-approved or BLS documented standard for timeliness of provisioning, KCI applied a standard of 95% for provisioning timeliness.[2] During initial testing, 87 ADSL orders were reviewed to determine if the completion date was consistent with the FOC due date. KCI measured provisioning timeliness. 77 (89%) of these orders completed on the FOC due date. Completion information was obtained through the BLS Customer Service Order Tracking System (CSOTS). KCI detiled these issues in Exception 126. KCI retested BLS for accuracy of provisioning on the due date contained in the order. 96 ADSL orders were reviewed to determine if the completion date was consitent with the FOC due date. 95 (99%) of the orders completed on the FOC due date. Completion information was obtained through CSOTS. See Exception 126 for additional information on this issue. KCI has recommended closure of Exception 126 to the GPSC.

[2] KCI applied standards based on its professional judgment in the absence of 1) GPSC-approved standards or 2) documented BellSouth guidelines.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-13-1-2	ADSL coordinated provisioning procedures are conducted in accordance with stated timing intervals.	Satisfied	Since there is no GPSC-approved or BLS documented standard for provisioning timeliness, KCI applied a standard for timely and accurate ADSL installations of 95%[3]. KCI observed 27 ADSL installations. KCI measured BLS's ability to meet provisioning Firm Order Confirmation(FOC dates. 26 ADSL installations (96%) were provisioned at the agreed upon FOC time.
Methods and Procedures (ADSL)			
PO&P-13-2-1	ADSL coordination provisioning procedures are conducted in adherence with methodologies prescribed in internal Method and Procedure documentation.	Satisfied	BLS was evaluated on its adherence to tasks identified in *UNEC Method and Procedures for Unbundled ADSL Capable Loops, Unbundled HDSL Capable Loops, and Unbundled Cooper Loops*, Document # 1.1, Issue 5/4/00. Since there is no GPSC-approved or documented BLS standard for adherence to M&P tasks, KCI applied a standard for adherence to M&P tasks for ADSL installations of 85%. KCI observed 27 ADSL installations (25 installations at the UNE-C in Birmigham, Alabama, two installations with Georgia Outside Field Technicians) with a total of 287 tasks. KCI measured BLS's ability to adhere to tasks defined in their internal Methods and Procedures documentation. 286 tasks (99%) were performed in accordance with BLS's internal Methods and Procedures.

[3] An installation was considered to be timely and accurate if BellSouth's provisioning activities allowed the CLEC to turn-up ADSL service on the loop on the FOC date.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Jeopardy Notification (ADSL)			
PO&P-13-3-1	A complete (e.g., beginning-to-end) decsription of the ADSL Jeopardy Notification process is defined.	Satisfied	A complete description of the ADSL Jeopardy Notification process can be found in BellSouth's: SDMA Policy Interconnection Services document.
PO&P-13-3-2	ADSL provisioning Jeopardy Notifications are returned in adherence to stated timing intervals.	No Result Determination Made[4]	Since there is no GPSC-approved or BLS documented standard for timely of receipt of Jeopardy Notifications, KCI applied a standard for timeliness of receipt of Jeopardy Notifications of 95%. One ADSL Jeopardy Notification was placed in Pending Facilities status (PF'd). KCI testers observed BLS notify the CLEC of this PF condition in accordance with the defined guidelines as stated in the "SDMA Policy Interconnection Services" document. The ADSL Jeopardy Notification was returned within the stated timing interval.
PO&P-13-3-3	ADSL provisioning Jeopardy Notifications are returned with accurate field entries.	No Result Determination Made[5]	One ADSL Jeopardy Notification was PF'd . KCI testers observed BLS accurately make the required field entries in the Jeopardy Notice as defined in the "SDMA Policy Interconnection Services" document. The ADSL Jeopardy Notification was submitted accurately.

[4] No result has been assigned due to insignificant sample sizes. The Jeopardy Notification test was not engineered by KCI to produce a pre-determined quantity of notifications. KCI testers were dependent on the results from "live" CLEC commercial installations. BellSouth generates a Jeopardy notice when an ADSL provisioning order can't be provisioned on the agreed upon installation date. KCI testers observed twenty-seven "live" CLEC commercial orders during this test. Only one Jeopardy Notice was returned.

[5] No result has been assigned due to insignificant sample sizes. The Jeopardy Notification test was not engineered by KCI to produce a pre-determined quantity of notifications. KCI testers were dependent on the results from "live" CLEC commercial installations. BellSouth generates a Jeopardy notice when an ADSL provisioning order can't be provisioned on the agreed upon installation date. KCI testers observed twenty-seven "live" CLEC commercial orders during this test. Only one Jeopardy Notice was returned.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Resale			
PO&P-13-4-1	Provisioning activity occurs on the date confirmed to the CLEC.	Satisfied[6]	Since there is no GPSC-approved or documented BLS standard for timeliness of provisioning, KCI applied a standard of 95% for provisioning timeliness. KCI reviewed 225 orders that completed for timeliness of provisioning. Of these, 212 (94.2%) completed on the confirmed due date provided on the Firm Order Confirmation (FOC) (See Table IV-3.6).
PO&P-13-4-2	Provisioning was completed accurately for orders placed on PO&P-11 EDI & TAG Functional Evaluation - Directory Listings .	Not Satisfied	Since there is no GPSC-approved or documented BLS standard for accuracy of provisioning, KCI applied a standard of 95% for provisioning accuracy for directory listings. 88 Directory Listings were reviewed to determine if BLS provisioned the listings correctly. Of those reviewed, 77 listings (88%) were provisioned correctly. As a result, KCI issued Exception 114. See Exception 114 for additional information on this issue. Exception 114 is closed.
PO&P-13-4-3	Provisioning was completed accurately for orders placed in PO&P-11 EDI & TAG Resale Functional Evaluation– Switch Translations Verification.	Not Satisfied	Since there is no GPSC-approved or documented BLS standard for accuracy of provisioning, KCI applied a standard of 95% for provisioning accuracy for switch translations. 174 switch translations were reviewed to determine if the data retrieved from the switch matched the information requested in corresponding, confimed LSRs. 159

[6] Although the test percentage is below the benchmark of 95%, the statistical evidence is not strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the substandard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0.3367, above the .0500 cutoff for a statistical conclusion of failure.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			(91%) of the switch translations provided information consistent with the corresponding LSR. See Exception 114 for additional information on this issue. Exception 114 is closed.
PO&P-13-4-4	Provisioning was completed accurately for orders placed in PO&P-11 EDI & TAG Resale Functional Evaluation–Customer Service Record (CSR) Validation	Satisfied[7]	Since there is no GPSC-approved or documented BLS standard for provisioning accuracy, KCI applied a standard of 95%for provisioning accuracyfor CSRs. 70 CSRs were reviewed to determine if the CSRs matched the information requested in corresponding, comfirmed LSRs. 63 (90%) of the CSRs provided information consistent with the corresponding LSR.

[7] Although the test percentage is below the benchmark of 95%, the statistical evidence is not strong enough to conclude that the performance is below the benchmark with 95% confidence. In other words, the inherent variation in the process is large enough to have produced the substandard result, even with a process that is operating above the benchmark standard. The p-value, which indicates the chance of observing this result when the benchmark is being met, is 0. 0604, above the .0500 cutoff for a statistical conclusion of failure.

Table IV-3.6: Provisioned Date[8] vs. FOC Due Date[9]

(Provisioning Date) – (FOC Due Date)	Number of Instances	Percent of Total
-1	2	15%
1	4	31%
2	3	23%
3	2	15%
4	1	8%
>5	1	8%
Total	13	100%

Table IV-3.7: Summary of Resale Provisioning Validation Results[10]

	Total Tested	Accurately Provisioned	% of Total	Number of Errors - Flow Through[11]	% of Total Errors	Number of Errors- Non-Flow Through	% of Total Errors
Customer Service Record	70	63	90.0%	3	42.9%	4	57.1%
Switch Translation	174	159	91.37%	5	33.3%	10	66.7%
Directory Listing	88	77	87.5%	8	72.7%	3	27.3%

[8] Provisioned date is the date defined by BellSouth on which provisioning work, inclusive of systems, Central Office and field activity, has been completed.

[9] FOC Due Date is defined as the due date provided in the FOC. It is the date on which BellSouth commits to complete provisioning of a customer's service.

[10] For CSRs and Directory Listings, validation was conducted on a per-order basis. For switch translations, validation was conducted on a per-line basis

[11] For electronically submitted LSRs, a flow through service request proceeds through BellSouth's OSS to generate an FOC without manual intervention. A non-flow through service request falls out for manual handling prior to generation of an FOC.

D. Test Results: Resale and xDSL Documentation Evaluation (PO&P14)

1.0 Description

The objective of the Resale and xDSL Documentation Evaluation[1] (PO&P14) was to conduct an operational review of the documentation developed by BellSouth to provide support to Competitive Local Exchange Carriers (CLECs) carrying out the business processes of ordering through BellSouth's Operational Support Systems (OSS).

This test was a high-level review to determine the degree to which documentation prepared and distributed by BellSouth was subject to acceptable management and business practices, as defined in the evaluation criteria. The evaluation was not a comprehensive review of the content accuracy of all BellSouth OSS-related documentation. Rather, this evaluation focused on the business rules related to ordering. Neither the Georgia Public Service Commission's (GPSC) May 20, 1999 Order authorizing third-party testing, nor the January 12, 2000 Order authorizing supplemental testing called for evaluation of the development of an EDI order interface; therefore, documentation pertaining to interface development (e.g., Local Exchange Ordering [LEO] Guide 4) was not formally reviewed. For xDSL, only manual processes for submitting orders (via fax and email) were tested[2].

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

BellSouth offers CLECs the ability to access its OSS supporting Resale pre-order, order and provisioning functions. Resale pre-order queries and orders are processed though the Telecommunications Access Gateway (TAG) and Electronic Data Interchange (EDI) interfaces. CLECs can submit pre-order inquiries electronically through the TAG interface, while orders can be submitted through either the TAG or EDI interface. TAG and EDI programming instruction and associated documentation are available to CLECs in BellSouth training classes. See Section IV, "PO&P Overview" for a complete description of the order processes at BellSouth.

[1] KCI began its evaluation of the xDSL ordering processes and documentation associated with BellSouth's TCIF issue 7. In September 2000, BellSouth requested that KCI complete its evaluation using BellSouth's TCIF issue 9.

[2] Beta testing period of TCIF Issue 9 electronic ordering for xDSL began on July 29, 2000.

xDSL pre-orders and orders submitted for this test were processed manually. Pre-order inquires and responses provide the CLEC with customer information prior to submitting an order for products or services.

BellSouth provides pre-order and order documentation to define the pre-order and order business rules, field formats, required data entry fields, and responses. In addition to the documentation provided during training, BellSouth posts pre-order and order documentation on their Web site at www.interconnection.bellsouth.com/ guides/guides/html. Notifications of updates to the documents are provided via Carrier Notifications, which are posted on the BellSouth Web site prior to actual delivery of the new version of the documents. In addition, Carrier Notifications provide CLECs with BellSouth operations information (i.e., system down time and holiday hours of operation).

2.2 Scenarios

The scenarios developed for the EDI and TAG Resale Functional Evaluation (PO&P11) and the xDSL Functional Evaluation (PO&P12) were used to evaluate BellSouth's business rules documentation.

2.3 Test Targets & Measures

The test target was the pre-ordering, ordering, provisioning verification and associated documentation for Resale and xDSL products. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

Table IV-4.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Resale and xDSL Documentation	Document Structure and Format	Existence of Stuctural Elements Completeness of Data	PO&P-14-2-1 PO&P-14-2-2 PO&P-14-2-3 PO&P-14-2-4 PO&P-14-2-5 PO&P-14-2-6 PO&P-14-2-7 PO&P-14-2-8 PO&P-14-2-9
	Document Content	Clarity of Information Completeness of Data	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Release Management	Existence and Adequacy Availability of Documentation	PO&P-14-1-1 PO&P-14-1-2 PO&P-14-1-3 PO&P-14-1-4 PO&P-14-1-5
	Document Accuracy	Accuracy of documentation	PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
Submit an Order	Create and send order in LSR format	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Receive FOC / error / reject notification	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
Submit an Error	Create and send order in LSR format	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Receive planned error / reject notification	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Correct errors	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Receive FOC	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
Supplement an Order	Create and send supplement transactions	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Receive FOC / error / reject notification	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Pre-Order / Order Integration	Populate integration orders with information returned from designated pre-order response	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Submit integration orders	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Receive acknowledgement	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Receive error / reject notification	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
	Correct errors	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Receive Completion Notice (CN)	Receive CN transaction	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
Receive Jeopardy Notification	Receive jeopardy notification transaction	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5
Check Service Order Status	Check service order status	Content of document(s) Accuracy of document(s)	PO&P-14-3-1 PO&P-14-3-2 PO&P-14-3-3 PO&P-14-4-1 PO&P-14-4-2 PO&P-14-4-3 PO&P-14-4-4 PO&P-14-4-5

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table IV-4.2: Data Sources for Resale and xDSL Documentation Evaluation

Document	File Name	Location in Work Papers	Source
BellSouth *Local Exchange Ordering Guide, Volume 1 Issue 7O*	O&P8_LEO Guide Vol. 1 Issue 7O.pdf	O&P-8-A-Disk 9	BLS
BellSouth Local Exchange Ordering Guide, Volume 1 Issue 7P	O&P8_LEO Guide Vol. 1 Issue 7P.pdf	O&P-8-A-Disk 10	BLS
BellSouth Local Exchange Ordering Guide, Volume 1 Issue 7Q	O&P8_LEO Guide Vol. 1 Issue 7Q.pdf	O&P-8-A-Disk 15	BLS
BellSouth Local Exchange Ordering Guide, Volume 1	O&P8_LEO Guide Vol. 1 Issue 7R.pdf	O&P-8-A-Disk 18	BLS

Document	File Name	Location in Work Papers	Source
Issue 7R			
BellSouth Pre-Ordering and Ordering Overview Issue 1.0	PO&P14 Pre-Ordering Overview Issue 1.0.pdf	O&P-8-A-Disk 11	BLS
BellSouth Products and Services Interval Guide Issue 2B	Products and Services Interval Guide Issue 2B.pdf	O&P-8-A-Disk 8	BLS
BellSouth Products and Services Interval Guide Issue 3	Products and Services Interval Guide Issue 2B.pdf	O&P-8-A-Disk 17	BLS
BellSouth Loop Make Up CLEC Information Package Version 1	No Electronic Copy	O&P-12-A-3	BLS
BellSouth *Unbundled Copper Loop*	BLS Undbundled Copper Loop.pdf	PO&P-14-A-Disk 1	BLS
BellSouth Resale Documentation Interview Report	BLS Resale Interview Report.doc	PRE-3-A-Disk 5	KCI
BellSouth xDSL Documentation Interview Report	BLS xDSL Interview Report.doc	PO&P-14-A-Disk 1	KCI
Comm South Resale Interview Report	Comm South Report.doc	PRE-3-A-Disk 5	KCI
Smoke Signals Resale Interview Report	No Electronic Copy	PRE-3-A-Disk 5	KCI
Rhythms Links Inc. xDSL Interview Report	Rhythms Report.doc	PRE-3-A-Disk 5	KCI
BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package	BLS Unbundled ADSL HDSL Compatible Loops.pdf	PO&P-14-A-Disk 1	BLS
BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package Version 2	No Electronic Copy	O&P-12-A-2	BLS
BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package Version 3	BLS Unbundled ADSL HDSL Compatible Loops Ver3.pdf	PO&P-14-A-Disk 1	BLS
BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package Version 4	BLS Unbundled ADSL HDSL Compatible Loops Ver4.pdf	PO&P-14-A-Disk 1	BLS

Document	File Name	Location in Work Papers	Source
BellSouth *Loop Makeup (LMU) CLEC Information Package* Version 2	No Electronic Copy	O&P-12-A-4	BLS
BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide for Manual Loop Makeup (Issue 1.0 September 15, 2000)	No Electronic Copy	O&P-12-A-1	BLS
BellSouth *Unbundled Copper Loop* Version 2	BLS Undbundled Copper Loop Ver2.pdf	PO&P-14-A-Disk 1	BLS
BellSouth *Unbundled Copper Loop* Version 3	BLS Undbundled Copper Loop Ver3.pdf	PO&P-14-A-Disk 1	BLS
Unbundled Loop Modifications CLEC Information Package March 10, 2000	No Electronic Copy	O&P-12-A-5	BLS
Unbundled Loop Modifications CLEC Information Package Version 2	BellSouth Unbundled Loop Modifications Ver2.pdf	PO&P-14-A-Disk 1	BLS
Unbundled Loop Modifications CLEC Information Package Version 3	BellSouth Unbundled Loop Modifications Ver3.pdf	PO&P-14-A-Disk 1	BLS
Pre-Order Business Rules Version 7.0	BellSouth Pre-Order Business Rules _Version 70.pdf	PRE-3-A Disk 10	BLS
Pre-Order Business Rules Data Dictionary Version 3.0	PO Bus Rules Data Dictionary Ver3.pdf	PRE-3-A-Disk 6	BLS
Pre-Order Business Rules Appendix Version 6.0	PO Bus Rules Appendix Ver6.pdf	PRE-3-A-Disk 11	BLS
BellSouth Business Rules for Local Ordering – OSS99 TCIF9 & LSOG4 Network and Carrier Services, Issue 9G	LSOG4 (OSS99) Issue 9G.pdf	PO&P-14-A-Disks 2, 3, 4 & 5	BLS

2.4.1 Data Generation/Volumes

This test relied on input from KCI subject matter experts who reviewed BellSouth resale and *x*DSL documentation in order to conduct the EDI and TAG Resale and *x*DSL functional evaluations (PO&P11 & PO&P12, respectively), as well as structured reviews of the format of the documentation and interviews with BellSouth and CLEC personnel.

2.5 Evaluation Methods

This test relied on input from KCI subject matter experts who reviewed BellSouth ordering documentation in order to conduct the Resale and *x*DSL Functional Evaluations as well as structured reviews of the format of the documentation and interviews with BellSouth and CLEC personnel.

Operational analysis techniques were used to evaluate BellSouth's documentation. Prior to the initiation of the test, evaluation checklists were created to facilitate a structured review of the documentation based on standard criteria. KCI performed a structured review of BellSouth Resale and xDSL documentation, visited Web sites where documentation is posted, conducted interviews with BellSouth and CLECs, and verified the accuracy of documentation during EDI and TAG – Resale and xDSL functional testing. The documentation reviews undertaken during the EDI and TAG Resale Functional Evaluation (PO&P11), and the xDSL Functional Evaluation (PO&P12), allowed for evaluation of the accuracy and usability of the documentation in a business environment.

BellSouth revised selected documents several times during the course of testing. Newly released or revised documents essential to functional testing activity were reviewed expeditiously, and in-depth, to allow the functional testing to continue with minimal interruption.

The methodology of the documentation evaluation was to review BellSouth documentation for conformance to a pre-defined checklist of expected characteristics. Documentation was examined for quality of structure, existence of acceptable management procedures, and quality of content using predefined checklists. Further, an "incident report" template was created to document occurrences of inconsistencies, errors, or unclear language that were identified during the test. Errors were discussed with BellSouth during the course of the test. Exceptions were issued for those documentation errors, inconsistencies, or instances of unclear language that were deemed to have a potential significant impact on a CLEC's ability to conduct business operations.

2.6 Analysis Methods

The Resale and xDSL Documentation Evaluation included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures provided the framework of norms, standards, and guidelines for the Resale and xDSL Documentation Evaluation.

Data analyzed for this report include test results collected through November 8, 2000.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table IV-4.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Release Management			
PO&P-14-1-1	BLS documentation is readily available via the BLS Web site or in hard copy.	Satisfied	KCI was able to obtain Resale and xDSL ordering documentation readily on the BLS Web site and/or in hard copy.
PO&P-14-1-2	BLS makes updates to documents readily available to the CLECs.	Satisfied	KCI reviewed BLS Resale and xDSL documentation throughout functional testing. Updates are available from the account team or obtained via the BLS Web site at http://www.interconnection.bellsouth.com/guides/guides.
PO&P-14-1-3	Training is available for use of documentation.	Satisfied	BLS offers the *Unbundled Network (UNE) Overview*, *CLEC Basic Service Ordering* and *Complex Products Service Ordering* classes as training for Resale products and documentation. BLS offers the *CLEC Basic Service Ordering* class to address manual ordering and manual completion of the LSR form required to order xDSL products and services.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-14-1-4	Responsibilities and procedures for developing, updating, and correcting documentation are clearly defined.	Satisfied	KCI's initial testing revealed numerous formatting errors and omissions in BLS documentation, which indicate deficiencies in BLS procedures for developing, updating, and correcting documentation. As a result, KCI issued Exception 53. BLS implemented a Quality Documentation Review process on May 31, 2000 that improved the process of identifying formatting errors and omissions before posting documentation to the BLS Web site. Through interviews with BLS Resale and xDSL Subject Matter Experts (SMEs), KCI validated Resale documentation development, update, and correction responsibilities, and the procedures that were instituted in the Quality Documentation Review process. See Exception 53 for additional information on this issue. Exception 53 is closed.
PO&P-14-1-5	Responsibilities and procedures for distributing documentation are clearly defined.	Satisfied	KCI's interviews indicate that responsibilities and procedures for distribution of Resale ordering documentation are defined and supported through Carrier Notifications on the BLS Web site. Through access to the BLS Web site, KCI observed xDSL documentation update notifications posted to the Carrier Notification section of the BLS Web site.
Document Structure and Format			
PO&P-14-2-1	Document version is indicated clearly within and throughout each document.	Satisfied	BLS Resale and xDSL documents display the version number on the title page and in the footer of each page.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-14-2-2	BLS document organization is consistent with its intended use.	Satisfied	The majority of BLS Resale ordering documentation reviewed by KCI facilitates access to critical business rule information and ordering procedures. However, KCI's initial review revealed that the *BellSouth Unbundled ADSL/HDSL Capable Loops* documentation contained numerous omissions and errors. KCI issued Exception 80. As a result BLS released a revised version of the *BellSouth Unbundled ADSL/HDSL Capable Loops*. Additionally, BLS added new xDSL documentation: *BellSouth Loop Makeup (LMU) CLEC Pre-Ordering and Ordering Guide for Manual Loop Makeup* and *BellSouth Loop Makeup CLEC Information package.* See Exception 80 for additional information on this issue. Exception 80 is closed.
PO&P-14-2-3	BLS documents contain information that is relevant to its intended audience.	Satisfied	The majority of BLS Resale documentation reviewed by KCI contains information relevant to its intended audience. KCI's initial review revealed several errors or omissions:. *BellSouth Loop Makeup (LMU) CLEC Information Package* referenced a required CLEC BAN entry on the SI form; however, the CLEC BAN field had been omitted from the form. *BellSouth Loop Makeup (LMU) CLEC Information Package* directed the user to add multiple loop requests to page two of the SI form. Page two had been omitted. KCI issued Exception 80. As a result, BLS released revised versions of the documentation. See Exception 80 for additional information on these issues. Exception 80 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-14-2-4	BLS documents contain a table of contents.	Satisfied	KCI's reviews of BLS documentation revealed that Resale and xDSL documentation contain a table of contents.
PO&P-14-2-5	BLS documents are logically organized with clear page numbering and section labeling.	Satisfied	BLS Resale and xDSL documentation reviewed by KCI contains clear page numbering and section labeling.
PO&P-14-2-6	BLS documents contain contact / help desk numbers.	Satisfied	BLS Resale and xDSL documentation reviewed by KCI contains contact / help desk information. KCI's initial tests, however, revealed deficiencies related to contact information in BLS's Resale documentation. BLS updated the documentation to add the required information. See Exception 55 for additional information on this issue. Exception 55 is closed.
PO&P-14-2-7	BLS documents clearly indicate purpose and scope.	Satisfied	BLS Resale and xDSL documentation reviewed by KCI contains purpose and scope statements.
PO&P-14-2-8	Cross-references are clearly stated directing readers to relevant sources of additional information.	Satisfied	BLS Resale and xDSL documentation reviewed by KCI contain cross-references to additional sources of relevant information. For example, *BellSouth Unbundled ADSL/HDSL Compatible Loops CLEC Information Package and the BellSouth LEO IG Volume 1* reference other BLS documentation and their locations on the BLS Web site.
PO&P-14-2-9	BLS documents clearly instruct users how to notify BLS of document errors and omissions.	Satisfied	BLS Resale and xDSL documentation reviewed by KCI contains instructions on how to notify BLS of document errors or omissions. KCI's initial tests, however, revealed deficiencies in BLS's Resale documentation relating to instructions on how to notify BLS of document errors and omissions. BLS updated its Web site to add instructions on how to notify BLS of document errors and omissions. See Exception 55 for additional information on this issue. Exception 55 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Document Content			
PO&P-14-3-1	BLS documents provide description of error messages and potential steps for resolution.	Satisfied	BLS Resale documentation reviewed by KCI contains error messages and potential steps for resolution. BLS xDSL documentation also contains error message descriptions and resolution steps.
PO&P-14-3-2	BLS documents clearly identify inputs / outputs of the specific processes.	Satisfied	BLS Resale documentation reviewed by KCI clearly identifies inputs / outputs of specific processes. KCI's initial review of BLS xDSL documentation revealed input / output omissions. As a result, BLS posted a new version of the documentation. See Exceptions 80 and 57 for additional information on this issue. Exceptions 80 and 57 are closed.
PO&P-14-3-3	BLS documents include expected results of process and cycle times.	Satisfied	KCI's review of BLS *Products and Services Interval Guide* revealed expected results and cycle times for Resale and xDSL ordering. *BellSouth Unbundled ADSL/HDSL Capable Loops* contains expected results and cycle times for xDSL products and services.
Document Accuracy			
PO&P-14-4-1	BLS documents correctly define data fields.	Satisfied	BLS Resale and xDSL documentation reviewed by KCI correctly defines data fields. However, KCI's initial review of BLS xDSL documentation revealed definition omissions and errors for several data fields. As a result, BLS posted a new version of *Combinations: Business, Residential and Line Side PBX*, *LEO IG Volume 2*, and *Products and Services Interval Guide.* Furthermore, KCI's initial review of *BellSouth Unbundled ADSL/HDSL Capable Loops* documentation revealed input / output omissions. KCI issued Exception 80. As a result, BLS posted a new version of the *BellSouth Unbundled ADSL/HDSL Capable Loops* that addresses the issues

Test Cross-Reference	Evaluation Criteria	Result	Comments
			identified by KCI. See Exception 80 for additional information on this issue. Exception 80 is closed.
PO&P-14-4-2	BLS documents accurately define acceptable formats for data fields.	Satisfied	BLS Resale documentation reviewed by KCI correctly defines acceptable formats for data fields. KCI's initial review of BLS xDSL documentation revealed omissions or errors in data field formats. KCI issued Exceptions 80 and 57. As a result, BLS posted new versions of its documentation that addressed the issues identified by KCI. See Exceptions 80 and 57 for additional information on this issue. Exceptions 80 and 57 are closed.
PO&P-14-4-3	BLS documents clearly identify required and optional fields.	Satisfied	BLS Resale documentation reviewed by KCI clearly identifies required and optional fields. However, KCI's initial review of xDSL documentation revealed omissions or errors in required and optional definitions. KCI issued Exceptions 80 and 57. As a result, BLS posted a new version of its documentation. See Exceptions 80 and 57 for additional information on this issue. Exceptions 80 and 57 are closed.
PO&P-14-4-4	BLS documents clearly describe expected system responses/outputs.	Satisfied	BLS Resale documentation reviewed by KCI clearly describes expected system responses/outputs. However, KCI's initial review of documentation revealed omissions or errors in required and optional definitions. KCI issued Exception 72. BLS updated its documentation to address these omissions and errors. See Exception 72 for additional information on this issue. Exception 72 is closed. KCI's initial review of BLS xDSL documentation revealed omissions in expected responses from the LMU-SI inquiry. As a result, BLS developed

Test Cross-Reference	Evaluation Criteria	Result	Comments
			new documentation and posted it to its Web site. See Exception 57 for additional information on this issue. Exception 57 is closed.
PO&P-14-4-5	BLS documents contain methods and procedures to correctly execute processes.	Satisfied	BLS Resale documentation reviewed by KCI contains methods and procedures to correctly execute processes. However, KCI's initial review of the Resale documentation revealed omissions or errors that related to methods and procedures for correctly executing processes. KCI issued Exception 72. BLS updated its documentation to address these omissions and errors. See Exception 72 for additional information on this issue. Exception 72 is closed. KCI's initial review of BLS xDSL documentation revealed omissions or errors in methods and procedures to correctly execute processes. KCI issued Exceptions 80 and 57. As a result, BLS posted new versions of its documentation. See Exceptions 80 and 57 for additional information on this issue. Exceptions 80 and 57 are closed.

E. Test Results: Work Center Capacity Management Evaluation - xDSL (PO&P15)

1.0 Description

The objective of the Work Center Capacity Management Evaluation was to review the safeguards and procedures in place to plan for and manage growth in the capacity requirements for the manual processes and workforce supporting xDSL pre-order and order processing.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

BellSouth's xDSL wholesale offerings are categorized as either Resale services or Unbundled Network Elements (UNEs). As part of its Resale offering, BellSouth sells its Consumer-Class Asymmetrical Digital Subscriber Line (ADSL) service to both network service providers (i.e., Internet service providers, corporations, and universities) and BellSouth Internet Services (BellSouth.net). The Internet Service Providers and BellSouth.net subsequently re-sell the end-to-end ADSL service to their respective customers using their own brand names. As part of its UNE offering, BellSouth leases its unbundled local loops to facilities-based Competitive Local Exchange Carriers (CLECs), which in turn provide xDSL service to customers using their own xDSL equipment. BellSouth's Unbundled ADSL and High Bit-rate Digital Subscriber Line (HDSL) Loops (UALs and UHLs, respectively) are capable of supporting specific xDSL services. CLECs may also lease Unbundled Copper Loops (UCLs) from BellSouth, which may or may not be capable of supporting xDSL service.

Resale and Retail xDSL pre-order and order processing activities, such as loop qualification and order submission, are supported by mechanized processes. UNE xDSL pre-order and order processing activities are supported by manual processes that reside in three primary BellSouth work centers: the Complex Resale Services Group (CRSG), the Service Advocate Center (SAC), and the Local Carrier Service Center (LCSC). The CRSG and SAC support pre-ordering; the LCSC supports order processing.

CLEC xDSL (UNE) pre-ordering begins with the submission by email or fax of a Service Inquiry (SI) and a Local Service Request (LSR) to the CRSG. The CRSG performs address validation on the LSR and forwards the SI to the SAC. The SAC determines if the specific loop identified in the SI is qualified to support xDSL service. In addition to providing SI responses to the CRSG, the SAC also reserves facilities and provides trouble-shooting support for specific orders. Once a qualified loop has been identified for the CLEC's SI, the CRSG subsequently faxes the CLEC's printed LSR to the LCSC for screening and entry

into the Local Order Number (LON) tracking system. Once it has been determined that the LSR is complete and that all information has been validated, the LCSC enters the LSR (service order) into the Exchange Access Control and Tracking (EXACT) system and issues Firm Order Confirmations (FOCs), Clarifications, or Cancellations, as appropriate, to the CLECs.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target was BellSouth's xDSL Pre-order and Order Processing Capacity Management process for the CRSG, SAC, and LCSC Work Centers. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

Table IV-5.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
xDSL Pre-Order and Order Processing Capacity Management	Data collection and reporting of business volumes, resource utilization, and performance monitoring	Adequacy and completeness of data collection and reporting	PO&P-15-1-1 PO&P-15-1-2 PO&P-15-1-3
	Data verification and analysis of business volumes, resource utilization, and performance monitoring	Adequacy and completeness of data verification and analysis	PO&P-15-1-4 PO&P-15-1-5 PO&P-15-1-6
	Workforce and capacity planning	Adequacy and completeness of workforce and capacity planning	PO&P-15-1-7 PO&P-15-1-8 PO&P-15-1-9 PO&P-15-1-10

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table IV-5.2: Data Sources for Work Center Capacity Management Evaluation - xDSL

Document	File Name	Location in Work Papers	Source
LEO Open Work Reports	No Electronic Copy	PO&P-15-A-1	BLS
MARCH System Reference, Issue 1, March, 2000	No Electronic Copy	PO&P-15-A-3	BLS
HairPIN and SIDEdoor, Issue 1, January, 2000	No Electronic Copy	PO&P-15-A-4	BLS
SOCS – UNE, Issue 1, July, 1999	No Electronic Copy	PO&P-15-A-6	BLS
UNE Work Types, Issue 1, March, 1997	No Electronic Copy	PO&P-15-A-7	BLS
UNE – 2W Designed Voice Grade Port and Voice Grade Loop, Issue 1a, February 2000.	No Electronic Copy	PO&P-15-A-9	BLS
CCSS Procedures, Issue 2, January, 2000	No Electronic Copy	PO&P-15-A-15	BLS
DSG Failed Provisioning Report	No Electronic Copy	PO&P-15-A-18	BLS
DSG Failed Validation Report	No Electronic Copy	PO&P-15-A-19	BLS
Anticipated Headcount Needs in Support of UNE Growth in the CRSG, as of 4/01/00	No Electronic Copy	PO&P-15-A-22	BLS
Top CLECs in CRSG Based on Number of LSRs Per Month, 5/01/2000	No Electronic Copy	PO&P-15-A-23	BLS
BellSouth ADSL "At A Glance,' 10/ 6/1999	No Electronic Copy	PO&P-15-A-24	BLS
ATL Outstanding UNE Work, 1/24/2000	No Electronic Copy	PO&P-15-A-25	BLS
Not Done by Center Report, 1/20/2000	No Electronic Copy	PO&P-15-B-26	BLS
BRITE System Reports by CLEC	No Electronic Copy	PO&P-15-B-27	BLS
BRITE Pending SI Response Report	No Electronic Copy	PO&P-15-B-28	BLS
BRITE Total TOS Report	No Electronic Copy	PO&P-15-B-29	BLS
Atlanta UNE Results 2000	No Electronic Copy	PO&P-15-B-30	BLS

Document	File Name	Location in Work Papers	Source
Escalation Procedures for the Unbundled Network Element (UNE) Center, Issue 2f, December, 1999	No Electronic Copy	PO&P-15-B-31	BLS
Calendar Events, Issue 1, December, 1999	No Electronic Copy	PO&P-15-B-34	BLS
Birmingham UNEC—LCSC Service Order Error Feedback, Issue 1, January, 2000	No Electronic Copy	PO&P-15-B-35	BLS
Asymmetrical Digital Subscriber Line (ADSL), Issue 1, 11/ 11/1999	No Electronic Copy	PO&P-15-B-36	BLS
Resale Turn-up for Orders Not "Switched As Is," Issue 2, February, 2000	No Electronic Copy	PO&P-15-B-37	BLS
CREX Job , Issue 1, January, 2000	No Electronic Copy	PO&P-15-B-38	BLS
Escalation, Issue 1, February, 2000	No Electronic Copy	PO&P-15-B-39	BLS
LMOS Codes and Procedures, Issue 1a, August, 1999	No Electronic Copy	PO&P-15-B-40	BLS
Performance Review for ET, Issue 1, February, 2000	No Electronic Copy	PO&P-15-B-41	BLS
Performance Summary—Maintenance Administrators, Issue 1, February, 2000	No Electronic Copy	PO&P-15-B-42	BLS
Resale Screening for Complex Design Turn-up, Issue 1c, 9/14/1999	No Electronic Copy	PO&P-15-B-43	BLS
SD/MA Policy Issue 3a, March, 2000	No Electronic Copy	PO&P-15-B-44	BLS
Screening—Non-Designed Provisioning, Issue 2, February, 2000	No Electronic Copy	PO&P-15-B-45	BLS
Screening—Designed, Issue 2, March, 2000	No Electronic Copy	PO&P-15-B-46	BLS
Quality Control, Issue 2, January, 2000	No Electronic Copy	PO&P-15-B-47	BLS
Past Due Service Order handling, CLEC DD miss. , Issue 1, March, 2000	No Electronic Copy	PO&P-15-B-48	BLS

Document	File Name	Location in Work Papers	Source
Past Due Service Order Due to PF, Issue 1, March, 2000	No Electronic Copy	PO&P-15-B-49	BLS
Past Due Service Order due to BellSouth, Not PF, Issue 1, March, 2000	No Electronic Copy	PO&P-15-B-50	BLS
Weekly Atlanta Production Report. All groups from 5/22/00 thru 5/27/2000	No Electronic Copy	PO&P-15-B-52	BLS
Email and BellSouth ADSL Service (Tariffed) Documents	No Electronic Copy	PO&P-15-B-53	BLS
Georgia ADSL-Equipped Wire Centers, 3/09/2000	No Electronic Copy	PO&P-15-B-54	BLS
Work Management Center Dispatch Procedures for Installation and Maintenance of ADSL Service	No Electronic Copy	PO&P-15-B-60	BLS
Workload Distribution, 7/01/00	No Electronic Copy	PO&P-15-B-61	BLS
Forecasted Covad Bookings	No Electronic Copy	PO&P-15-B-63	BLS
LSR Forecast	No Electronic Copy	PO&P-15-B-64	BLS
Service Rep Headcount Estimates2000-2004	No Electronic Copy	PO&P-15-B-65	BLS
LCSC Center Activity Report	No Electronic Copy	PO&P-15-B-66	BLS
LSR Volume Report by Data source for 3/1/00 to 3/31/00	No Electronic Copy	PO&P-15-B-67	BLS
BRITE System Reports for Thursday, April 6, 2000	No Electronic Copy	PO&P-15-B-68	BLS
CRSG On Line Job Aid UNE New: Responses to SIs, Clarifications	No Electronic Copy	PO&P-15-B-69	BLS
Customer Escalation to the CRSG	No Electronic Copy	PO&P-15-B-70	BLS
Forecasting Spreadsheet for the LCSC	No Electronic Copy	PO&P-15-C-3	BLS
Unbundled Local Loops, CO Job Aides	No Electronic Copy	PO&P-15-C-4	BLS
Atlanta LCSC Center 2000	No Electronic Copy	PO&P-15-C-6	BLS
DSG SOEG Reports	No Electronic Copy	PO&P-15-C-7	BLS

Document	File Name	Location in Work Papers	Source
SAC Attachment to Draft Exception 132, SAC Staffing Formulas	No Electronic Copy	PO&P-15-C-8	BLS
RL 96-12-026BT SAC Recommendations	No Electronic Copy	PO&P-15-C-9	BLS
OSPE/SAC Response, Network and Carrier Service Forecasting	No Electronic Copy	PO&P-15-C-10	BLS
SAC UNE Job Aid	No Electronic Copy	PO&P-15-C-11	BLS
Capacity Management Local Operations Centers	No Electronic Copy	PO&P-15-C-12	BLS
Anticipated Headcount Needs in Support of UNE Growth in the CRSG	BellSouth Forecast.xls	PO&P-15-C-13	BLS
Atlanta LCSC Center Reports - 2000	No Electronic Copy	PO&P-15-C-14	BLS
RELOG Disaster Recovery Plan	No Electronic Copy	PO&P-15-C-15	BLS
N&CS Forecasting Process	Totals.gif	PO&P-15-C-17	BLS
BellSouth FASS Overview	No Electronic Copy	PO&P-15-C-18	BLS
North West Atlanta District SAC Headcount Analysis for UNE/CLEC	No Electronic Copy	PO&P-15-C-19	BLS
OSPE/SAC Response	No Electronic Copy	PO&P-15-C-20	BLS
BellSouth Performance Evaluation, DSG	No Electronic Copy	PO&P-15-D-8	BLS
UNE Loop Make Up, Methods and Procedures (DRAFT) 3/12/2000	No Electronic Copy	PO&P-15-D-9	BLS
Mpower and BellSouth, CRSG Review, March 23, 2000	No Electronic Copy	PO&P-15-D-14	BLS
UNEC Methods and Procedures for Unbundled ADSL Capable Loops, Unbundled HDSL Capable Loops, and Unbundled Copper Loops	No Electronic Copy	PO&P-15-D-15	BLS
UNEC Methods and Procedures for Unbundled Loop Modification	No Electronic Copy	PO&P-15-D-16	BLS

Document	File Name	Location in Work Papers	Source
CRSG Organizational Chart as of 2/01/2000	No Electronic Copy	PO&P-15-D-21	BLS
Georgia AFIG Organizational Chart	No Electronic Copy	PO&P-15-D-22	BLS
Atlanta UNE II Group, Organizational Chart	No Electronic Copy	PO&P-15-D-23	BLS
Complex Team Coorganizational Chart, 6/2000	No Electronic Copy	PO&P-15-D-24	BLS
Tester Score sheet	No Electronic Copy	PO&P-15-D-33	BLS
Unbundled ADSL, HDSL and UCL Loop Job Aid	No Electronic Copy	PO&P-15-D-34	BLS
AFIG/ SOC Error Report	No Electronic Copy	PO&P-15-D-35	BLS
Appendix C – CLEC & BST Work center Disaster Recovery for Local Services	No Electronic Copy	PO&P-15-D-36	BLS
Service Representative Performance Measurement Plan (PMP)	No Electronic Copy	PO&P-15-D-37	BLS
KPMG Draft Exception 132 with BellSouth response	No Electronic Copy	PO&P-15-D-41	BLS
Works Management Center Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-42	BLS
UNE Center (Birmingham, AL) Interview Summary with BellSouth feedback.	No Electronic Copy	PO&P-15-D-43	BLS
SAC Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-44	BLS
LCSC (Birmingham, AL) Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-45	BLS
LCSC (Atlanta, GA) Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-46	BLS
DSG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-47	BLS
CRSG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-48	BLS

Document	File Name	Location in Work Papers	Source
CPG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-49	BLS
CO Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-50	BLS
AFIG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-E-1	BLS
UNE Center (Atlanta, GA) Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-E-2	BLS
Exception 109	No Electronic Copy	PO&P-15-E-8	BLS
BellSouth response to Exception 109	No Electronic Copy	PO&P-15-E-9	BLS
Peer Review Sign Off, POP 15 Work Center Capacity Management Evaluation, 5/16/00	No Electronic Copy	PO&P-15-E-20	BLS

2.4.1 Data Generation/Volumes

Data for this test was obtained through interviews with BellSouth personnel responsible for processing service inquiries, screening local service requests, resolving facility assignment/order errors, monitoring xDSL order volumes, provisioning orders, and planning work center staffing levels. Reviews of documentation supporting these procedures and structured walk-throughs of order processing sites also provided data for this test.

2.5 Evaluation Methods

The evaluation of BellSouth's Capacity Management for manual xDSL ordering processes began with a review of the work center procedural documentation and interviews with center personnel to collect information about the processing of xDSL orders. Structured center walk-throughs and direct observation of personnel performing their daily work supplemented the planned test interviews and document reviews. Business transaction volume and forecast data were gathered in order to assess current and future workload. Process models were reviewed to assess the capacity and scalability of the manual processes. Work force planning procedures and staffing plans were evaluated through additional interviews and documentation reviews.

2.6 Analysis Methods

The Work Center Capacity Management Evaluation - xDSL included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures provided the framework of norms, standards and guidelines for the Work Center Capacity Management Evaluation – xDSL.

The data collected were analyzed employing the evaluation measures referenced above.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table IV-5.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-15-1-1	There is an established process for capturing business and transaction volumes.	Satisfied	The document entitled "CRSG On Line Job Aid UNE New: Responses to SIs, Clarifications" describes the CRSG's use of the BLS Resale Information Tracking (BRITE) System to log Service Inquiries (SIs) received from CLECs. The CRSG's "Pending Service Inquiry Response" report, which is generated from BRITE, provides a listing of SIs received from CLECs. KCI interviews and documentation reviews revealed that the SAC's "NW ADSL Orders" report, is generated twice daily from the RELOG system / HTA database by an SAC Specialist. Orders referenced on this report are organized by specific wire centers. Generated from the Local Order Number (LON) system, the "LCSC Center Activity" report lists the Local Service Requests (LSRs) received from CLECs. The LCSC's "LSR Volume Report" identifies the type of service

Test Cross-Reference	Evaluation Criteria	Result	Comments
			requested via CLEC LSRs.
PO&P-15-1-2	There is an established process for capturing resource utilization and performance.	Satisfied	KCI interviews and observations revealed that counts of faxed SIs are kept on a manual stroke sheet in the CRSG fax room. These data are entered into a spreadsheet that is provided to the Sales Support Manager, and that is used for performance evaluation. The "CRSG Year 2000 Headcount Needs Summary" document also provides data on the number of UNE LSRs handled per CRSG headcount, per month. KCI interviews and documentation reviews revealed that the SAC tracks increases in work volumes and provides such data to the local management team for additional headcount authorization, as evidenced by the "OSPE/SAC Response" document. The "OSPE/SAC Response" outlines the SAC's staffing process for various types of Pending Facility Orders and Loop Make Up Requests. Also included in this documentation is the "SAC Headcount Forecast for CLEC Orders" document, which utilizes performance estimates to trigger additional headcount, and the "Northwest Atlanta District SAC Headcount Analysis for UNE/CLEC" document which utilizes historical and projected performance criteria to forecast headcount adjustments. KCI interviews revealed that a supervisor in the LCSC UNE Design Group begins each work day by analyzing a LON system report, paying special attention to orders that are close to reaching their due date. The "ATL Outstanding UNE Work" report displays open CLEC UNE orders. This document also references the length of time that CLEC orders have been outstanding. Performance goals, related to service order accuracy

Test Cross-Reference	Evaluation Criteria	Result	Comments
			and LSR throughput exist for LCSC Service Representatives and are referenced in the document entitled "Service Representative Performance Measurement Plan (PMP)".
PO&P-15-1-3	Managers monitor resource utilization and performance through the use of defined instrumentation and other documented tools.	Satisfied	KCI interviews and documentation reviews revealed that CRSG UNE Team Leaders monitor daily Trigger reports generated through BRITE to ensure that requests are being processed and closed within the prescribed time frame of one to five days. Trigger reports include the "Start Date," "Clarification", "Not Sent To Service Center," "Pending FOC from Center," "Pending FOC to Customer," and "Pending Service Inquiry Response" reports. UNE Team Leaders also monitor resource utilization by accessing the shared UNE mailbox to view email volume flowing to the Systems Designers. KCI interviews and documentation analysis revealed that SAC managers monitor daily order volumes on the Referred to Engineering Log (RELOG) system. SAC managers also utilize the BLS 5855 Performance Evaluation Tool to measure resource effectiveness in answering all service orders within eight hours, as well as measuring key service commitment criteria. KCI interviews and documentation reviews revealed that daily LCSC progress is monitored by reports generated through LON. One of these reports, entitled the "Weekly Atlanta Production Report – All Groups", includes the following performance measures: • # of errors per order • # of LSRs handled per hour. This report also lists resources / headcount assigned to each LCSC manager. Service representatives can view these statistics on a Web-based Intranet site.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-15-1-4	There is an established process for forecasting and trend analysis of business volumes and transactions.	Satisfied	The "CRSG Year 2000 Headcount Needs Summary" document provides a forecast of the CRSG's year 2000 UNE orders (listed by CLEC). Also referenced in this document are the CRSG's historical monthly UNE order volumes. The "OSPE/SAC Response" document provides a formula for forecasting headcount needs as Pending Facility (PF) Order volumes, Loop Make-Up (LMU) volumes, and T1 Order volumes increase in the SAC. The "SAC Headcount Forecast" document provides a forecast for Year 2000 Orders and Inquiries handled by the SAC. The "Northwest Atlanta District SAC Headcount Analysis for UNE/CLEC" document provides historical ADSL and Service Order Inquiry data for the months of May through August 2000, as well as projected volumes for the months of September through December. KCI was also provided with the document entitled "Network & Carrier Service Forecasting." This document includes processes for Switch, Loop, and Circuit Capacity Management, providing Forecast Assurance, Forecasting Process Basics, Forecasting Analysis Techniques, and Actual-vs-Forecast and Forecast-vs-Forecast Tracking Procedures. KCI interviews and documentation reviews revealed that the LCSC receives an annual UNE Loop forecast, entitled "Forecasted Bookings—2000" from one of its primary CLEC customers. This forecast provides monthly UNE projections for the major cities in which BLS provides service.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-15-1-5	There is an established process for forecasting and trend analysis of resource utilization.	Satisfied	The "CRSG Year 2000 Headcount Needs Summary" document provides a forecast of the CRSG's year 2000 headcount needs, based on forecasted UNE volumes. Also referenced in this document is information regarding the LSRs that the CRSG handles per headcount, per month. The SAC provided KCI with the document entitled "OSPE/SAC Response." Contained in this document is a forecasting process that evaluates the estimated number of resources needed to handle projected SAC transactions, formulas used to determine staff sizing based on Plain Old Telephone Service (POTS), and LMU order volumes. KCI was also provided with a document entitled "Network & Carrier Service Forecasting." This document includes processes for Switch, Loop, and Circuit Capacity Management, providing Forecast Assurance, Forecasting Process Basics, Forecasting Analysis Techniques, and Actual-vs-Forecast and Forecast-vs-Forecast Tracking Procedures. The section of the document subtitled "Forecast Process Basics," includes information to be used by SAC staff in preparing forecasts based on trend data as well as resource utilization. KCI interviews and documentation reviews revealed that the LCSC staff organization has a workforce model and LSR forecast data to project capacity within the organization. Overtime is used to gain capacity, and load balancing is conducted by sharing work with the UNE Center in Birmingham via the fax server. The document entitled "Service Representative Headcount Estimates 2000-2004" contains LCSC Service Representative headcount forecasts.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-15-1-6	There are defined methods and procedures for supervisors and managers to follow to evaluate workforce performance and to establish performance metrics and goals.	Satisfied	KCI interviews revealed that a sample of closed folders are reviewed daily by the CRSG clerks to confirm that all data match information recorded in BRITE, and to verify that each SI is adequately documented. This information is tracked and used to evaluate employee performance. KCI interviews revealed that the SAC Manager evaluates the performance of SAC Specialists via use of the performance criteria referenced on the 5855 Evaluation Form. Specialists are evaluated on their effectiveness in answering all service orders within eight hours as well as being measured in key commitment areas including stretch goals, developmental goals, and key goals (the category into which answered calls fall). Reviews are conducted every January and July. The document entitled "Service Representative Performance Measurement Plan (PMP)" references the LCSC's approach for establishing performance measurements for its UNE and Resale Service Representatives. This document lists performance objectives, rating scales, and data collection methods.
PO&P-15-1-7	Capacity Management procedures are defined and documented.	Satisfied	A CRSG document entitled "Anticipated Headcount Needs in Support of UNE Growth in the CRSG" contains a process for managing the growth of order volumes, transactions, and the number of employees needed to handle projected workloads. Detailed in this process are quarterly reviews of forecasted Service Inquiry volumes, quarterly reviews of actual Service Inquiry Volumes, and the formulas used to plan resource utilization. The document entitled "OSPE/SAC Response" contains a procedure to plan for and manage increased order volumes in the SAC. Also included in

Test Cross-Reference	Evaluation Criteria	Result	Comments
			this document are formulas for staff sizing based on xDSL order volumes and projected workloads, as well as processes for resource variance tracking, succession, and back filling. The LCSC's document entitled "Capacity Management – Local Operations Centers" revealed the process flow and procedures for force sizing and capacity management for the LCSC. Also included in this document is unit forecasting based on historical as well as actual monthly / yearly data, processes for generating ad-hoc forecasts as circumstances warrant, and force modeling and sizing components for the LCSC.
PO&P-15-1-8	Workforce performance and existing capacity are considered in the planning process for capacity management.	Satisfied	Per the "CRSG Year 2000 Headcount Needs Summary" document, the CRSG uses the following data elements to estimate future CRSG headcount needs: (current) monthly UNE volumes, headcount, production averages, and (forecasted) UNE volumes. Forecasted headcount needs also consider the potential impact resulting from the introduction of an automated loop qualification system in the CRSG. KCI interviews revealed that the SAC Manager uses volumes on RELOG to trigger the addition of capacity to the xDSL group. KCI interviews revealed that the LCSC staff is charged with the monitoring of capacity in the LCSC. LCSC capacity management is monitored with the use of workforce models, forecasts, amount of overtime, attrition, and work load to determine additional staffing needs. As additional staffing needs arise, managers notify the LCSC Director of their needs. Open positions are announced by issuing a Job Vacancy Notification (JVN), after which the HR staffing coordinator fills

Test Cross-Reference	Evaluation Criteria	Result	Comments
			the vacancy.
PO&P-15-1-9	Capacity Management procedures define performance metrics which trigger staff augmentation, staff redeployment / redistribution, or staff training.	Satisfied	A CRSG document entitled "Anticipated Headcount Needs in Support of UNE Growth in the CRSG" contains a process for managing the growth of order volumes, transactions, and the number of employees needed to handle projected workloads. Detailed in this process are quarterly reviews of forecasted Service Inquiry volumes, quarterly reviews of actual Service Inquiry Volumes, and the formulas used to plan resource utilization. A document entitled "OSPE / SAC Response" contains a procedure to plan for and manage increased order volumes in the SAC. Also included in this document are formulas for staff sizing based on xDSL order volumes and projected workloads, as well as processes for employee succession, back filling, formal training, and on-the-job training. An LCSC document entitled "Capacity Management – Local Operations Centers" describes the process flow and procedures for force sizing and capacity management for the LCSC. Also included in this document are LCSC force sizing components based on forecasting, LNP volumes, mechanization, time to full proficiency due to training – learning curve, force modeling, and sizing components for the LCSC. KCI's initial testing revealed that formal procedures defining performance metrics, which trigger BLS work center staff augmentation / staff redeployment, were not defined or documented. KCI subsequently issued Exception 109. In response to Exception 109, BLS provided KCI with the documentation referenced above. KCI's re-testing activities consisted of

Test Cross-Reference	Evaluation Criteria	Result	Comments
			a review of CRSG, SAC, and LCSC documentation received from BLS in response to this exception. See Exception 109 for additional information on this issue. Exception 109 is closed.
PO&P-15-1-10	Contingency and disaster recovery plans exist in the event of a significant increase in volume or significant loss of BLS resources.	Satisfied	The document entitled *Appendix C - CLEC & BST Workcenter Disaster Recovery for Local* Services outlines the CRSG's plan for responding to scenarios under which BLS is unable to deliver traffic to CLECs due to a variety of natural disasters or incidents including earthquakes, floods, civil unrest, and software problems. These procedures do not provide information on the CRSG's procedures for responding to sudden increases in volumes or the loss of BLS resources (e.g., headcount). A document entitled "Referred to Engineering Log (RELOG) Disaster Recovery Plan" outlines the disaster recovery procedures designed to cover the functions of the SAC. By utilizing the RELOG system, the SAC can mechanically track held service orders and advise other departments on how to provide facilities for SAC orders. Also included in the document are Critical Input and Output lists, communication requirements, hardware and software requirements, procedures for alternate site order processing, and off-site storage. KCI interviews revealed that the Atlanta LCSC has a disaster recovery plan which enables access to the center's terminals and phones via other buildings. Load balancing is possible by sharing work between the Atlanta and Birmingham UNE Centers, and by assigning overtime work as needed.

F. Test Results: xDSL Process Parity Evaluation (PO&P16)

1.0 Description

The objective of the xDSL Process Parity Evaluation was to review the pre-order, order, and provisioning processes and systems for wholesale operation and compare them with the corresponding processes and systems in BellSouth's retail operation. The review focused on the following areas:

- Pre-Order, Ordering, and Provisioning Processes and Systems
- Workflow definitions
- Workforce scheduling
- Facility administration
- Service activation
- Exception handling
- Completion notices

The evaluation consisted of targeted interviews of key process-owners along with structured reviews of process, system, and interface documentation. Structured walk-throughs, interviews with BellSouth work center personnel, and direct observation of personnel performing their daily work supplemented the process-owner interviews and documentation reviews.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

BellSouth's xDSL service offerings are categorized as either "Retail," "Resale," or "Wholesale." BellSouth sells its Consumer-Class Asymmetrical Digital Subscriber Line (ADSL) service to both Network Service Providers (NSPs) (i.e., Internet service providers, corporations, and universities) and BellSouth.net (BellSouth Internet Services), who subsequently resell the service using their own brand names. Bellsouth.net is considered to provide retail xDSL service, while the NSPs are considered to provide resale xDSL service. BellSouth provides wholesale xDSL service by leasing Unbundled Network Element (UNE) loops to facilities-based Competitive Local Exchange Carriers (CLECs).

CLECS provide xDSL service to customers using their own xDSL equipment. BellSouth's Unbundled ADSL and High Bit-rate Digital Subscriber Line (HDSL) Loops (UALs and UHLs, respectively) are capable of supporting specific xDSL services. CLECs may also lease Unbundled Copper Loops (UCLs) from BellSouth, which may or may not be capable of supporting xDSL service.

For purposes of this evaluation, the term "Retail" is used to describe the xDSL service offerings that BellSouth.net sells to end-user customers, such as consumers and small businesses. BellSouth.net's Retail ADSL offering is sold under the FastAccess℠ brand name. BellSouth.net outsources Retail pre-order and order processing functions to Client Logic, a third-party provider of call center services. The term "Resale" is used to indicate service sold by BellSouth to NSPs, who resell the service to end-user customers. The term "Wholesale" is used to describe the UNE xDSL capable loops that CLECs purchase to provide service to their end-user customers.

xDSL Pre-Order Process

Prior to submission of a firm order for an xDSL loop(s), a service provider must first determine if the line(s) at a particular service address is qualified to support xDSL service. The loop qualification process for xDSL service is in addition to the pre-order activities required to gather and identify information required to submit an order. Pre-order process steps required for all order types such as Address Validation, View Customer Service Record, Calculate Due Date, etc. were not evaluated in this test.

Retail Pre-Order Process

Retail pre-order activity begins with the execution of a loop qualification query via the Loop Qualification System (LQS), also known as "Loopy." LQS provides feedback on the existence of xDSL qualified loops, supplying either an "available," "planned" or "not qualified" response with associated reason codes. LQS response information is derived from the Loop Engineering Assignment Data (LEAD) database. This database contains a snapshot (executed on a monthly basis) of the information contained within the Loop Facilities and Assignment Control System (LFACS).

Loop Make-Up information is not required for retail xDSL pre-ordering. Only ADSL service is available for retail customers and the ADSL loop make-up information is considered in the generation of the LQS response to pre-order service inquiries.

Wholesale Pre-Order Process

Wholesale service providers, who chose to perform their own loop qualification may execute mechanized loop qualification queries via the same LQS system used for retail loop qualification. In addition, UNE providers may obtain more comprehensive loop characteristic data via the Loop Make-Up (LMU) process. Information returned in response to an LMU request includes the composition of loop material (i.e., copper or fiber; the existence, location, and type of equipment on the loop [e.g., digital loop carrier, feeder / distribution interfaces, bridge taps, load coils]; loop length; wire gauge; and electrical parameters).

UNE LMU requests may be performed manually or electronically. Manual LMU requests, submitted via e-mail or Fax, are handled by the CRSG. Electronic LMU requests, submitted via the LENS, TAG, or RoboTAG interfaces, are fed into LFACS. LMU pre-order inquiries (both manual and electronic) may be executed on working facilities or spare facilities. In addition, CLECs can request a reservation of spare facilities in conjunction with the LMU request. This pre-order is referred to as an LMU with Facility Reservation Number (FRN). Reservations are good for up to four days.

CLECs that do not wish to perform their own loop qualification or that want BellSouth to perform the loop qualification must follow a manual Service Inquiry (SI) and Local Service Request (LSR) submission process. To execute this manual process, the CLEC e-mails or faxes the SI form and the completed LSR to the Complex Resale Service Group (CRSG). The CRSG forwards the SI to the Service Advocacy Center (SAC). The SAC determines whether or not the desired loop is qualified for the xDSL service requested and returns a qualified or not qualified response to the CRSG, which in turn notifies the CLEC of the result.

xDSL Ordering Process

Retail Ordering Process

Assuming that a qualified loop exists for the line queried/tested, Retail ADSL service ordering begins when a retail customer's order for end-to-end ADSL service is entered into one of three Web front-end systems (Consumer, Small Business and Fast Access Sales and Service (FASS) [used by Client Logic]). The service order flows through to the Service Order Entry Gateway (SOEG) system and then into the Service Order Control System (SOCS). Service orders flow automatically through a variety of systems unless errors are present, in which case they fall out for manual processing. The Digital Subscriber Group (DSG) provides support for NSP and retail (BellSouth.net) ADSL orders that have fallen out of the mechanized process due to errors or exceptions. Orders that fall out in the DSG for manual processing are entered into the Broadband Administrative Support System (BASS) within 24 hours of receipt. Once cleared of errors, these orders flow to SOCS and enter the provisioning process

Wholesale Ordering Process

Orders for wholesale xDSL service may be requested via a manual or automated process. If, in the pre-order function, the CLEC requested that BLS qualify the loop and submitted a manual SI to the CRSG, and the CLEC receives confirmation that a given loop is qualified to support ADSL service, the CRSG faxes the LSR to the Local Carrier Service Center (LCSC) for review and entry into BellSouth's Local Order Number (LON) system for tracking. If additional information is required from the CLEC, BellSouth faxes a Clarification to the

CLEC. Once BellSouth deems that the LSR is error-free, address and customer record information are then validated using the ORION, Regional Street Address Guide (RSAG), and Business Office Customer Record Information System (BOCRIS) systems, respectively. The LSR information is subsequently entered into the Exchange Access Control and Tracking (EXACT) system, assigned a service order number, and submitted to the SOCS system for processing. Firm Order Confirmations (FOCs) or Clarifications for manual orders are faxed to CLECs within a targeted 48 hour interval.

CLEC xDSL orders may also be submitted electronically through the TAG, LENS, or EDI interfaces. The xDSL capable loop orders are processed like all other requests for Unbundled Network Element (UNE) Loops. If the order is error free, it flows to SOCS and enters the provisioning process.

The Atlanta Local Carrier Service Center (LCSC) handles xDSL orders that fall out of the mechanized process with errors. The Provisioning Analyst Work Station (PAWS) system is used for exception handling of xDSL orders. The Service Representatives (SR) log on to PAWS and can view the queue of pending xDSL orders with errors. The SR requests the next work package from PAWS and reviews the Request for Manual Assistance (RMA). The representative resolves the exception using their knowledge of order processing and available systems (DOE, SONGS, SOCS, RSAG, ATLAS, etc.) Following correction of the error, the SR marks the exception as "Complete" or "Resolved." Once the order exception has been resolved, the order enters the provisioning process.

xDSL Provisioning Process

Retail and Wholesale Process

The provisioning of retail and wholesale orders is supported by the DSG, Address Facility Inventory Group (AFIG), Circuit Provisioning Group (CPG), and various Work Management Centers (WMC) and Central Offices (CO). Wholesale order provisioning activity is also supported by the LCSC and UNE Centers.

The AFIG and CPG support xDSL provisioning primarily by resolving order errors and assigning cable pairs. The AFIG and CPG do not distinguish between Retail, Resale, and UNE orders. The UNE Centers also work with the AFIG, CPG, and LCSC to facilitate provisioning by identifying orders requiring cable pair assignments and engineering / design work. The DSG troubleshoots xDSL devices (e.g., DSLAMs), handles calls from NSPs and Bellsouth.net, and also resolves order errors. The WMC assigns work orders to service technicians in the field who provide installation and turn-up of xDSL orders. In addition to testing copper loops for load coils, loss, etc., the CO completes the facility based provisioning and turn-up of xDSL orders.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target was BellSouth's xDSL Pre-order, Order, and Provisioning processes. Processes, sub-processes, and evaluation measures, are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

Table IV-6.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
xDSL Pre-order	xDSL Service Inquiry	Non-discriminatory processes between wholesale and retail	PO&P-16-1-1 PO&P-16-1-6 PO&P-16-1-11
	xDSL Loop Qualification	Non-discriminatory processes between wholesale and retail	PO&P-16-1-2 PO&P-16-1-7 PO&P-16-1-12
xDSL Ordering	xDSL Order Submission	Non-discriminatory processes between wholesale and retail	PO&P-16-1-3 PO&P-16-1-8 PO&P-16-1-13
	xDSL Order Entry	Non-discriminatory processes between wholesale and retail	PO&P-16-1-3 PO&P-16-1-8 PO&P-16-1-13
xDSL Provisioning	xDSL Workflow Management	Non-discriminatory processes between wholesale and retail	PO&P-16-1-14 PO&P-16-1-15
	xDSL Workforce Management	Non-discriminatory processes between wholesale and retail	PO&P-16-1-4 PO&P-16-1-5
	xDSL Facilities Assignment	Non-discriminatory processes between wholesale and retail	PO&P-16-1-4 PO&P-16-1-9 PO&P-16-1-14
	xDSL Service Activation	Non-discriminatory processes between wholesale and retail	PO&P-16-1-5 PO&P-16-1-10 PO&P-16-1-15

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table IV-6.2: Data Sources for xDSL Process Parity Evaluation

Document	File Name	Location in Work Papers	Source
BellSouth Practices / BellSouth Telecommunications Standard--Unbundled Local Loops (ULL), Draft Issue 3 / 18 / 1999	No Electronic Copy	PO&P-15-A-2	BLS
MARCH System Reference, Issue 1, March, 2000	No Electronic Copy	PO&P-15-A-3	BLS
HairPIN and SIDEdoor, Issue 1, January, 2000	No Electronic Copy	PO&P-15-A-4	BLS
Turn-Up Non-Designed Combined Inside and Outside Conversions, Issue 2a, March, 2000	No Electronic Copy	PO&P-15-A-5	BLS
SOCS – UNE, Issue 1, July, 1999	No Electronic Copy	PO&P-15-A-6	BLS
UNE Work Types, Issue 1, March, 1997	No Electronic Copy	PO&P-15-A-7	BLS
UNE Center Provisioning Process for Stand-Alone Interim Local Number Portability, Issue 2, March, 2000	No Electronic Copy	PO&P-15-A-8	BLS
UNE – 2W Designed Voice Grade Port and Voice Grade Loop, Issue 1a, February 2000.	No Electronic Copy	PO&P-15-A-9	BLS
Unbundled Network Elements (UNE) Reference, Products, Systems, and Links, Issue 4d, March, 2000	No Electronic Copy	PO&P-15-A-10	BLS
[miscellaneous information on "wholesale" purchasing from BellSouth]	No Electronic Copy	PO&P-15-A-11	BLS
UNEC, CLEC Collocation (M&Ps)	No Electronic Copy	PO&P-15-A-12	BLS
UNE—2W Voice Grade Port and Voice Grade Loop Combination Services, Issue 1a, February, 2000	No Electronic Copy	PO&P-15-A-13	BLS

Document	File Name	Location in Work Papers	Source
UNEC/CLEC Timing for Acceptance, MARCH input, Jeopardy, MFC and Completions Policy, Issue 1a, December, 1999	No Electronic Copy	PO&P-15-A-14	BLS
CCSS Procedures, Issue 2, January, 2000	No Electronic Copy	PO&P-15-A-15	BLS
AIN—LNP Unbundled Network Elements, Issue 1a, December, 1999	No Electronic Copy	PO&P-15-A-16	BLS
Unbundled Network Element Combination, Issue 2, February, 2000	No Electronic Copy	PO&P-15-A-17	BLS
DSG Failed Provisioning Report	No Electronic Copy	PO&P-15-A-18	BLS
DSG Failed Validation Report	No Electronic Copy	PO&P-15-A-19	BLS
Jeopardy Codes/Missed Function Codes and SOCS Missed Appointment Codes, Issue 1, March, 2000	No Electronic Copy	PO&P-15-A-20	BLS
Loop Make-Up Service Order Exhibits, 2/23/2000	No Electronic Copy	PO&P-15-A-21	BLS
CLEC Requirements for Unbundled Loops, Issue 3c, October, 1999	No Electronic Copy	PO&P-15-B-32	BLS
DS3, Channelized DS1, and STS-1, Issue 1, February, 2000	No Electronic Copy	PO&P-15-B-33	BLS
Calendar Events, Issue 1, December, 1999	No Electronic Copy	PO&P-15-B-34	BLS
LMOS Codes and Procedures, Issue 1a, August, 1999	No Electronic Copy	PO&P-15-B-40	BLS
Screening—Non-Designed Provisioning, Issue 2, February, 2000	No Electronic Copy	PO&P-15-B-45	BLS
Screening—Designed, Issue 2, March, 2000	No Electronic Copy	PO&P-15-B-46	BLS
Past Due Service Order handling, CLEC DD miss., Issue 1, March, 2000	No Electronic Copy	PO&P-15-B-48	BLS
Past Due Service Order Due to PF, Issue 1, March, 2000	No Electronic Copy	PO&P-15-B-49	BLS

Document	File Name	Location in Work Papers	Source
Past Due Service Order due to BellSouth, Not PF, Issue 1, March, 2000	No Electronic Copy	PO&P-15-B-50	BLS
Non-Switched, Unbundled Network Element Combinations, Issue 1e, March, 2000	No Electronic Copy	PO&P-15-B-51	BLS
Email and BellSouth ADSL Service (Tariffed) Documents	No Electronic Copy	PO&P-15-B-53	BLS
Georgia ADSL-Equipped Wire Centers, 3/09/2000	No Electronic Copy	PO&P-15-B-54	BLS
BST ADSL Service-Loop Qualification System, Process Flow Diagram	No Electronic Copy	PO&P-15-B-55	BLS
Small Business FastAccess DSL Service – Online Ordering Screen Documentation, Issue 1, 12/13/1999	No Electronic Copy	PO&P-15-B-56	BLS
Sales and Service Section 1: Scripts for Handling General Inquiries, 2/07/00	No Electronic Copy	PO&P-15-B-57	BLS
Unbundled Local Loop – Technical Specifications, February, 2000	No Electronic Copy	PO&P-15-B-58	BLS
FastAccess Initial Training, Putting It All Together Sales and Service Customer Contacts	No Electronic Copy	PO&P-15-B-59	BLS
Work Management Center Dispatch Procedures for Installation and Maintenance of ADSL Service	No Electronic Copy	PO&P-15-B-60	BLS
Workload Distribution, 7/01/00	No Electronic Copy	PO&P-15-B-61	BLS
ADSL Loop Qualification System (LQS) 7/10/00	No Electronic Copy	PO&P-15-B-62	BLS
LSR Volume Report by Datasource for 3/1/00 to 3/31/00	No Electronic Copy	PO&P-15-B-67	BLS
BRITE System Reports for Thursday, April 6, 2000	No Electronic Copy	PO&P-15-B-68	BLS

Document	File Name	Location in Work Papers	Source
CRSG On Line Job Aid UNE New: Responses to SIs, Clarifications	No Electronic Copy	PO&P-15-B-69	BLS
BASS User Guide	No Electronic Copy	PO&P-15-C-1	BLS
NMS User Guide	No Electronic Copy	PO&P-15-C-2	BLS
Forecasting Spreadsheet for the LCSC	No Electronic Copy	PO&P-15-C-3	BLS
Unbundled Local Loops, CO Job Aides	No Electronic Copy	PO&P-15-C-4	BLS
Circuit Provisioning Methods and Procedures for Unbundled Hi-Capacity Services (ADSL, HDSL, DS1, DS3, UIT, UC, Dark Fier) from the CPG	No Electronic Copy	PO&P-15-C-5	BLS
SAC UNE Job Aid	No Electronic Copy	PO&P-15-C-11	BLS
UNE ADSL / HDSL Without Modification, Network and Carrier Services	Resale.doc	PO&P-15-C-16	BLS
N&CS Forecasting Process	Totals.gif	PO&P-15-C-17	BLS
BellSouth FASS Overview	No Electronic Copy	PO&P-15-C-18	BLS
ENCORE User Requirements for EIO Support of the Processing of UNE ADSL, HDSL and UCL	No Electronic Copy	PO&P-15-C-21	BLS
ENCORE User Requirements for Mechanization of Loop Make-Up for CLEC xDSLs	No Electronic Copy	PO&P-15-C-22	BLS
NO.5ESS Integrated Digital Carrier Unit TIRKS Inventory & Design Methods & Procedures, Issue A, April 1993	No Electronic Copy	PO&P-15-C-23	BLS
Subscriber Carrier Module SLC96 (SMS) DMS 100TIRKS Inventory AND Provisioning Methods AND Procedures	No Electronic Copy	PO&P-15-C-24	BLS
Welcome to the Atlanta Local Carrier Service Center, March, 2000	No Electronic Copy	PO&P-15-C-25	BLS
UNE Center Cut Sheet	No Electronic Copy	PO&P-15-D-1	BLS

Document	File Name	Location in Work Papers	Source
KPMG BellSouth Atlanta UNE Center Provisioning Meeting, 5/9/00	No Electronic Copy	PO&P-15-D-2	BLS
UNE 4 Wire Digital ISDN PRI Port/Loop	No Electronic Copy	PO&P-15-D-3	BLS
Unbundled Copper Loop, CLEC Information Package, February 24, 2000	No Electronic Copy	PO&P-15-D-4	BLS
BellSouth Unbundled ADSL.HDSL Capable Loops, CLEC Information Package, February 24, 2000	No Electronic Copy	PO&P-15-D-5	BLS
UNEC Methods and Procedures for Unbundled Loop Modification, 3/13/00	No Electronic Copy	PO&P-15-D-6	BLS
ADSL NMS Login, 11/08/99	No Electronic Copy	PO&P-15-D-7	BLS
UNE Loop Make-Up, Methods and Procedures (DRAFT) 3/12/2000	No Electronic Copy	PO&P-15-D-9	BLS
Marketing Sales Package, Unbundled Loop Make-Up	No Electronic Copy	PO&P-15-D-10	BLS
Loop Make-Up Implementation Guide	No Electronic Copy	PO&P-15-D-11	BLS
Address and Facility Inventory Group Unbundled Network Elements Methods and Procedures Loop Make Up 319 Remand	No Electronic Copy	PO&P-15-D-12	BLS
BLS Unbundled Digital Loop – Service Description, Characteristics, etc – from BLS Interconnection services Web site, 3/8/2000	No Electronic Copy	PO&P-15-D-13	BLS
Mpower and BellSouth, CRSG Review, March 23, 2000	No Electronic Copy	PO&P-15-D-14	BLS
UNEC Methods and Procedures for Unbundled ADSL Capable Loops, Unbundled HDSL Capable Loops, and Unbundled Copper Loops	No Electronic Copy	PO&P-15-D-15	BLS

Document	File Name	Location in Work Papers	Source
UNEC Methods and Procedures for Unbundled Loop Modification	No Electronic Copy	PO&P-15-D-16	BLS
UNE ADSL / HDSL Compatible Loops – General Information	No Electronic Copy	PO&P-15-D-17	BLS
UNE – ADSL / HDSL Without Modification	No Electronic Copy	PO&P-15-D-18	BLS
BellSouth DSL Family of Products, BellSouth Interconnection Services	No Electronic Copy	PO&P-15-D-19	BLS
BellSouth ADSL Service (Interconnection Web site document)	No Electronic Copy	PO&P-15-D-20	BLS
BellSouth ADSL Service – Rates and Charges	No Electronic Copy	PO&P-15-D-25	BLS
Consumer-Class ADSL Systems and Interface	No Electronic Copy	PO&P-15-D-26	BLS
BellSouth Consumer-Class ADSL Service Activation Process CPE Installation by BST Technician	No Electronic Copy	PO&P-15-D-27	BLS
BellSouth Consumer-Class ADSL Service Activation Process CPE Installation by NSP / ISP Technician	No Electronic Copy	PO&P-15-D-28	BLS
BellSouth Consumer-Class ADSL Provisioning Timeline	No Electronic Copy	PO&P-15-D-29	BLS
BellSouth Business-Class ADSL Service Activation Process Flow, 07 / 16 / 99	No Electronic Copy	PO&P-15-D-30	BLS
High Speed Data Service Order Entry Gateway System (SOEG)	No Electronic Copy	PO&P-15-D-31	BLS
Fast Access Training: Pre-Sale Process	No Electronic Copy	PO&P-15-D-32	BLS
Unbundled ADSL, HDSL andUCL Loop Job Aid	No Electronic Copy	PO&P-15-D-34	BLS
AFIG / SOC Error Report	No Electronic Copy	PO&P-15-D-35	BLS

Document	File Name	Location in Work Papers	Source
Unbundled Local Loop Technical Specifications, April, 2000	No Electronic Copy	PO&P-15-D-38	BLS
KPMG Draft Exception 128 with BellSouth response	No Electronic Copy	PO&P-15-D-39	BLS
KPMG Draft Exception 129 with BellSouth response	No Electronic Copy	PO&P-15-D-40	BLS
Works Management Center Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-42	BLS
UNE Center (Birnmingham, AL) Interview Summary with BellSouth feedback.	No Electronic Copy	PO&P-15-D-43	BLS
SAC Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-44	BLS
LCSC (Birmingham, AL) Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-45	BLS
LCSC (Atlanta, GA) Interview Summary with BellSouth feedback	No Electronic Copy	PO&P-15-D-46	BLS
DSG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-47	BLS
CRSG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-48	BLS
CPG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-49	BLS
CO Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-D-50	BLS
AFIG Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-E-1	BLS
UNE Center (Atlanta, GA) Interview Summary with BellSouth response	No Electronic Copy	PO&P-15-E-2	BLS
Exception 107	No Electronic Copy	PO&P-15-E-3	BLS
BellSouth response to Exception 107	No Electronic Copy	PO&P-15-E-4	BLS
BellSouth amended response to Exception 107	No Electronic Copy	PO&P-15-E-5	BLS
Exception 108	No Electronic Copy	PO&P-15-E-6	BLS

Document	File Name	Location in Work Papers	Source
BellSouth response to Exception 108	No Electronic Copy	PO&P-15-E-7	BLS
Loop Qualification System (LQS) DLEC / CLEC Job Aid, Issue 1, October 16, 2000	No Electronic Copy	PO&P-15-E-10	BLS
BellSouth Unbundled ADSL / HDSL Compatible Loops, ADSL Loop and HDSL Loop CLEC Information Package, 10 / 13 / 00	No Electronic Copy	PO&P-15-E-11	BLS
PAWS – Provisioning Analyst Work Station, Network Services, Customer Services, Issue 2, 01 / 01	No Electronic Copy	PO&P-15-E-12	BLS
BellSouth Interconnection Services, Carrier Notification SN91082201	No Electronic Copy	PO&P-15-E-13	BLS
BellSouth Products & Services Interval Guide – 4B – Unbundled Network Elements, pages 31-38	No Electronic Copy	PO&P-15-E-14	BLS
BellSouth Loop Make-up (LMU) CLEC Information Package, Version 3, October 23, 2000	No Electronic Copy	PO&P-15-E-15	BLS
BellSouth Pre-Ordering and Ordering Overview Guide, 3 / 31 / 00	No Electronic Copy	PO&P-15-E-16	BLS
Loop Make-up and Electronic Ordering of CLEC xDSL UNE, 6 / 14 / 00	No Electronic Copy	PO&P-15-E-17	BLS
High Speed Data Service Order Entry Gateway System (SOEG), Issue 1.0A, 10 / 22 / 99	No Electronic Copy	PO&P-15-E-18	BLS
BellSouth Unbundled ADSL / HDSL / UCL Compatible Loops Account Team Information	No Electronic Copy	PO&P-15-E-19	BLS
LCSC (Atlanta, GA) Second Interview Summary	No Electronic Copy	PO&P-15-E-21	BLS

2.4.1 Data Generation/Volumes

This test relied on interviews with BellSouth personnel, documentation reviews, and structured walk-throughs of BellSouth work centers.

2.5 Evaluation Methods

The evaluation of xDSL Process Parity began with a review of xDSL pre-order, order, and provisioning process documentation. KCI identified relevant systems and interfaces and conducted interviews with center personnel, including process owners and staff. Structured center walk-throughs and direct observation of personnel performing their daily work supplemented the planned test interviews and document reviews. Physical systems and communications environments were inspected and process models were developed to assess the parity between wholesale and retail pre-order, order, and provisioning processes.

2.6 Analysis Methods

The xDSL Process Parity Evaluation included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures provided the framework of norms, standards, and guidelines for the xDSL Process Parity Evaluation.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table IV-6.3: POP16 Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-16-1-1	Documented procedures for the xDSL Pre-Order Loop Qualification process are consistent, repeatable, and non-discriminatory between retail and wholesale	Satisfied	KCI's evaluation of BLS documented procedures revealed that both retail and wholesale (UNE) customers may access BellSouth's Loop Qualification System (LQS) to determine if an existing telephone number is served by a BLS loop capable of supporting BLS ADSL service. BLS Retail and Resale LQS access is automated. While wholesale (UNE) access initially involved a manual process, representing a discriminatory difference between the Retail and

Test Cross-Reference	Evaluation Criteria	Result	Comments
			UNE processes, BLS subsequently made the LQS system available to CLECs via an electronic interface[1]. See Exception 107 for additional information on this issue. Exception 107 is closed. BLS's *Loop Qualification System (LQS) DLEC/CLEC Job Aid, Issue 1*[2] provides LQS access information for wholesale (UNE) customers (CLECs). The document outlines instructions for accessing, installing and utilizing the Web-based LQS application, and provides information on the possible results returned for queries. The document entitled *Small Business FastAccess DSL Service—Online Ordering Screen Documentation* outlines a process through which retail and resale customers may access LQS via a Web-based application to determine if a specific phone number qualifies for BLS FastAccess℠ DSL service (i.e., whether a loop is available to support ADSL service). The documents entitled *BST ADSL Service-Loop Qualification System* and *BellSouth ADSL Service (Tariffed)* reference several methods through which NSPs, upon written request to BLS, may access LQS. Client Logic has access to LQS through the FASS system.

[1] KCI did not conduct feature-function testing associated with this capability.

[2] The *Loop Qualification System (LQS) DLEC/CLEC Job Aid, Issue 1* was posted to the BLS Interconnection Web site on October 16, 2000.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-16-1-2	Documented procedures for the xDSL Pre-Order Loop Make-Up (LMU) process are consistent, repeatable, and non-discriminatory between retail and wholesale	Satisfied	Loop Make-Up information is not required for retail xDSL pre-ordering. Only ADSL service is available for retail customers and the ADSL loop make-up information is considered in the generation of the LQS response to pre-order service inquiries. During KCI's initial evaluation, wholesale (UNE) customers could obtain loop make-up information only through a manual process. The manual process for determining the availability and specific characteristics of an ADSL capable loop, is described in the *ADSL/HDSL Capable Loop – CLEC Information Package*, dated February 24, 2000. As of November 18, 2000, wholesale xDSL customers gained electronic access to BLS's mechanized LMU service. In addition to the LQS, the data returned by the LMU service provides the CLEC with the underlying loop qualification information. The document *BellSouth Loop Makeup (LMU) CLEC Information Package* provides specific instructions for UNE customer use of BLS's mechanized LMU service. See Exception 107 for additional information on this issue. Exception 107 is closed.
PO&P-16-1-3	Documented procedures for xDSL Order Submission and Order Entry are consistent, repeatable, and non-discriminatory between retail and wholesale	Satisfied	During KCI's initial evaluation, wholesale xDSL order submission process was entirely manual, as outlined in the *Unbundled ADSL, HDSL, & UCL Loop Job Aid*. Retail Order Submission is supported via on-line mechanized process. The document entitled *Small Business FastAccess DSL Service-Online Ordering Screen Documentation* outlines the procedures used by Client Logic to submit retail ADSL orders taken on behalf of BLS. Therefore, KCI's initial testing revealed that BLS's documented

Test Cross-Reference	Evaluation Criteria	Result	Comments
			procedures for xDSL Order Submission were discriminatory between retail and wholesale. As a result, KCI issued Exception 108. In response to Exception 108, on February 12, 2001 BLS implemented a system change to provide all CLECs the ability to order xDSL capable loops electronically through the TAG, LENS, and EDI interfaces. The *BellSouth Business Rules for Local Ordering (BBR-LO),* Issue 9K and *Encore User Requirements for EIO Support of the Processing of UNE ADSL, HDSL, and UCL, ENC7794.doc, Version 5.0,* document procedures for use of BLS's mechanized system for UNE order submission. KCI found that the BBR-LO was not updated to incorporate changes introduced by the mechanization of the wholesale xDSL ordering process. However, to support the CLECs as they implement electronic xDSL order submission, BLS Account Teams provide additional clarifying information as outlined in the document *BellSouth Unbundled ADSL/HDSL/UCL Compatible Loops Account Team Information, ADSL/HDSL/UCL Loop Electronic Ordering.* Based on a review of the documentation[3], the newly available electronic ordering functionality is adequate to support CLEC order submission requirements and is non-discriminatory to retail. See Exception 108 for additional information on this issue. KCI has recommended closure of Exception 108 to the GPSC.

[3] KCI did not conduct feature-function testing for electronically submitted xDSL orders.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-16-1-4	Documented procedures for xDSL Facility Assignment are consistent, repeatable, and non-discriminatory between retail and wholesale	Satisfied	The AFIG and CPG maintain documented procedures for xDSL Facility Assignment that do not distinguish / differentiate between Retail, Resale, and UNE orders. The AFIG's *Address and Facility Inventory Group Unbundled Network Elements Methods and Procedures--Loop Makeup 319 Remand* document outlines the AFIG's role in entering loop make-up information into the LFACS system. The documents entitled *NO.5ESS Integrated Digital Carrier Unit TIRKS Inventory & Design Methods & Procedures* and *Subscriber Carrier Module SLC96 (SMS) DMS 100TIRKS Inventory AND Provisioning Methods AND Procedures* outline the CPG's role in building TIRKS inventory records for two types of circuits: hairpin and side door. No distinction is made among Retail, Resale, and Wholesale (UNE) orders.
PO&P-16-1-5	Documented procedures for xDSL Service Activation are consistent, repeatable, and non-discriminatory between retail and wholesale	Satisfied	The DSG, WMC, COs, and the UNE Centers maintain documented procedures for xDSL Service Activation. The DSG's service activation procedures, which include confirming orders, tracking due dates, and trouble shooting DSLAMs for retail and resale orders, are referenced in the *BellSouth Business-Class ADSL Service Activation Process Flow.* The WMC supports service activation primarily by assigning orders to Service Technicians. The procedures for doing so are referenced in the document entitled *Work Management Center Dispatch Procedures for Installation and Maintenance of ADSL Service.* BLS COs support service activation procedures by completing facility-

Test Cross-Reference	Evaluation Criteria	Result	Comments
			based provisioning and turn-up on xDSL orders, and by testing copper loops for load coils. CO provisioning activities do not differentiate between Retail and Wholesale (UNE) orders. The *UNEC Methods and Procedures for Unbundled Loop Modification* and *UNEC Methods and Procedures for Unbundled ADSL Capable Loops and Unbundled Copper Loops* documents outline the UNE Centers' roles in wholesale (UNE) service activation.
PO&P-16-1-6	Systems in the Pre-Order loop qualification process are non-discriminatory between retail and wholesale	Satisfied	During KCI's initial evaluation, wholesale (UNE) customers could obtain loop make-up information only through a manual process. As a result, KCI issued Exception 107. In response to Exception 107, BLS made the LQS system available for wholesale use and posted CLEC LQS access information on the Interconnection Web site on October 16, 2000 in the document titled *Loop Qualification System (LQS) DLEC/CLEC Job Aid, Issue 1*. Loop qualification information in support of Retail service is obtained from the LQS system via an automated query. LQS contains information derived from the LEAD database, updated monthly with data from LFACS. Retail and wholesale requests via LQS for loop qualification information are processed by the same systems and are non-discriminatory between retail and wholesale. For additional information, refer to Exception 107, which is closed.
PO&P-16-1-7	Systems in the Pre-Order Loop Make-Up (LMU) process are non-discriminatory between retail and wholesale	Satisfied	Loop Make-Up information is not required for retail xDSL pre-ordering. Only ADSL service is available for retail customers and the ADSL loop make-up information is considered in the generation of the LQS response to

Test Cross-Reference	Evaluation Criteria	Result	Comments
			pre-order service inquiries. During KCI's initial evaluation, wholesale customers could obtain loop make-up information only through a manual process. No wholesale pre-order systems were available for evaluation. As of November 18, 2000, wholesale xDSL customers gained electronic access to BLS's mechanized LMU system. In addition to the LQS, the data returned by the LMU system provides the CLEC with underlying loop qualification information. The document *BellSouth Loop Makeup (LMU) CLEC Information Package* provides specific instructions for wholesale customer use of BLS's mechanized LMU system.
PO&P-16-1-8	Systems in the Order Submission and Order Entry processes are non-discriminatory between retail and wholesale	Satisfied	KCI's initial testing found that retail order submission is mechanized while Wholesale order submission processes were entirely manual and therefore, discriminatory. As a result, KCI issued Exception 108. Retail orders for xDSL service are submitted via electronic systems. Client Logic submits retail orders through via the FASS system, and resale orders are submitted electronically, into SOEG. In contrast, processes in place at the time of initial testing revealed that the CRSG submitted wholesale (UNE) orders to the LCSC via fax machines. In response to Exception 108, on February 12, 2001 BLS implemented a system change to provide all CLECs the ability to order xDSL capable loops electronically through the TAG, LENS, and EDI interfaces. Based on a review of the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			documentation (see comments in PO&P-16-1-3)[4], the newly available electronic ordering functionality is adequate to support CLEC order submission requirements and is non-discriminatory to retail. See Exception 108 for additional information on this issue. KCI has recommended closure of Exception 108 to the GPSC.
PO&P-16-1-9	Systems in the Facility assignment process are non-discriminatory between retail and wholesale	Satisfied	Systems in the Facility assignment process are non-discriminatory between retail and wholesale. The AFIG and CPG do not distinguish / differentiate between retail and wholesale orders. The AFIG uses PAWS for assigning and managing work and for receiving Requests for Manual Assistance (RMAs) from the Hands-off Assignment Logic (HAL) system. The AFIG uses LFACS for determining the cause of RMAs and also uses SOCS, TANDEM, MOBI, and Computer System for Mainframe Operations (COSMOS) for correcting errors on service orders. The CPG uses SOCS to retrieve information used to resolve order errors. The CPG also uses the Trunk Inventory Record Keeping System (TIRKS) for generating lists of erroneous orders to be worked.
PO&P-16-1-10	Systems in the Service Activation process are consistent between retail and wholesale	Satisfied	Systems in the Service Activation process are consistent between retail and wholesale. The WMC and COs do not distinguish between retail and wholesale orders. The UNECs and DSG support UNE and retail / resale provisioning respectively. ADSL-related work is dispatched by the WMC via the AELERA database. LMOS is also used to distribute daily work assignments to Service

[4] KCI did not conduct feature-function testing for electronically submitted xDSL orders.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Technicians. The UNEC uses the Work Force Administration (WFA) system for receiving CLEC UNE orders and for loading orders to Electronic Technicians (ETs). SOCS, MARCH, and TIRKS provide order details used in provisioning. SOCS is used to verify order information / due dates and to ensure that circuit identification numbers referenced in SOCS match those found in TIRKS WORD documents. MARCH is accessed to find the switch identification number for the Cut sheet, to change the disconnect order release date, and to change the disconnect order status. TIRKS is also used to send FAB tickets to the Circuit Provisioning Group. The CO receives orders to be worked via WFA. The DSG uses BASS / SOCS to obtain order details used for the turn-up of xDSL retail and resale orders.
PO&P-16-1-11	Loop Qualification pre-order transactions are executed in a consistent, non-discriminatory, and repeatable manner between retail and wholesale.	Satisfied	During KCI's initial evaluation, wholesale (UNE) loop qualification requests were handled by a manual process, while retail requests were handled through a mechanized process accessing LQS, highlighting a discriminatory difference. While retail requests were processed instantaneously, responses to wholesale xDSL loop qualification requests took up to seven business days. As a result, KCI issued Exception 107. In response to Exception 107, BLS made the LQS system available to CLECs on October 16, 2000. See Exception 107 for additional information on this issue. Exception 107 is closed. As documented in the *Loop Qualification System DLEC/CLEC Job Aid*, retail and wholesale loop

Test Cross-Reference	Evaluation Criteria	Result	Comments
			qualification requests are handled in the same manner upon submission via the Web-based LQS application. Loop qualification responses, indicating whether a line can adequately support xDSL service or not, are provided in near real time for both retail and wholesale requests.
PO&P-16-1-12	Loop Make-Up (LMU) pre-order transactions are executed in a consistent, non-discriminatory, and repeatable manner between retail and wholesale	Satisfied	Loop Make-Up information is not required for retail xDSL pre-ordering. Only ADSL service is available for retail customers and the ADSL loop make-up information is considered in the generation of the LQS response to pre-order service inquiries. During KCI's initial evaluation, wholesale (UNE) customers could obtain loop make-up information only through a manual process. The manual process for determining the availability and specific characteristics of an ADSL capable loop, is described in the *ADSL/HDSL Capable Loop – CLEC Information Package*, dated February 24, 2000. As of November 18, 2000, wholesale xDSL customers gained electronic access to BLS's mechanized LMU service. In addition to the LQS, the data returned by the LMU service provides the CLEC with the underlying loop qualification information. The document *BellSouth Loop Makeup (LMU) CLEC Information Package* provides specific instructions for UNE customer use of BLS's mechanized LMU service. See Exception 107 for additional information on this issue. Exception 107 is closed.
PO&P-16-1-13	Order transactions are executed in a consistent, non-discriminatory, and repeatable manner between retail and wholesale	Satisfied	KCI's initial testing found that retail order processing is mechanized. Wholesale order processes were entirely manual (submitted by the CRSG to the LCSC via fax machines) and therefore, discriminatory. As a result, KCI issued Exception 108.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			In response to Exception 108, on February 12, 2001 BellSouth implemented a system change to provide all CLECs the ability to order xDSL capable loops electronically through the TAG, LENS, and EDI interfaces. Retail orders for xDSL service are submitted via electronic systems. Client Logic submits retail orders through via the FASS system, and resale orders are submitted electronically, into SOEG. Retail orders with errors fall out to the DSG, are re-keyed into BASS, flow to SOCS and enter the provisioning process. CLEC xDSL orders with errors fall out to PAWS and the exceptions are addressed by the service representatives in the LCSC. The representatives utilize DOE, SONGS, SOCS, RSAG, ATLAS, and other systems to identify and correct errors allowing the order to enter the provisioning process. In its January 16, 2001 Docket No. 7892-U, the GPSC specified a benchmark / analog for the UNE xDSL (ADSL, HDSL, UCL) Order Completion Interval of 7 business days without conditioning and 14 business days with conditioning. Based on interviews, observations and a review of the documentation (see comments in PO&P-16-1-3)[5], the newly available electronic ordering functionality is adequate to support CLEC order submission requirements and is non-discriminatory to retail. See Exception 108 for additional information on this issue. KCI has recommended closure of Exception 108 to the GPSC

[5] KCI did not conduct feature-function testing for electronically submitted xDSL orders.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PO&P-16-1-14	Facility Assignment transactions are executed in a consistent, non-discriminatory, and repeatable manner between retail and wholesale	Satisfied	In the AFIG, the Facility Assignment and Control System screens and, where possible, automatically assigns facilities to orders from LFACS and the Computer System for Mainframe Operations (COSMOS) databases. If LFACS is unable to assign facilities, HAL (Hands-off Assignment Logic) attempts to assign them. If HAL is unable to make the assignment, the order falls out to the AFIG as an RMA (Request for Manual Assistance) and is held in PAWS, the system used to assign and manage the work in the AFIG. When an AFIG supervisor assigns work to a FAS, the work unit(s) appear as packages on the FAS's PC desktop. The FAS opens the work package in PAWS to see the RMA and assigns facilities in LFACS and/or COSMOS. The FAS waits until the status in SOAC (Service Order Analysis & Control) is updated to show that facilities have been assigned. If the FAS is unable to resolve the assignment error, he/she calls the database maintenance group to report the problem. The database administrator will either call back to inform the FAS of resolution or the specialist will check the order after one-half hour to see if the assignment has been made. The FAS may also need to call the Central Office (CO or Serving Wire Center) to clarify the assignment information. CO contacts are maintained in a binder on the FAS' desk. Provisioning Specialists in the CPG use TIRKS to generate their respective Work Lists. Specialists work orders according to their respective Loop Assignment & Make-Up (LAM) dates, which are typically one to two days prior to the Ready and Designed (RID) date. Using the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			orders obtained from TIRKS, the Provisioning Specialist views the specific orders in SOCS to obtain additional information needed to resolve the error(s). To resolve order errors, the Provisioning Specialist sends trouble tickets to the AFIG via the TIRKS Field Assistance screen or contacts the LCSC. Following each contact, the Provisioning Specialist enters notes into the Work Force Administration / Control (WFA / C) system regarding current order status. Orders then flow to the Design Group. Orders are removed from the TIRKS Work Lists once a "PD" status in SOCS is achieved. CPG xDSL orders are identified by the code "LXFU." As orders flow through the BLS facility assignment process, there is no distinction among Retail, Resale, and Wholesale (UNE) order types.
PO&P-16-1-15	Service Activation transactions are executed in a consistent, non-discriminatory, and repeatable manner between retail and wholesale	Satisfied	All WMC assignments are driven by a commitment date made by the DSG. ADSL-related work is dispatched by the WMC via the AELERA database. The WMC Load Balance Manager assigns orders to Service Technicians. The WMC Load Balance Manager sends specific order assignments to the proper Network Managers a day before the actual work is to take place. Network Managers are able to see which of their Service Technicians are working specific orders and distribute these orders (via AELERA / LMOS) for work to begin. UNE Center Maintenance Administrators review orders to ensure that they are error-free and resolve any jeopardy conditions / Service Order Control System (SOCS) error codes (e.g., AO / FAO) prior to loading orders to

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Electronic Technicians (ETs) via WFA / C for provisioning. MAs work orders by their respective due dates. ADSL-related work is dispatched to the CO by the Work Management Center (WMC) via the Work Force Administration (WFA) system. The WMC assigns the priority for all work flowing into the CO. The CO has no input in deciding what work gets assigned or in which order work is completed. The DSG's SAR team works to provide xDSL services to ISPs / NSPs. SAR staff members fulfill three main roles: troubling shooting ADSL installations / maintenance issues, addressing pending provisioning orders, and handling incoming calls from ISPs / NSPs, BellSouth.net, and field technicians. 85% of orders coming into the SAR group automatically flow through, the remaining 15% fall out as a Request for Manual Assistance (RMA or Alert). Provisioning orders enter the SAR group via the Network Management System (NMS). The orders are automatically validated by the ADSL NMS. Multimedia Technicians (MTs) on the Alerts Team address orders that have failed this validation process. Those orders that fail validation are addressed by the Alert team, which attempts to screen and troubleshoot the order in time to meet its specific due date. The Alert team MT reviews order history, checking assignment and port data. If the order does not have facilities assigned, the MT contacts the AFIG. If the cable name cannot be validated, engineers are contacted to correct it or the order is referred to the NAS group. A WFA ticket is opened for each order that fails validation. If the MT cannot resolve an alert, Tier Two Technical employees act as support. The Alerts

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Team relies more heavily on the NMS hotline for support in handling alerts. It is not typical that the Tier Two Technical support employees are approached for "Alerts" assistance since their main focus is on handling installation and repair troubleshooting. There is also an NMS hotline that Technicians can call for advice and troubleshooting assistance.

V. Billing (BLG) Domain Results and Analysis

1.0 Description

The purpose of this section is to present the specific tests, results, and analysis from KCI's evaluation of the systems and operational elements associated with BellSouth's support for Wholesale Resale Billling. Billing tests assessed the adequacy and accuracy of BellSouth's wholesale billing systems and functions.

2.0 Methodology

The scope of the Resale Billing tests in Georgia included evaluations of the processes and procedures of BellSouth's Customer Record Information System (CRIS) and other related systems used to assemble, route, and process billable messages. This was accomplished by testing the functionality of BellSouth's billing and message processing systems, and by reviewing and evaluating relevant processes and documentation.

2.1 Business Process Description

CRIS is the primary billing system utilized by BellSouth to create CLEC Resale bills. BellSouth produces many types of wholesale bills, using several media types, which are distributed over the course of a billing period. Each bill type covers a specific set of products and services. Bill production and distribution begins with collection of customer data (e.g., service orders and payments) and usage data. Charges are calculated and the information formatted based on the customer-selected bill media. Bills are then produced on the selected media and mailed or transmitted to the customer.

Message processing of usage data begins at the telephone switch. Usage is recorded by the switch and is retrieved by BellSouth on a daily basis. Usage is assembled and input into Optional Daily Usage Files (ODUF) that are delivered to CLECs at scheduled intervals. ODUFs include local billable messages carried over the BellSouth network, operator handled calls, and BellSouth incoming calls. CLECs use the data provided by ODUFs to facilitate end-user billing.

2.2 Scenarios

The scenarios used in the Billing Evaluations were defined in the *Supplemental Test Plan* (*STP*) and included the following activities: New Install, Migrate As-Is, Migrate As-Specified, Inside/Outside Moves, Suspend/Restore, Add/Change Features, Change Telephone Number, Add Line, and Disconnect. Business and residence classes of service were represented in the test case scenarios.

The test case scenarios referenced above were executed in conjunction with orders submitted during the EDI and TAG Functional Evaluations. Usage charges were validated based on the usage that was generated and captured on ODUFs delivered to KCI in the course of the Resale Usage Functional Evaluation.

2.3 Test Bed

To facilitate the execution of billing transactions, a test bed of telephone lines was provisioned by BellSouth, based of a set of requirements developed by KCI.

A. CRIS Resale Invoicing Functional Evaluation (BLG7)

1.0 Description

The Customer Records Information System (CRIS) Resale Invoicing Functional Evaluation assessed BellSouth's ability to accurately bill elements associated with resale products. Functional billing elements include measured and flat-rated services, monthly recurring and non-recurring charges, pro rations, resale discounts, adjustments, late payments, and usage charges. The test was executed in conjunction with orders submitted during the execution of the EDI and TAG Functional Evaluations (PO&P11), and with usage generated during the execution of the Resale Usage Functional Evaluation (BLG8). These tests are detailed in Section V, 1.0, Section V, 2.0, and Section VII, 2.0 of the *Supplemental Test Plan (STP).*

KCI examined the billing elements of CRIS resale bills resulting from completed order transactions on test accounts for resale products and services. The test also looked at bill formats to evaluate completeness and readability of each format.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

BellSouth produces several types of bills that are delivered over the course of a monthly billing period. Each bill type covers bills that are produced by two primary billing systems, the Carrier Access Billing System (CABS) and CRIS. The CABS billing system principally serves CLECs that choose to lease unbundled services. The CRIS billing system produces bills for resale products and services.

BellSouth produces bills for their resale product offerings using the CRIS billing system. The CRIS billing system employs several bill formats. These formats include Customized Large User Bill (CLUB), Diskette Analyzer Bill (DAB) transmitted via File Transfer Protocol (FTP) push, and DAB Paper Image - CD-ROM.

BellSouth's CLEC bills are structured in a hierarchical manner. At the top of the hierarchy is the Master Account or "Q" Account. Charges for multiple individual Billing Telephone Numbers (BTNs) and Earning Telephone Numbers (ETNs) associated with the same account/customer are aggregated under the "Q" Account.

The body of the CRIS bill includes five major areas: monthly charges, other charges and credits, itemized calls, local usage, and taxes and franchise. Some charges within bills are standard based on tariffs; others are subject to variable pricing based on CLEC-negotiated interconnection agreements.

2. 2 Scenarios

The test scenarios selected for evaluation were a subset of the test scenarios executed for the Ordering & Provisioning EDI and TAG Functional Evaluation (PO&P-11). The subset was chosen to cover a range of ordering activities that would be undertaken by a CLEC. Order activity evaluated for the bill validation component of the BLG7 test included the following service request types:

- New Install
- Migration of a BellSouth customer "as is / as specified"
- Inside Move
- Outside Move
- Suspend
- Restore
- Add / Change features
- Change telephone number
- Add line
- Disconnect

2.3 Test Targets & Measures

The test target was the completeness, accuracy, and timeliness of delivery of the CRIS resale bills in accordance with BellSouth's published specifications. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

Table V-1.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Billing Accuracy	Verify recurring charges	Accuracy and completeness of rates and quantity	BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-6, BLG-7-1-8, BLG-7-1-13, BLG-7-1-14 BLG-7-1-16, BLG-7-1-18
	Verify non-recurring charges	Accuracy and completeness of rates and quantity	BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-6, BLG-7-1-7, BLG-7-1-8, BLG-7-1-11, BLG-7-1-13, BLG-7-1-14, BLG-7-1-16, BLG-7-1-17

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Verify pro rated charges	Accuracy and completeness of rate, quantity and date ranges	BLG-7-1-5, BLG-7-1-6, BLG-7-1-8, BLG-7-1-11, BLG-7-1-13, BLG-7-1-14, BLG-7-1-16, BLG-7-1-17
	Verify usage charges	Accuracy and completeness of minutes of use and rates	BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-8, BLG-7-1-12, BLG-7-1-13, BLG-7-1-14, BLG-7-1-16, BLG-7-1-19
	Verify adjustments	Accuracy, completeness, and timeliness of adjustments	BLG-7-1-1, BLG-7-1-3, BLG-7-1-4, BLG-7-1-7, BLG-7-1-10, BLG-7-1-15, BLG-7-1-16, BLG-7-1-17
	Verify balance carried forward	Accuracy of balance	BLG-7-1-1, BLG-7-1-3, BLG-7-1-4, BLG-7-1-8, BLG-7-1-9, BLG-7-1-10, BLG-7-1-13, BLG-7-1-14, BLG-7-1-15
	Verify discounts	Accuracy and appropriateness of discount	BLG-7-1-1, BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-8, BLG-7-1-9, BLG-7-1-13, BLG-7-1-14, BLG-7-1-15, BLG-7-1-16
	Verify late charges	Accuracy of rate and calculation	BLG-7-1-1, BLG-7-1-3, BLG-7-1-4, BLG-7-1-7, BLG-7-1-10, BLG-7-1-15, BLG-7-1-16, BLG-7-1-17
	Receive copy of bill	Timeliness of media delivery	BLG-7-1-20
Completeness and Readability	Verify presentation of bill sections	Completeness and accuracy	BLG-7-1-1, BLG-7-1-2, BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-6, BLG-7-1-7
	Verify page header information	Completeness and accuracy	BLG-7-1-1, BLG-7-1-2, BLG-7-1-3, BLG-7-1-4, BLG-7-1-5
	Verify presence of Customer Service Record	Completeness	BLG-7-1-1, BLG-7-1-4, BLG-7-1-5, BLG-7-1-6, BLG-7-1-7
	Verify pagination	Completeness and accuracy	BLG-7-1-1, BLG-7-1-2, BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-6, BLG-7-1-7

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Verify presence of return page	Completeness and accuracy	BLG-7-1-1, BLG-7-1-2, BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-6, BLG-7-1-7
	Verify labeling of charges	Completeness and accuracy	BLG-7-1-1, BLG-7-1-2, BLG-7-1-3, BLG-7-1-4, BLG-7-1-5, BLG-7-1-6, BLG-7-1-7
	Verify service address	Completeness and accuracy	BLG-7-1-1, BLG-7-1-2, BLG-7-1-3, BLG-7-1-4

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table V-1.2: Data Sources for CRIS Resale Invoicing Functional Evaluation

Document	File Name	Location in Work Papers	Source
Product Information	Http://www.interconnection.bellsouth.com/products Also in hardcopy.	BLG-1-B	BLS
General Subscriber Service Tariff	Http://cpr.bst.bellsouth.com/pdf/ga/a996.pdf Also in hardcopy.	BLG-1-C	BLS
Facility Based Activation Requirements – Interconnection Services	Http://www.interconnection.bellsouth.com/guides/actreq2_fac/index.htm Also in hardcopy.	BLG-1-D	BLS
Facility Based – CLEC Starter Kit	Http://www.interconnection.bellsouth.com/guides/guidepdf/stfb_is2.pdf Also in hardcopy.	BLG-1-F	BLS
*CLUB*EDI Customer Handbook*	No Electronic Copy	BLG-1-G-1	BLS
Sample CLUB Bill	No Electronic Copy	BLG-1-G-3	BLS
Beyond DAB	No Electronic Copy	BLG-1-G-4	BLS
Diskette Analyzer Bill User's Guide	No Electronic Copy	BLG-1-G-5	BLS
Batch File Processing with DAB	No Electronic Copy	BLG-1-G-6	BLS
FTP Protocol	No Electronic Copy	BLG-1-G-7	BLS
Diskette Billing System ASCII Data Exporting	No Electronic Copy	BLG-1-G-8	BLS
How to Retrieve Data Files and Install/Activate Analyzer Software	No Electronic Copy	BLG-1-G-9	BLS

Document	File Name	Location in Work Papers	Source
CRIS Billing Media Options	No Electronic Copy	BLG-1-G-10	BLS
BLS FCC Tariff Information	Http://cpr.bst.bellsouth.com/pdf/fcc/fcc.htm	Not in Work Papers Binders	BLS
BLS GA Intrastate Tariff Information	Http://cpr.bst.bellsouth.com/pdf/ga/ga.htm	Not in Work Papers Binders	BLS
BLS CLEC Customer Guides	Http://www.interconnection.bellsouth.com/guides/guides.html	Not in Work Papers Binders	BLS
TelView Online Tariff Research Service	Http://www.ccmi.com	Not in Work Papers Binders	BLS
List of KCI CLEC Billing Account Numbers (BANs) and Bill Media Types	No Electronic Copy	BLG-1-K-33	BLS
BellSouth CLEC Billing Guide	Http://www.interconnection.bellsouth.com/guides/other_guides/pdf/bg06_1600.pdf	BLG-5-A-22	BLS
Interconnection Agreement (Agreement Between BellSouth Telecommunications, Inc. and CKS, Inc. [Georgia])	No Electronic Copy	Project Management Office Work Papers	BLS

2.4.1 Data Generation/Volumes

Data included in the invoicing functional component of the evaluation were gathered from multiple sources including Firm Order Confirmations (FOCs), Customer Service Records (CSRs), Daily Usage Files (DUFs), and the BellSouth resale bills delivered to KCI. These data provided the basis for the creation of expected results. This evaluation did not rely on volume testing.

2.5 Evaluation Methods

For validation of the bills of the KCI test CLEC, KCI reviewed BellSouth documentation related to bill structure, content, and elements. To explain bill formats to CLECs, upon request, BellSouth provides sample bill formats supplemented with meetings via conference call. KCI conducted meetings with BellSouth subject matter experts to review bill format layouts and to determine the applicable rate elements and discounts for various services, based on the KCI test CLEC interconnection agreement. Using the information collected, KCI constructed a detailed test plan and bill validation procedures.

The test targeted the various bill types and bill delivery methods provided by BellSouth. The test scenarios evaluated were created to represent typical CLEC

ordering activity. These test scenarios were taken from orders issued during the O&P EDI and TAG Functional Evaluations.

These test scenarios were utilized to create Local Service Requests (LSRs) for the products and order activities specified for the purposes of bill validation. This ordering activity provided the mix of line types and line activity to ensure that the test case scenarios indicated in the *STP* were covered. BellSouth processed the LSRs, resulting in the creation of carrier bill invoices.

Customer Service Records (CSRs) reflecting completed order activity resulting from test case transactions were used to create expected billable charges. Expected results were compared to billing invoices produced by BellSouth to ensure that charges were appropriately and accurately billed.

KCI evaluated one baseline bill period and one post-test-activity bill period for each account. The first bill period consisted of baseline bills created for the test bed of telephone numbers. The second bill period consisted of bills produced after test scenarios were executed (e.g., customers were migrated, disconnected, etc.). This set included charges for test case activity such as conversions, additions, and usage charges for calls generated during the execution of the Resale Usage Functional Evaluation (BLG8). Billing service delivery media utilized for bill validation purposes included Paper, DAB CD-ROMs, and FTP formats. Each of these formats was evaluated for completeness and readability. In addition, the FTP format was evaluated for timeliness of delivery.

Validation procedures were used to verify whether or not recurring and non-recurring charges were rated and applied correctly, and that pro rations of charges were calculated appropriately. In addition, the validation assessed whether or not service establishment and disconnection dates were accurately captured, and whether or not adjustments and late charges were applied correctly. Finally, the evaluation examined whether or not appropriate resale discounts were applied correctly, and whether or not balances were carried forward appropriately.

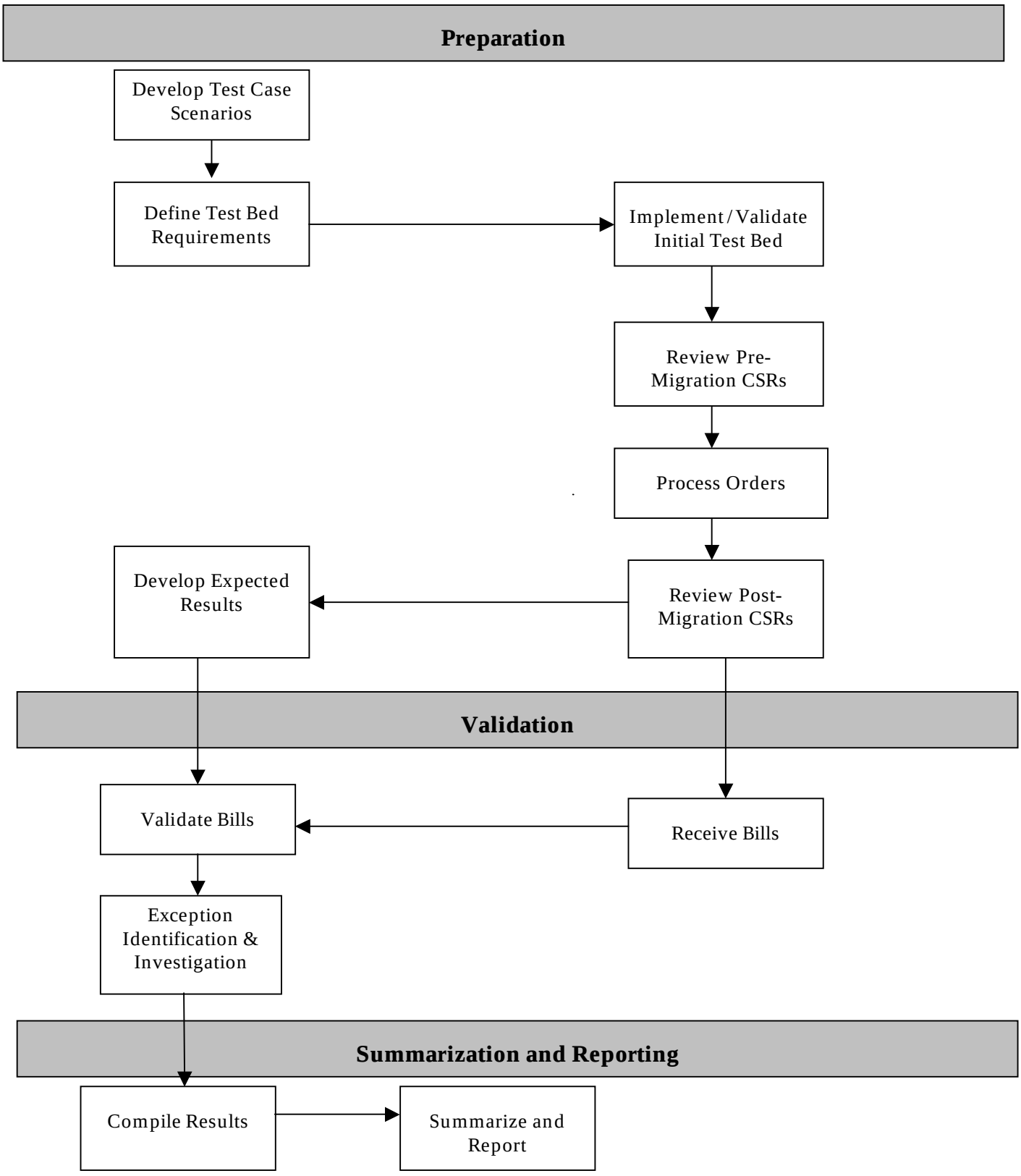
Bills containing usage charges for billable messages were examined to verify the accuracy of the usage billing components. KCI created expected results based on calls placed during the Resale Usage Functional Evaluation (BLG8) and the application of BellSouth business rules governing the billing of resale usage. Expected results were then compared to usage charges on corresponding resale bills.

KCI also evaluated bill formats to verify that required sections (e.g., pro rations, Other Charges & Credits [OC&C], recurring charges, and usage charges) appeared on the CRIS resale bills.

KCI analyzed the timeliness of delivery of electronically transmitted invoices. As bills were received from BellSouth, the invoice and receipt dates were

recorded. The number of elapsed business days was calculated based on the interval between the end of the bill cycle and the date that the bills were received. These statistics were evaluated to determine the timeliness of bill delivery. Figure V-1.1 BLG7: CRIS Resale Invoicing Functional Evaluation Process Flows outlines the steps of the testing process.

Figure V-1.1: BLG7: CRIS Resale Invoicing Functional Evaluation Process Flow



2.6 Analysis Methods

The CRIS Resale Invoicing Functional Evaluation (BLG7) included a checklist of evaluation measures developed by KCI during the preparation of supplemental test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures provided the framework of norms, standards and guidelines for the CRIS Resale Invoicing Functional Evaluation (BLG7).

The data collected were analyzed employing the evaluation measures referenced in Table V-1.1.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table V-1.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
BLG-7-1-1	The appropriate major bill sections appear on the bills per BLS's documentation.	Satisfied	Appropriate major bill sections appeared on all of the bill types evaluated (CLUB paper, DAB sent via FTP and DAB paper image CD-ROM).
BLG-7-1-2	The appropriate data appears on the page headers per BLS's documentation.	Satisfied	Appropriate data such as the Operating Company Number (OCN), billing account number, invoice date, and page number appeared on the page headers as per BLS documentation.
BLG-7-1-3	The appropriate data appear on the remittance page per BLS's documentation.	Satisfied	For the bill types that included a remittance page, appropriate data such as the billing account number, customer name, and customer address appeared on the bill as per BLS documentation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
BLG-7-1-4	Appropriate data appear in the Summary Billing Section per BLS's documentation.	Satisfied	Appropriate data appear in the Summary Billing Section of the three bill types evaluated. Data such as the balance forward, monthly recurring charges and other charges and credits consistently appeared on the bills as per BLS documentation.
BLG-7-1-5	Appropriate details appear in the Summary Biling Section per BLS's documentation.	Satisfied	Appropriate details such as the balance forward and payments line items consistently appeared on the bill as per BLS documentation. However, in the course of KCI's evaluation, it was discovered that credit adjustments provided by BLS were rendered on both the 6/5/00 and 7/5/00 invoices instead of on only the 6/5/00 invoice, as requested. This event is not material to the result of this criterion.
BLG-7-1-6	Appropriate details appear in the Current Charges Section per BLS's documentation.	Satisfied	Appropriate details such as monthly recurring charges, other charges and credits and taxes line items consistently appeared on the Current Charges Section of the bill as per BLS documentation.
BLG-7-1-7	Appropriate details appear in the Other Charges and Credits Section per BLS's documentation.	Satisfied	Appropriate details, such as the From & Thru Dates, the Purchase Order Numbers (PONs), and the Service Order IDs (SOIDs), appear in the Other Charges and Credits section as per BLS documentation.
BLG-7-1-8	Summary Page calculations correspond with the calculation definition.	Satisfied	Calculations on the Summary Page of the bill correctly corresponded with the calculation definitions provided by BLS in the bill overview session and documentation. For example, the Total Amount Due was correctly calculated as the sum of the Total Balance Due, Late Payment Charges, and the Total Current Charges.

Test Cross-Reference	Evaluation Criteria	Result	Comments
BLG-7-1-9	Balance Due calculations cross-total as appropriate.	Satisfied	Balance Due calculations on the bills correctly corresponded with the calculation definitions provided by BLS in the bill overview session and documentation. For example, the Total Balance Due was correctly calculated as the sum of the Total Amount of Last Bill less Adjustments Applied.
BLG-7-1-10	Late Payment Charge calculations correspond with the calculation definition in the BLS documentation.	Satisfied	Late Payment Charge calculations on the bills correctly corresponded with the calculation definitions in the BLS documentation.
BLG-7-1-11	Non-recurring and pro rated monthly charge calculations correspond appropriately to the BLS tariffs.	Satisfied	In general, the non-recurring and pro rated monthly charges were properly assessed and calculated as per BLS documentation. In its initial evaluation, KCI found that BLS had assessed Presubscribed Interexchange Carrier Charge (PICC) charges as non-recurring charges instead of as recurring charges.[1] KCI found that 88.4% of the test cases reviewed for the test analysis met KCI's expectations of billable charges when compared to the invoices rendered by BLS. The remaining test cases did not meet KCI expectations because of the incorrect classification of PICC charges as non-recurring charges. In its amended response to KCI's exception report, BLS stated that a CRIS system change would be implemented on 2/1/01 to reclassify the PICC charges as a recurring charge on retail and resale bills. KCI validated the system change by reviewing its 2/5/01 KCI Test CLEC invoices and the CSRs corresponding to the telephone numbers evaluated. KCI found that the PICC charges were reclassified as

[1]BLS assessed PICC charges on the KCI Resale invoices as non-recurring charges under the Other Charges & Credits section of the bill. These charges were labeled "Charge for No Pre-subscribed Interexchange Carrier for *NXX-####*." In contrast, the language in the BellSouth tariff FCC No. 1 indicates this PICC charge should be classified as a monthly-recurring charge.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			recurring charges and were accurately billed. See Exception 99 for additional information on this issue. KCI has recommended closure of Exception 99 to the GPSC. See also Table V-1.6 for details on Dollar-Based Billing Accuracy measurements[2].
BLG-7-1-12	Usage Rates correspond, as defined in the BLS tariffs or Interconnection Agreement.	Satisfied	Usage Charges on the bills agreed with rates published in the BLS tariffs or Interconnection Agreement.
BLG-7-1-13	Calculations correspond for Summary Charges, as defined in the BLS tariffs or Interconnection Agreement.	Satisfied	Summary Charges correctly corresponded with the definitions found in the BLS documentation.
BLG-7-1-14	Calculation for Detail Charges correspond, as defined in the BLS tariffs or Interconnection Agreement.	Satisfied	Detail Charges correctly corresponded with the definitions found in the BLS documentation.

[2] The bill validation accuracy results in Table V-1.6 are presented on a dollar-billed basis. The percentage accuracy results in the comments of this evaluation criterion are presented on a test-case-match basis.

Test Cross-Reference	Evaluation Criteria	Result	Comments
BLG-7-1-15	Remittance totals cross-total appropriately.	Satisfied	On bills with remittance pages, all remittance totals cross-totaled appropriately. For example, the Total Current Charges amount listed under the Current Charges section of the bill corresponded to the Total Current Charges line item on the Summary Page of the bill.
BLG-7-1-16	Summary sections / page correspond with appropriate totals elsewhere in the bills.	Satisfied	Totals on the Summary Page of the bill corresponded appropriately to the totals on the Detail Charges pages of the bills. For example, the "Total Current Charges" amount listed under the Current Charges section of the bill corresponded to the Total Current Charges line item on the Summary Page of the bill.
BLG-7-1-17	Other Charges & Credits (OC&C) Information matches expected results.	Satisfied	BLS generated bills that reflected OC&C charges that matched expected results. See Table V-1.6 for details on Dollar-Based Billing Accuracy measurements.
BLG-7-1-18	Monthly Recurring Charge information matches expected results.	Satisfied	BLS generated bills with monthly service charges that matched expected results. See Table V-1.6 for details on Dollar-Based Billing Accuracy measurements.
BLG-7-1-19	Usage charge(s) match expected results.	Satisfied	Usage charges rendered by BLS on the invoices, in general, matched KCI's expected results. In certain instances, BLS rendered invoices with usage charges that could not be reconciled with KCI expected charges. The discrepancies were due to missing and unexpected usage charges. KCI detailed these issues in Exception 103. In investigating the issues, BLS determined that certain missing usage charges noted by KCI were, in fact, valid, but because of the age of the calls at the time the exception was reported to BLS, the usage was subsequently written off. This treatment of KCI's CLEC calls was in parity with the treatment of BLS's retail customers. In addition, since the ODUF files

Test Cross-Reference	Evaluation Criteria	Result	Comments
			corresponding to the calls were delivered to KCI, KCI, in its capacity as a CLEC, would have been able to bill its end user. KCI generated additional calls in January 2001. KCI reviewed the DUFs and the bills it received, and found that it was billed accurately and correctly for each call. One usage charge that KCI categorized as missing was deemed to be invalid. BLS had sent two call records which cancelled each other out. Therefore, the call in question would not have appeared on the invoice. For two unexpected usage charges, BLS determined that though the charges for the two calls were valid, ODUF records for these calls were not sent because of an incorrect indicator setting in the BLS billing system. Since KCI's expectation of what should appear on the bill is based on the ODUF records sent by BLS, KCI's expected results did not match the bill. BLS completed a system trouble ticket on 9/16/00 to correct this incorrect indicator problem. KCI generated additional calls in January 2001. KCI reviewed the DUFs and the bills it received, and found that it was billed accurately and correctly for each call.For one unexpected usage charge, BLS determined that the charges were valid based on KCI's subscription to the Georgia Community Caller Plus calling plan on this telephone line. In addition, the lack of Local Call Detail provided to KCI was due to the fact that KCI had not ordered this option for this telephone line. Therefore, based on this investigation the usage charge appearing on the bill was determined to be valid. As a result of these findings, KCI closed Exception 103. See Exception 103 for additional information. KCI has recommended closure of Exception 103 to the GPSC. See Table V-1.5 for details on Dollar-Based Billing Accuracy of

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Usage Charges.
BLG-7-1-20	Verification of bill delivery of timeliness as defined in Appendix D2 of the BLS – GA OSS *Master Test Plan*.	Satisfied	All CRIS Resale bills sent by BLS were delivered within the BLS standard of six business days. KCI evaluated a total of 19 CRIS FTP bills for this criterion and found that the bills were delivered in a timely manner 100 percent of the time. See Table V-1.4 for details on Timeliness of Delivery of Carrier Bill.

3.1.1 Analysis of Bill Content

The tables and text below provide additional detail on the results of the bill validation evaluation. The following bill types were examined to verify that actual charges met KCI's expectations of billable charges, and that bills were formatted according to BellSouth specifications. Content evaluations examined Q Account & telephone number (TN)/circuit level charges, bill calculations, and cross checks of totals. The following bill types were included in the analysis:

- CRIS Resale
- Paper
- CD-ROM
- FTP

Information for these checks is addressed in Tables V-1.4 through V-1.6 in the sections that follow.

3.1.2 Analysis of the Timeliness of Carrier Bill Delivery

KCI utilized the Mean Time to Deliver formula from the BellSouth Service Quality Measures (SQMs) document to evaluate the timeliness of carrier bill delivery. The sample incorporated CRIS FTP bills for Resale. The statistics reported in the Table V-1.4 represent the time period from April 2000 to June 2000. The BellSouth SQM document states that the standard for evaluating billing delivery timeliness for CRIS bills is delivery within six business days of the Bill Period date.

Table V-1.4: BLG7 Timeliness of Delivery of Carrier Bill Analysis

Product Type	Total Number of Days Between Bill Cycle End Date and Date of Invoice Receipt	Count of Invoices Transmitted in Reporting Period	Mean Time to Deliver Invoices (Days)	Retail/Analog Benchmark (Business Days)	Met/Not Met Relative to Benchmark
Resale CRIS Bills	77	19	4.05	6	Met

3.1.3 Analysis of Completeness of Usage Charges

Table V-1.5 reflects the evaluation of billed versus expected usage charges associated with calls placed during the Usage Tests conducted in April 2000 and January 2001. Entries are broken out by the type of usage charge listed on the bills (e.g., local, toll, Directory Assistance, etc.).

Table V-1.5: BLG7 Bill Validation Dollar Based Billing Accuracy Analysis - Usage Charges

Usage Billing Elements	Usage Per EMI Records	Usage Per BLS Invoice	Usage Variance	Billed Amount Per KCI	Billed Amount Per BLS	Net Billing Variance
Operator Assisted	26	26	0	$161.95	$159.31	$(2.64)
Customer Dialed	33	23	10	$16.20	$16.37	$0.17
3rd Numbers	24	25	1	$58.02	$60.52	$2.50
Collect	21	19	2	$54.45	$48.63	$(5.82)
Local	56	50	6	$0.00	$0.26	$0.26
DACC	21	19	2	$0.70	$0.70	$0.00
Total (All Usage Billing Elements)	**181**	**162**	**21**	**$291.32**	**$285.79**	**$(5.53)**

3.1.4 Analysis of Overall Billing Accuracy

Table V-1.6 reflects the overall invoice bill accuracy, as defined by the BellSouth metric, of all test cases evaluated. Results listed in the table include test cases for the CRIS paper, CRIS FTP, and CRIS DAB CD-ROM formats. Overall billed versus expected usage charges revealed a 96.01% accuracy rating as indicated in Table V-1.6: Overall Billing Accuracy Analysis. The variance listed in Table V-1.6 resulted from the items listed in Table V-1.3 under evaluation criterion BLG-7-1-19.

Table V-1.6: BLG7 - Overall Billing Accuracy Analysis

All Bill Types (CRIS Resale)	Total Billed Revenue	Absolute Value of Difference	Invoice Accuracy[3],[4]
Total Monthly Recurring (Monthly + OC&C – fractional)	$9,561.40	$47.05	99.51%
Total Non-Recurring	$1,160.31	$0.00	100.00%
Total Usage	$285.79	$11.39	96.01%
Overall Totals	$11,007.50	$58.44	99.47%

[3] (Total Billed Revenue - |Total Adjustments[Variance]|)/Total Billed Revenues) X 100

[4] The bill validation accuracy results in Table V-1.6 are presented on a dollar-billed basis. The percentage accuracy results in the comments of evaluation criteria BLG-7-1-11 are presented on a test-case-match basis.

B. Test Results: Resale Usage Functional Evaluation (BLG8)

1.0 Description

The Resale Usage Functional Evaluation examined the functional elements associated with message processing of usage data by BellSouth on behalf of a Competitive Local Exchange Carrier (CLEC). For purposes of this evaluation, KCI simulated a non-facility based CLEC providing resale services to business and residential customers. For usage testing purposes, the KCI CLEC subscribed to BellSouth resale services.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

Message processing of usage data begins at the telephone switch. Usage is recorded by the switch and is retrieved by BellSouth on a daily basis. This information is used to create a file of call events. Call events associated with resale services provided to a CLEC are assembled for input into Daily Usage Files (DUFs) and delivered to CLECs electronically or on cartridge tapes, based on a schedule published by BellSouth (see Table V-2.5).

Events are consolidated or "packed" to ensure that a CLEC receives only one DUF feed per day, rather than multiple daily feeds. Files may contain a minimum of one message and a maximum of 99,999 messages. In most instances, DUFs are sent to CLECs on the second business day after the actual recording of the message (call details). Customers may request that prior period usage from the original transmission date up to 90 days be re-sent.

For the purposes of the DUF test, Optional Daily Usage File (ODUF) and Enhanced Optional Daily Usage File (EODUF) were produced by BellSouth and utilized by KCI. ODUFs include local billable messages carried over the BellSouth network, operator- handled calls, and BellSouth incoming collect calls. EODUFs include local call detail from flat-rated resale lines. Throughout this report, usage of the acronym DUF includes both ODUF and EODUF.

2.2 Scenarios

The usage-based evaluation involved test calls from both business and residential classes of service. Telephone lines used in the test were provisioned across four central offices using three switch types, including #5ESS, DMS 100/200, and 1AES. These telephone lines included resale business and residential lines. The twenty-eight call types, included in the DUF test are shown in Table V-2.1.

Table V-2.1: DUF Test Call Types

	Call Types
1.	Local Call
2.	Toll Call
3.	Collect Local Call (Operator Serviced)
4.	Collect Toll Call (Operator Serviced)
5.	Collect Local Call (Operator Completed)
6.	Collect Toll Call (Operator Completed)
7.	Third Party Local Telephone Call (Operator Serviced)
8.	Third Party Toll Telephone Call (Operator Serviced)
9.	Third Party Local Telephone Call (Operator Completed)
10.	Third Party Toll Telephone Call (Operator Completed)
11.	Operator Interruption of Local Call
12.	Operator Verification of Busy Local Number
13.	Operator Refund for Local Call
14.	Operator Refund for Toll Call
15.	Operator Assisted Toll Call without Service Charges
16.	Operator Assisted Local Call without Service Charges
17.	Operator Completed Toll Call with Service Charges
18.	Operator Completed Local Call with Service Charges
19.	Directory Assistance for Local Number
20.	Directory Assistance with Local Call Completion
21.	Customer Service Call
22.	Toll Free (800, 888, 877) Call
23.	Information Provider 900/976 Call
24.	Phonesmart Repeat Dial Call
25.	Phonesmart Dial Back Call
26.	Three Way Call
27.	Operator Assisted Third Party (Out-of-Area Caller) Local Call
28.	Operator Assisted Third Party (Out-of-Area Caller) Toll Call

2.3 Test Targets & Measures

For the DUF activity test, the test target was the recording, assembly, and delivery of relevant usage data. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

Table V-2.2: BLG8 Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Reporting of Usage	Track Usage	Completeness	BLG-8-1-1, BLG-8-1-2, BLG-8-1-3
	Verify Usage Data	Completeness and Accuracy of data	BLG-8-1-1, BLG-8-1-2, BLG-8-1-3, BLG-8-1-4
	Verify no empty set files	Completeness and Accuracy of data	BLG-8-1-1, BLG-8-1-2, BLG-8-1-3, BLG-8-1-4
Receipt of Usage	Verify Header/Trailer Record counts	Completeness of data	BLG-8-1-1
	Track receipt of files	Timeliness of DUF files and Records	BLG-8-1-3

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table V-2.3: Data Sources for the BLG8: Resale Usage Functional Evaluation

Document	File Name	Location in Work Papers	Source
Soft Copies of Test Records & DUF Files	RSLMatch.xls	BLG-8-A-5	KCI
Exchange Message Interface/Ordering and Billing Forum (EMI/OBF)	EMI16r2.pdf Version 16r2, July 1999	BLG-2-A-5	Alliance for Telecomunications Industry Solutions (ATIS)
BLS Optional Daily Usage File (ODUF), December 1999	No Electronic Copy	BLG-2-A-7	BLS http://www.interconnection.bellsouth.com/products/billing/oduf.html
BLS Enhanced Optional Daily Usage File (EODUF), December 1999	No Electronic Copy	BLG-2-A-8	BLS http://www.interconnection.bellsouth.com/products/billing/eoduf.html

Document	File Name	Location in Work Papers	Source
Facility-Based CLEC Starter Kit – Daily Usage File, Issue 2, December 31, 1997	No Electronic Copy	BLG-2-A-9	BLS
Usage Process: Timing of ADUF Messages, Issue Date: February 17, 1998; Revision Date: July 12, 1998	No Electronic Copy	BLG-2-A-13	BLS
CLEC Advisory Training	No Electronic Copy	BLG-2-A-15	BLS
Electronic Interface – Billing Optional Daily Usage Files, September 31, 1999	No Electronic Copy	BLG-2-B-1	BLS
Chapter 3.0 Billing Format Options	No Electronic Copy	BLG-2-B-3	BLS http://www.interconnection.bellsouth.com/guides/actreq2_fac/c3_4.htm
BLS Optional Daily Usage File (ODUF) Revision Date: April 30, 1999	No Electronic Copy	BLG-2-B-4	BLS

2.4.1 Data Generation/Volumes

This test required usage data generation. Each tester received instructions and training for placing and recording calls. Testers recorded actual call information in the test call log and submitted both written and electronic copies of the logs. Testers were instructed to place calls to particular telephone numbers in specific ways. Testers were required to log all attempted and completed calls. A total of 898 originating and terminating calls were included in the evaluation. To generate test calls of sufficient variety, testers were dispatched to four locations within the BellSouth calling region. These locations are listed in Table V-2.4:

Table V-2.4: Test Call Sites (BellSouth Central Offices)

Central Office	Address
Macon	787 Cherry Street, Macon, GA 31201
Powers Ferry	1732 Powers Ferry Road SE, Marietta, GA 30067
Rome	708 East First Street, Rome, GA 30161
Toco Hills	2204 La Vista Road NE, Atlanta, GA 30320
Floater	Various locations throughout Georgia

One additional tester, traveling within Georgia, placed third party billing and collect calls from non-test lines to test lines[1] in the BellSouth calling region.

Each tester was given a spreadsheet containing the telephone numbers to be called and any special instructions needed to ensure that a wide variety of call types and call lengths were placed. Testers recorded actual call information on the spreadsheets.

Calls were grouped in four categories: Local, Toll, Operator Services and Other. 'Local' calls are defined as calls made to destinations within the local calling area, and are charged by standard measured service or a monthly flat fee. 'Toll' calls are calls made to destinations outside of the local calling region, but within the same Local Access Transport Area (LATA). Operator Services calls include credit calls, directory assistance calls, and special service calls. 'Other' calls consist of information provider calls (900 services) and casual calls (10-10-XXX dialed, e.g. 10-10-321)[2]. BellSouth retains the access records for resale accounts, and is entitled to bill access charges to long distance carriers for resale accounts; therefore, long distance calls were not placed as part of the resale test.

2.5 Evaluation Methods

The following methodology was employed to evaluate the accuracy, completeness and timeliness of DUFs:

1. The testers placed scripted test calls across all 28 call categories.
2. Test log records for the completed test calls and DUF records received were compiled in a database. Each test call was examined to determine if the specific call should result in the generation of a DUF record.

[1] Test lines are provisioned for use by KCI; non-test lines are non-KCI lines utilized during the test

[2] Information provider calls are calls to information providers accessed by dialing 1-900-xxx-xxxx; casual calls are long-distance calls placed by first utilizing a 10-10-xxxx dialing pattern to gain access (dial tone) from an alternative long-distance carrier, rather then direct-dialing the call.

Individual call records on the DUF were matched against call details from the test call logs. All call types were reviewed for accuracy, validation of the date and time of placement, origination and termination TNs, call duration, method of recording, rate class, indicators, and message type. If a unique record could not be identified as a match to the call log, the expected DUF record was designated as missing. KCI also examined the database to identify any unexpected DUF records.

3. The record layout and content of DUF headers and trailers, as defined by Exchange Message Interface-Ordering and Billing Forum (EMI-OBF) guidelines[3], were examined to verify that the DUFs actually contained the number of records indicated in the header and trailer. DUFs were examined to verify that no empty files were transmitted, and that the volume of records contained in the DUFs were within BellSouth's published specifications.

4. The transmission date and time of DUFs were recorded, and the number of calendar days between the message creation date and the DUF transmission date was noted. This number was used in the determination of timeliness of usage data delivery. Although BellSouth offers a variety of DUF delivery methods to CLECs, this test involved only the CONNECT:Direct® delivery method. Therefore, all delivery time analysis was completed from files transmitted via CONNECT:Direct and over an eight-day period beginning on April 3, 2000.

The timeliness of delivery of DUFs was evaluated based on the following message transmission timing factors as published by BellSouth.[4]

Table V-2.5: BellSouth Schedule of Message Recording and Delivery to CLECs

Message Recorded	BIBS Sends (Processing Ctr. 1)[5]	MD03B01 Receives (Processing Ctr. 2)[6]	MD03B02 Consolidator in Mississippi Receives (BLS Processing Ctr. 3)[7]	CLEC Receives
Mon	Tues 1:00pm	Tues between 1:00pm and 12:00am	Wed 7:00am	Wed 9:00am

[3] Exchange Message Interface-Ordering and Billing Forum (EMI-OBF) EMI16r2.pdf Version 16r2, July 1999

[4] BellSouth ADUF document entitled *Data Delivery,* Chapter 6 p.vi.6.1 - "Usage Processing, Timing of ADUF Messages."

[5] BellSouth Industrial Billing System (BIBS) processes and feeds ODUF and EODUF.

[6] MD03B01 processes jobs in each of the Revenue Accounting Offices (RAO); performs system edits and EMI conversion.

[7] MD03B02 Consolidator processes all files from RAO and packs data into header and trailer records.

Message Recorded	BIBS Sends (Processing Ctr. 1)[5]	MD03B01 Receives (Processing Ctr. 2)[6]	MD03B02 Consolidator in Mississippi Receives (BLS Processing Ctr. 3)[7]	CLEC Receives
Tues	Wed 1:00pm	Wed between 1:00pm and 12:00am	Thurs 7:00am	Thurs 9:00am
Wed	Thurs 1:00pm	Thurs between 1:00pm and 12:00am	Fri 7:00am	Fri 9:00am
Thurs	Fri 1:00pm	Fri between 1:00pm and 12:00am	Mon 7:00am	Mon 9:00am
Fri	Mon 1:00pm	Mon between 1:00pm and 12:00am	Tues 7:00am	Tues 9:00am
Sat	Mon 1:00pm	Mon between 1:00pm and 12:00am	Tues 7:00am	Tues 9:00am
Sun	Mon 1:00pm	Mon between 1:00pm and 12:00am	Tues 7:00am	Tues 9:00am

2.6 Analysis Methods

The test included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Resale Usage Functional Evaluation.

The data collected from transaction processing were analyzed employing the evaluation criteria referenced above.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

The results of the DUF usage test are presented in the tables below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table V-2.6: BLG8 Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
BLG-8-1-1	For all scripted and completed test calls that should generate a DUF record, appropriate DUF records are contained in the electronically delivered Daily Usage Files.	Satisfied	During the period April 4-7, 2000, KCI completed 898 test calls for which DUF files were expected. In the majority of cases, BLS provided appropriate DUF records for these calls. KCI did observe several minor issues with the DUF records: • In several cases, BLS was inconsistent in providing local

Test Cross-Reference	Evaluation Criteria	Result	Comments
			call detail records for directory assistance call completion on flat-rated lines. • BLS occasionally provided unexpected operator-completed intralata toll records immediately following customer credit requests. • BLS provided inconsistnet records for operator-handled versus non-operator-handled local calls in several instances. • BLS did not provide customer service call detail from the Rome or Macon central offices.
BLG-8-1-2	For all scripted and completed test calls that should generate a DUF record, all expected DUF records are contained in the electronically delivered Daily Usage Files.	Satisfied	KCI completed 898 test calls during the Resale Usage Functional Evaluation. BLS failed to deliver DUF records for 12% of the test calls for which records were expected. As a result, KCI issued Exception 94. Upon further investigation, which revealed switch records that errored in the BLS billing system (BLS utilizes the same system for retail and resale billing which includes the same edits and error processes) and some KCI logging errors, KCI concluded that BLS did, in fact, deliver DUF records for 95% of the test calls for which records were expected. Exception 94 is closed. See Exception 94 for additional information on this issue.
BLG-8-1-3	For all scripted and completed test calls that should generate a DUF record, 95% are delivered within six calendar days.	Satisfied	During the period April 4-7, 2000, KCI completed 898 test calls for which DUF files were expected. BLS delivered 100% of the DUF records within six calendar days.
BLG-8-1-4	DUF records transmitted to the KCI test CLEC contained billable information.	Satisfied	All of the DUF file transmissions BLS provided to KCI contained billable information.

3.2. DUF Accuracy and Completeness Summary Data Analysis

Table V-2.7 illustrates timeliness results for the BellSouth DUF Usage test. DUF records received after six calendar days are considered to be untimely based on the intervals specified in KCI's interconnection agreement.

Table V-2.7: DUF Timeliness

Timeliness Criteria	Percent Received	Cumulative Percent Received
% DUF in 1 calendar day	24%	24%
% DUF in 2 calendar days	0%	24%
% DUF in 3 calendar days	45%	69%
% DUF in 4 calendar days	30%	99%
% DUF in 5 calendar days	1%	100%
% DUF in 6 calendar days	0%	100%
% DUF in >6 calendar days	0%	100%

Table V-2.8 displays results by location from KCI's analysis of DUFs for accuracy and completeness.

Table V-2.8: Results by Location

Evaluation Criteria	Macon	Powers Ferry	Rome	Toco Hills	Total
1) Total number of test calls	241	224	237	196	898
2) Number of Calls for which no DUF was expected	84	89	94	55	322
3) Total number of calls for which a DUF record was expected	157	135	143	141	576
4) Total number of calls for which an expected DUF record wasn't found	12	11	14	8	45

Evaluation Criteria	Macon	Powers Ferry	Rome	Toco Hills	Total
5) Number of expected DUFs that were not found as a percentage of total number calls for which a DUF was expected	8	8	10	6	8
6) Total number of scripted test calls for which an unexpected DUF record was found	0	0	0	0	0
7) Percentage of total test calls for which an unexpected DUF record was found (6/1)	0%	0%	0%	0%	0%

Note: Totals may not sum due to rounding

Table V-2.9 illustrates the results of analysis done to validate transmitted file completeness.

Table V-2.9: DUF Transmission Completeness Validation

Create Date	DUF File	File Count	Actual Count	Discrepancies
04/07/2000	Dsadufga.zxc.194653.D2000098.T071946.20000407090003952	313	313	0
04/07/2000	Dsadufga.zxc.194801.D2000098.T071948.20000407090004220	173	173	0
04/10/2000	Dsadufga.zxc.302702.D2000101.T073027.20000410090004444	166	166	0
04/07/2000	Dsodufga.zxc.233363.D2000098.T122333.20000407150002292	208	208	0
04/07/2000	Dsodufga.zxc.233827.D2000098.T122338.20000407150004953	221	221	0
04/07/2000	Dsodufga.zxc.234171.D2000098.T122341.20000407150006788	99	99	0
04/07/2000	Dsodufga.zxc.234518.D2000098.T122345.20000407150007579	36	36	0
04/10/2000	Dsodufga.zxc.345991.D2000101.T073459.20000410090007787	191	191	0

Create Date	DUF File	File Count	Actual Count	Discrepancies
04/10/2000	Dsodufga.zxc.350690.D2000101.T073504.20000410090010951	238	238	0
04/10/2000	Dsodufga.zxc.350690.D2000101.T073506.20000410090011115	117	117	0
04/11/2000	Dsodufga.zxc.410386.D2000102.T074103.20000411090006463	231	231	0
04/11/2000	Dsodufga.zxc.410735.D2000102.T074107.20000411090009408	139	139	0
04/11/2000	Dsodufga.zxc.410900.D2000102.T074109.20000411090011780	19	19	0
04/03/2000	Dsodufga.zxc.450365.D2000094.T084503.20000403120004341	1	1	0

Maintenance & Repair

VI. Maintenance and Repair (M&R) Domain Results and Analysis

1.0 Description

The purpose of this section is to present the specific tests, results, and analysis from KCI's evaluation of the systems, processes, and other operational elements associated with BellSouth's support for Wholesale Maintenance and Repair. Maintenance & Repair (M&R) includes the network information, diagnostic tools, personnel, and processes that allow Competitive Local Exchange Carriers (CLECs) to diagnose and solve customer trouble complaints or otherwise assist customers who experience service disruptions. The M&R tests assessed the functionality of repair systems and the adequacy and accuracy of operational processes and procedures and supporting documentation.

2.0 Methodology

The scope of the M&R tests encompassed the review and analysis of BellSouth's processes, procedures, and systems for Wholesale trouble reporting and repair. This was accomplished by evaluating the equivalence of BellSouth's end-to-end processes for retail and wholesale trouble reporting and repair of xDSL lines, as well as by testing the Trouble Analysis Facilitation Interface (TAFI) and the Electronic Communications Trouble Administration (ECTA) functionality on resale lines.

2.1 Business Process Description

Three methods exist for BellSouth CLEC customers to report and resolve troubles: Submission of trouble tickets through the TAFI or ECTA Gateways, and by manually telephoning a trouble report to a BellSouth work center. These methods are described below.

TAFI

TAFI can be accessed using a Telnet protocol through a LAN-to-LAN or dial-up connection to BellSouth. It does not support a Graphical User Interface (GUI). Rather, it uses a non-traditional "window" format that is divided into three types: Main Menu, Sub Menus, and Pop-up Windows.

The TAFI application is a rules-based system that provides automated trouble receipt and screening functionality to both CLEC and BellSouth retail repair center users. Its design guides users through a series of questions and instructions in order to allow the initial point of contact to resolve or route telephone number-based- (TN-) based, Plain Old Telephone Service (POTS) customer service problems. In essence, TAFI acts as a tool that collects data from the user and the various downstream applications in order to generate recommendations for resolving POTS problems. Reports leaving TAFI as a result of a trouble fall into one of three categories: resolved/closed, routed to the appropriate entity for resolution, or cancelled. While TAFI itself does not perform any

repair functions, it allows access to downstream systems that can repair some trouble types in "real time."

Both BellSouth and CLECs use the TAFI system for handling POTS trouble reports. BellSouth states that the version created for CLECs is similar to the BellSouth version for trouble processing functionality, with the following differences.

- The CLEC is restricted to accessing BellSouth records for its own customers.
- The TAFI Supervisor function is configured for a given CLEC user community.
- BellSouth processes its residential and business customers on different TAFI servers, while CLECs currently use one system for all of their customers.

In addition to these internal security measures, BellSouth has incorporated additional layers of security to restrict unauthorized usage. These layers include system user passwords that automatically expire, as well as SecurID tokens.

TAFI interacts with specific BellSouth downstream systems, the functions of which fall within two primary areas of activity:

- Trouble administration systems for POTS lines
- Test systems for fault identification.

The following table highlights each of the downstream systems and their functions as well as some reports accessed by TAFI. There are three different LMOS systems, 16 Predictor systems, and four March systems. Multiple systems exist for load balancing purposes, and provide identical functionality.

Table VI-A: BellSouth M&R Downstream Systems and Reports Accessed by TAFI

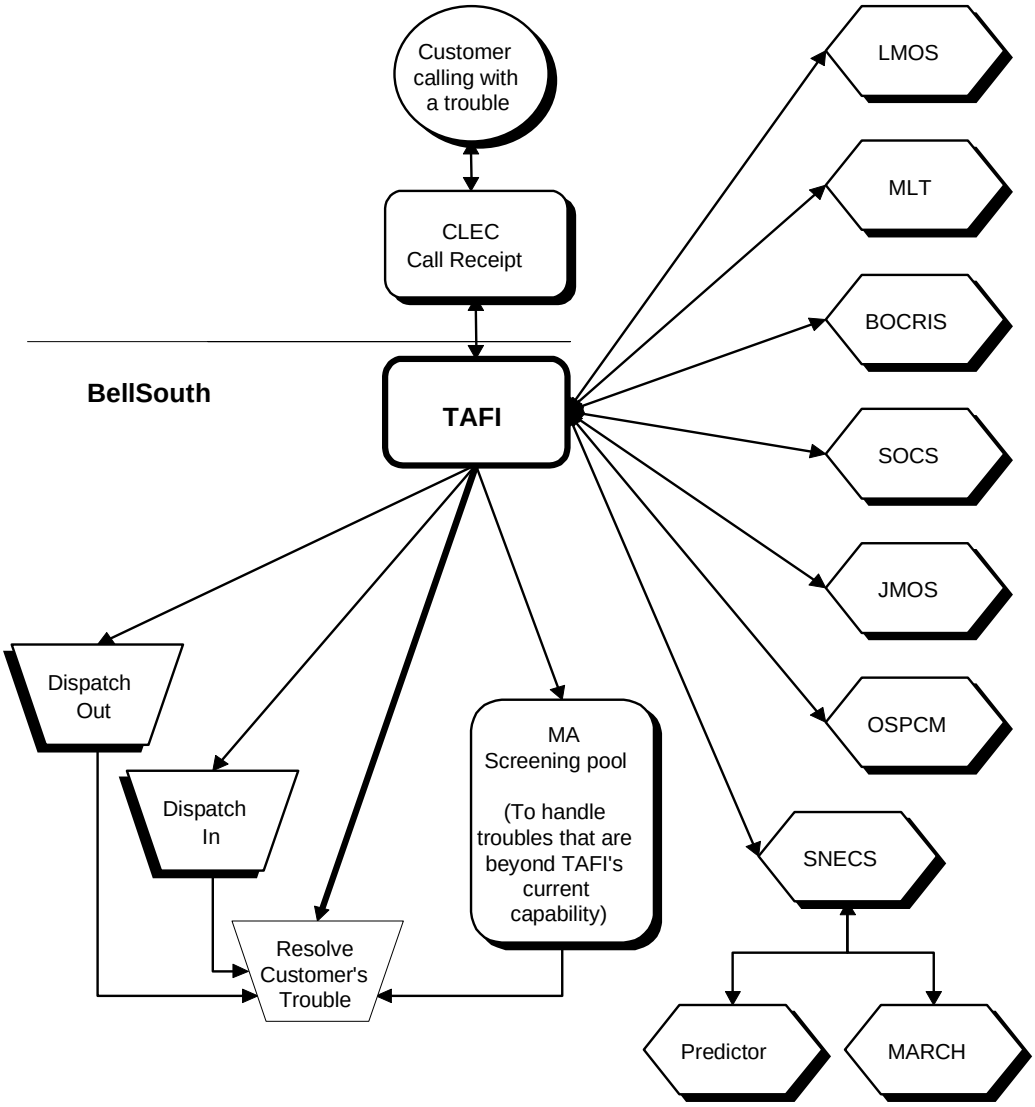
System	Description
BOCRIS: Business Office Customer Record Inventory System	Provides service order information including Name, Address, Class of Service, Maintenance Plan, Restrictions, Features, and Preferred Interexchange Carrier (PIC).
COSMOS: Computer System for Mainframe Operations	Provides frame data used in problem analysis.
JMOS: Job Management Operations System	Provides outside plant and construction workload scheduling and reporting. Used to track contractors performing buried service wire activity.
LFACS: Loop Facility Assignment and Control System	Provides facility data used in problem analysis.
LMOS: Loop Maintenance Operations System	Supplies trouble ticket processing and the following information: Name and Address verification, Working Condition, Trouble History, Commitments, Failure information, Unit #, Pending Reports, Status, Category of Report, Pending Service Order information, and facilities.

MARCH	Provides the mechanism to add or delete features to or from a line.
MLT: Mechanized Loop Testing	Provides loop testing on the customer's line number.
OSPCM: Outside Plant Construction Management System	The Navigator compatible replacement for JMOS.
PREDICTOR	Identifies and verifies line features present on the customer's line.
SNECS: Secured Network Element Contract Server	A peer to peer computer interface between TAFI and the Predictor and MARCH systems.
SOCS: Service Order Communication System	Issues a service order when adding a new feature to a customer's line, and verifies the status of an order.
DATH Trouble History	LMOS Display Abbreviated Trouble History - A trouble history report showing just the close out narrative on previous trouble reports.
DLETH Trouble History	LMOS Display Extended Trouble History - A trouble history report showing every line of status on previous trouble reports.
DLR	LMOS Display Line Record - Displays the customer's Line Record in LMOS.

If TAFI determines that one of its downstream systems cannot resolve the problem, it then routes the trouble to either the Maintenance Assistant Screening Pool for further analysis, or directly to the Work Management Center (WMC) for dispatching of technicians to the Central Office (Dispatch-In) or to the customer site (Dispatch-Out).

The following diagram illustrates the downstream systems and their relationship to TAFI.

Figure VI-A: BellSouth Trouble Administration Systems Used by CLECs



ECTA

The BellSouth Electronic Communications Trouble Administration (ECTA) Gateway is BellSouth's implementation of an American National Standards Institute (ANSI) T1M1 compliant electronically bonded trouble administration interface[1]. Competitive Local Exchange Carriers (CLECs) must possess an electronic interface to access BellSouth's ECTA Gateway. Currently, there are two options available for a CLEC that wants to

[1] The T1M1 standard is outlined in ANSI documents T1.227, T1.228 and T1.262 as well as the General Network Information Model of which these ANSI standards are an extension.

use ECTA for trouble management. Option one is the Electronic Communication-Common Presentation Manager (EC-CPM) interface made available by BellSouth. This interface does not offer the full complement of available ECTA functions. Option two is an interface that a CLEC builds itself, based on the ANSI T1.227, T1.228 and T1.262 standards for trouble administration. Currently, there are no CLECs using the EC-CPM interface to access ECTA. CLECs that are currently using the ECTA Gateway for trouble administration have programmed their own interfaces for access to the BellSouth system. Presently, there are only two CLECs that have programmed this interface, and the current trouble volume being processed is approximately 35 trouble tickets per month.

CLECs can use the ECTA Gateway to run Mechanized Loop Testing (MLT) evaluations on lines[2], enter and cancel trouble tickets, check the status of trouble tickets, and modify or add information to trouble tickets for both non-designed and designed services through an electronically bonded interface. When the user enters trouble tickets into the ECTA Gateway, they are routed to the appropriate downstream system, based on whether they are for designed or non-designed systems. Trouble tickets for designed systems are directed to the Work Force Administration (WFA) application and are processed manually.

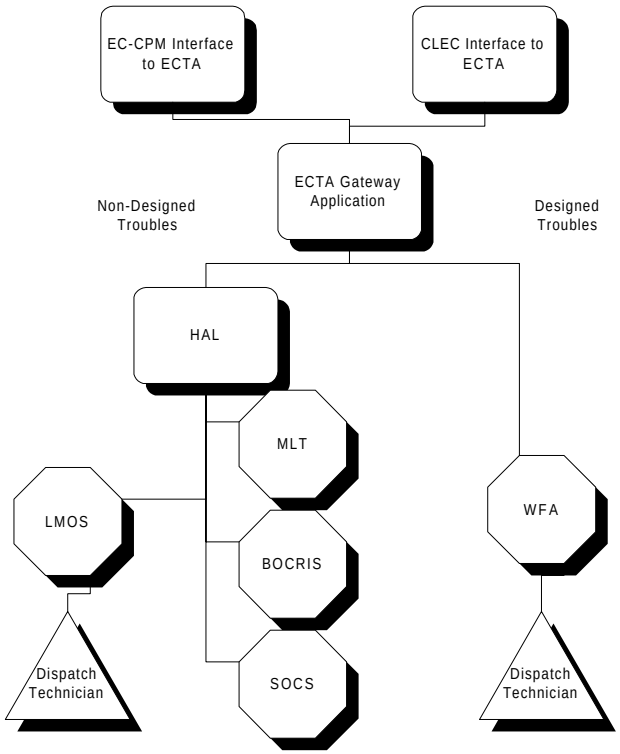
Trouble tickets for non-designed systems are forwarded to the "Hands-Off" Assignment Logic (HAL) system that further automates their processing. Upon receipt of a trouble ticket, the HAL system ensures data confidentiality by validating that telephone numbers for which trouble tickets are created belong to the CLEC submitting the ticket. HAL then initiates the correct Loop Maintenance Operations System (LMOS) transaction and processes the request. The HAL system has the capability to assess whether an MLT test is required and, if so, submits the request for an MLT evaluation. Once MLT results are returned, HAL has the capability to route trouble tickets to appropriate downstream systems based on those test results[3].

The relationship between the various systems is illustrated below:

[2] MLT is available only for POTS lines.

[3] See Table VI-B for a complete list of systems and their functions.

Figure VI-B: ECTA Systems Diagram



Downstream Systems

ECTA is connected to BellSouth's legacy systems via the HAL system. The specific systems accessible through HAL are:

Table VI-B: Systems Accessible through HAL

System	Function
LMOS: Loop Maintenance Operations System	Supplies trouble ticket processing and provides account and trouble processing information.
MLT: Mechanized Loop Testing	Provides loop testing on the customer's line number.
BOCRIS: Business Office Customer Record Inventory System	Provides service order information including name, address, class of service, maintenance plan, restrictions, features, and Preferred Interexchange Carrier (PIC).
SOCS: Service Order Communication System	Issues a service order when adding a new feature to a customer's line and verifies the status of an order.

Once a trouble ticket has been submitted to ECTA, any change in the status of that ticket made by a BellSouth maintenance administrator is communicated back to the CLEC via an electronic Attribute Value Change (AVC) within the ECTA system.

ECTA Alternatives

ECTA allows CLECs to enter trouble reports for either designed or non-designed circuits. Trouble reports for designed systems that are not entered into ECTA by a CLEC are telephoned to a BellSouth service center. BellSouth customer service representatives receiving these trouble reports enter the information directly into the WFA system and bypass the ECTA Gateway. This is the same process that occurs for BellSouth's own retail designed service trouble reports. In addition to using ECTA, CLECs also have the option of entering non-designed trouble tickets into the BellSouth-provided Trouble Administration Facilitation Interface (TAFI) system. CLEC trouble tickets that are reported through ECTA can be electronically bonded between the Operating Support Systems (OSS) of BellSouth and those of the owning CLEC. Trouble reports that are telephoned to a BellSouth service center and trouble reports entered into TAFI can not be electronically bonded to the CLEC's OSS. For these non-ECTA trouble reports, the owning CLEC must re-key data into their own OSS to keep an electronic record of the trouble.

ECTA Interface Implementation Process

BellSouth does not produce any documentation available externally that outlines the full functionality of the ECTA Gateway. The only documentation produced by BellSouth concerning the ECTA Gateway is the CLEC-specific Joint Implementation Aggreement (JIA), which is not intended to be used by ECTA end-users. The JIA outlines points specific to an implementation of an ANSI T1.227-, T1.228- and T1.262-compliant CLEC interface to BellSouth's ECTA Gateway.

Each implementation of an ECTA interface by a CLEC is customized based upon a CLEC's request for functionality/system objects, and negotiations between BellSouth and the CLEC to define final functionality and object support.

Interface Used for ECTA Testing

As development of an ANSI-compliant interface for ECTA testing was not in the scope of the *Supplemental Test Plan,* KCI performed functional and performance testing using a Test Interface developed by BellSouth that is not available for CLEC use. BellSouth uses this Test Interface for internal development testing. Use of this interface allowed KCI to overcome limitations that would have arisen had one of the interface options available to a real CLEC been used: 1) the EC-CPM interface does not offer the full complement of ECTA functions currently available to CLECs, and the system responses through the required dial-up EC-CPM connection were judged to be too slow to allow for adequate performance testing; and 2) use of a CLEC-developed interface could compromise the ability to accurately evaluate ECTA functionality by introducing performance aspects of the CLEC's interface into the evaluation.

Manual Telephone Call

A CLEC also has the option of telephoning a BellSouth work center directly to report a trouble. In the case of troubles for non-designed services and POTS, the CLEC telephones the BellSouth Resale Maintenance Center (BRMC). In the case of troubles for designed services, the CLEC telephones the BellSouth Unbundled Network Element Center (UNEC). After taking the information from the CLEC, the BellSouth Maintenance Administrator (MA) would then determine into which M&R system to enter the trouble report (i.e., TAFI, LMOS, or WFAC).

2.2 Scenarios

Various M&R-related scenarios were used to evaluate the M&R trouble repair process and systems. Specific details are provided in each of the individual M&R Test descriptions.

2.3 Test Bed

The M&R test bed was designed to represent an appropriate mix of services (i.e., line types and feature types) that BellSouth offers its Wholesale customers. The following lists those included in the M&R test:

Line Types	**Feature Types**
Plain Old Telephone Service	3-way calling
- UNE Loop	Call waiting
- UNE Loop / Port Combo	Call forwarding
- Resale	Call blocking
PBX	No dial tone
Synchronet	Caller ID

A. Test Results: Maintenance and Repair (M&R) Process Evaluation (M&R11)

1.0 Description

The objective of the M&R Process Evaluation (M&R11) was to evaluate the trouble report maintenance and repair process for wholesale xDSL line type service. The test is comprised of two major elements. The first element (Sub-Test 1) evaluated BellSouth's processes for trouble reporting, maintenance and repair of wholesale xDSL Unbundled Network Element- (UNE-) capable loops. The process flows for wholesale trouble management were reviewed and evaluated along with technician methods and procedures (M&Ps) and job aids for wholesale xDSL trouble repair. The second element (Sub-Test 2) involved the execution and observation of selected M&R test scenarios to evaluate BellSouth's adherence to existing processes and procedures for making repairs to xDSL-capable UNE loops.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

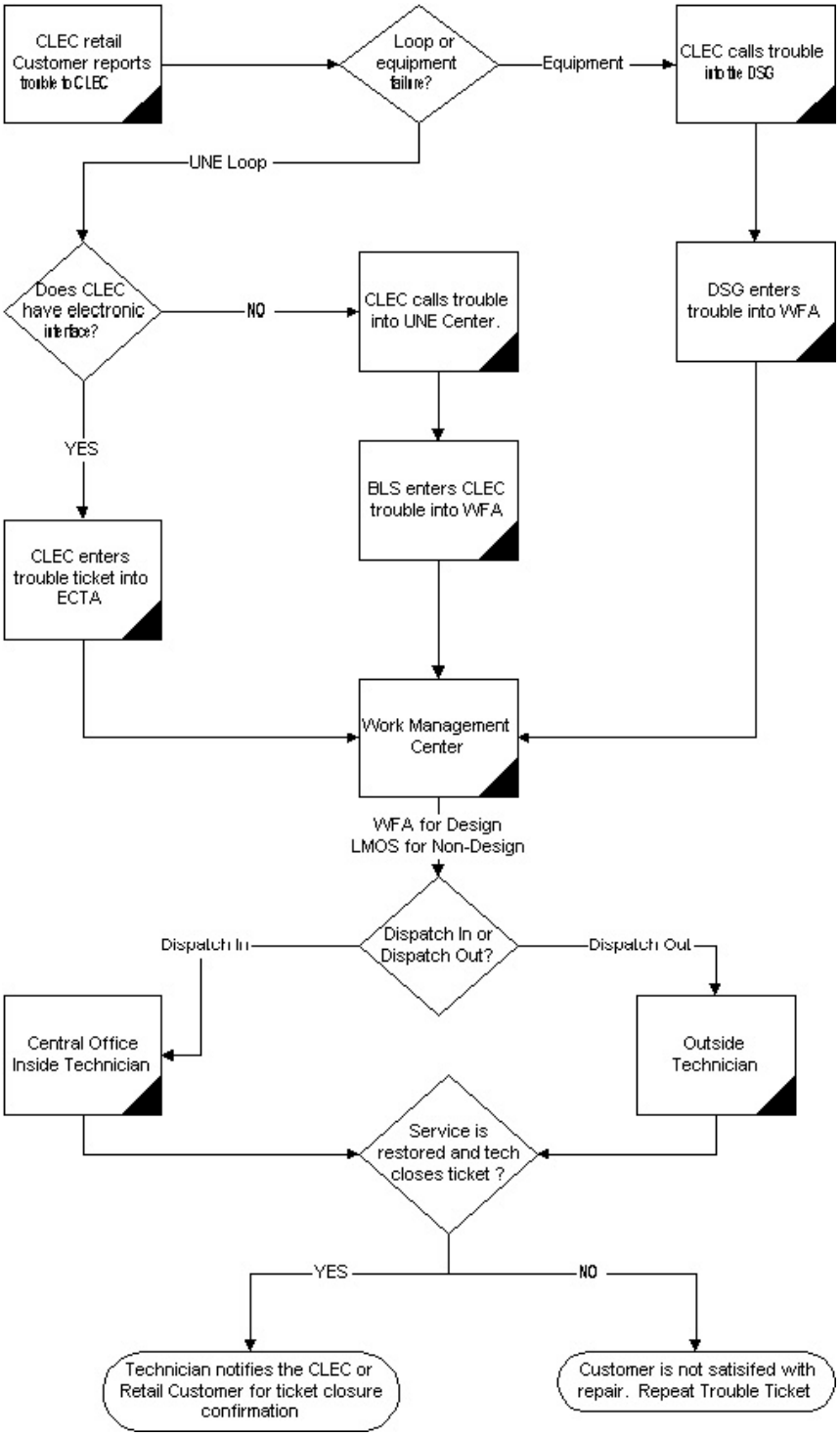
BellSouth's M&R administration and trouble repair process flows are described at a high level below and are depicted in Figure VI-1.1. See Section VI, "Overview" for a detailed description of the BellSouth M&R processes.

The Work Force Administration Interface (WFA) is used to capture wholesale trouble tickets for designed UNE-capable xDSL loops. The WFA trouble system also provides trouble management and escalation information relating to trouble tickets passed to outside technicians. Work Management Center (WMC) staff schedule technicians and allocate outstanding trouble tickets to a Dispatch In (DI) or Dispatch Out (DO) status depending upon the repair action required to restore service.

This test concentrated on the BellSouth repair procedures for designed UNE-capable xDSL loops, as well as the consistent application of those procedures, for M&R support of wholesale customers.

Figure VI-1.1 illustrates the BellSouth M&R process flow.

Figure VI-1.1: M&R11 Business Process Flow



2.2 Scenarios

Multiple M&R scenarios were used to evaluate the M&R trouble repair performance process. Table VI-1.1 summarizes the scenarios used for the end-to-end process evaluation in Sub-Test 2. The "end-to-end process" is defined as the process that occurs from the time a trouble is first reported to the point service is restored by a technician and the trouble ticket is closed by the CLEC.

Table VI-1.1: M&R Trouble Repair Performance Process Scenarios

Scenario No.	Scenario Title and Description
xDSL8h, 10e, 10f	CLEC reports xDSL capable UNE loop trouble to BLS on behalf of CLEC business customer who cannot receive data.
xDSL8j, 8b, 8i, 10g	CLEC reports xDSL capable UNE loop trouble to BLS on behalf of CLEC business customer who cannot transmit data.
xDSL9a, 8f, 9e	CLEC reports xDSL capable UNE loop trouble to BLS on behalf of CLEC business customer who cannot transmit or receive data.
xDSL9b	CLEC reports xDSL capable UNE loop trouble to BLS on behalf of CLEC residential customer who cannot transmit data.
xDSL9c	CLEC reports xDSL capable UNE loop trouble to BLS on behalf of CLEC residential customer who cannot receive data.
xDSL9d, 9f, 10h	CLEC reports xDSL capable UNE loop trouble to BLS on behalf of CLEC residential customer who cannot transmit or receive data.

2.3 Test Targets & Measures

The test target was the wholesale UNE xDSL maintenance and repair end-to-end processes, procedures, and performance. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

Table VI-1.2: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
End-to-End M&R Process *x*DSL	Process Flow Documentation	Completeness	M&R-11-1-1
End-to-end Trouble Report process	Process Evaluation	Completeness, consistency, and timeliness of the process	M&R-11-1-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
M&R Test Scenarios	Commitment date and time given when logging trouble	Accuracy Timeliness	M&R-11-1-3
	Trouble ticket closure process followed	Accuracy Timeliness	M&R-11-1-4
	Closure notification given when technician closes ticket	Completeness Timeliness	M&R-11-1-5
	Escalation process followed for xDSL services	Completeness	M&R-11-1-6
	Trouble ticket logging, tracking, and reporting process is followed	Completeness	M&R-11-1-7

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VI-1.3: Data Sources for M&R Process Evaluation

Document	File Name	Location in Work Papers	Source
ADSL / HDSL Capable Loop CLEC Information Package	DSLPKG.DOC	M&R-11-A-1	BLS
JA-ASYM-001 "ADSL"	No Electronic Copy	M&R-11-A-2	BLS
RL-MOS-001 "LMOS codes"	No Electronic Copy	M&R-11-A-3	BLS
RMQIR001 "Quality Maintenance"	No Electronic Copy	M&R-11-A-4	BLS
UG-EPUE-001 "Escalation Procedures"	No Electronic Copy	M&R-11-A-5	BLS
UNE Center May 2 Meeting Summary	No Electronic Copy	M&R-11-A-6	KCI
xDSL Test Bed	No Electronic Copy	M&R-11-A-7	KCI
ADSL NMS Login Process JA-01	No Electronic Copy	M&R-11-A-8	BLS
WFA Processor Login JA-02	No Electronic Copy	M&R-11-A-9	BLS
BOCRIS Login JA-03	No Electronic Copy	M&R-11-A-10	BLS
Service Order Confirmation JA-04	No Electronic Copy	M&R-11-A-11	BLS

Document	File Name	Location in Work Papers	Source
Opening WFA Ticket with NSP / ISP for ADSL trouble JA-05	No Electronic Copy	M&R-11-A-12	BLS
Closing WFA tickets to NSP / ISP via DSG ticketmaster JA-06	No Electronic Copy	M&R-11-A-13	BLS
VPI / VCI and / or RVPI / RVCI Changes with installer on site JA-07	No Electronic Copy	M&R-11-A-14	BLS
SCCS Login JA-08	No Electronic Copy	M&R-11-A-15	BLS
MOBI Login JA-09	No Electronic Copy	M&R-11-A-16	BLS
DSG WFA Pending Lists JA-10	No Electronic Copy	M&R-11-A-17	BLS
ADSL Service Restoral / Denial JA-11	No Electronic Copy	M&R-11-A-18	BLS
ADSL CPE Maintenance Ticket process JA-12	No Electronic Copy	M&R-11-A-19	BLS
Cancelling ADSL Service Order's JA-13	No Electronic Copy	M&R-11-A-20	BLS
MLT Test JA-14	No Electronic Copy	M&R-11-A-21	BLS
SOEG Login JA-15	No Electronic Copy	M&R-11-A-22	BLS
Exceed Login JA-16	No Electronic Copy	M&R-11-A-23	BLS
Remote Solutions Verification JA-17	No Electronic Copy	M&R-11-A-24	BLS
Cancelling ADSL Service Order's (WFA) JA-18	No Electronic Copy	M&R-11-A-25	BLS
Creating a LT Board in Feature Group 4 AWS's JA-19	No Electronic Copy	M&R-11-A-26	BLS
LCS Login	No Electronic Copy	M&R-11-A-27	BLS
How to distinguish between one or more MiniRams JA-21	No Electronic Copy	M&R-11-A-28	BLS
How to plan the ADNT software for ADSL Ports JA-22	No Electronic Copy	M&R-11-A-29	BLS
ADSL DSLAM to Mini-Ram Conversion JA-23	No Electronic Copy	M&R-11-A-30	BLS
Alerts to be worked by loaners JA-24	No Electronic Copy	M&R-11-A-31	BLS
How to Push a Service order through JA-25	No Electronic Copy	M&R-11-A-32	BLS
How to Deny / Restore ADSL Service JA-27	No Electronic Copy	M&R-11-A-33	BLS
NAS Form JA-29	No Electronic Copy	M&R-11-A-34	BLS
Trouble Shooting Guide	No Electronic Copy	M&R-11-A-35	BLS
DSG Visit summary	No Electronic Copy	M&R-11-A-36	BLS
UNE Center Visit summary	No Electronic Copy	M&R-11-A-37	BLS

Document	File Name	Location in Work Papers	Source
WFA / C OSSLOG Trouble Ticket Reports	No Electronic Copy	M&R-11-A-38	BLS
WFA / C Work and Force Administration / Control Field Definitions JA-283	No Electronic Copy	M&R-11-A-39	BLS

2.4.1 Data Generation/Volumes

Trouble tickets were created on KCI test bed[1] accounts and tracked using the WFA trouble ticketing interfaces. Calls were placed to the UNE Center to initiate the repair process with BellSouth. No volume testing was required for this evaluation.

2.5 Evaluation Methods

Sub-Test 1 activities were developed based on KCI's understanding of BellSouth's wholesale M&R end-to-end processes. In addition, interviews were conducted at the BellSouth Digital Service Group (DSG) and Resale / UNE Work Centers to evaluate the working knowledge of existing processes and procedures specifically relating to the trouble ticket process, tracking system process, back-end analysis performance, use of test systems, and the utilization of repair technicians.

M&R documentation and information was gathered and interviews were conducted at the following BellSouth work centers:

- The BellSouth Unbundled Network Element Center (UNEC) provides a single point of contact and accountability for the provisioning and maintenance of xDSL UNE services for all registered facility-based CLECs. The UNE Center is responsible for responding to all CLEC informational inquiries. The center also controls, tests, coordinates, and analyzes the installation of xDSL UNEs, and provides control, testing, analysis, and fault isolation functions for all CLEC xDSL UNE trouble reports.
- The Work Management Center (WMC) provides a pool of technicians who are assigned trouble tickets that require a Dispatch In (DI) or Dispatch Out (DO). Trouble tickets entered into WFA are sent to the WMC, which enters a date and time stamp for the trouble ticket. Technicians are given assignments based on their geographical area. The workload is further allocated based on distance to job, distance to residence, and time commitment.

[1] See Section VI, "M & R Overview" for a description of the M&R test bed.

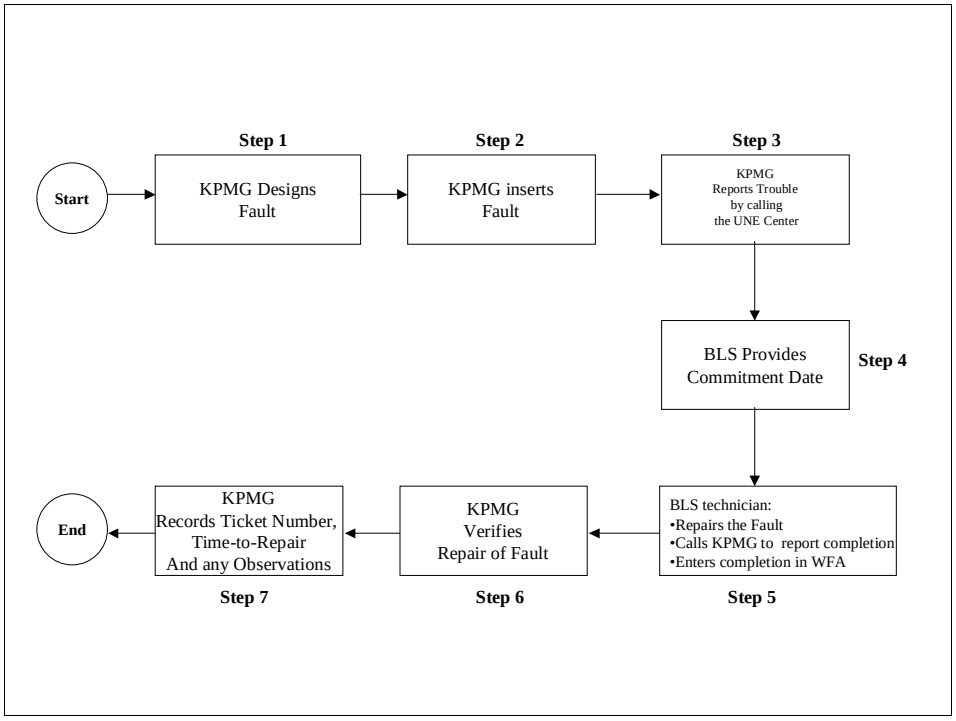
- The Digital Service Group (DSG) provides a pool of technicians who manage the provisioning, configuration, and fault isolation of the Digital Subscriber Line Access Multiplexer **(**DSLAM) and Asynchronous Transfer Mode **(**ATM) switches, which carry the xDSL traffic.

Sub-Test 2 evaluated BellSouth's performance in isolating and repairing faults inserted in a working test bed of provisioned telephone lines. The fault insertions were placed in the Powers Ferry, Toco Hills, and Macon BellSouth Central Offices (COs). KCI conducted this test during the week of June 12, 2000 and called the BellSouth UNE Center to report the troubles on the lines.

After BellSouth repaired a trouble, they called the KCI CLEC to report that the service had been restored, and to provide ticket closure confirmation. KCI then physically verified that each trouble had been repaired within each of the central offices (COs). For each trouble ticket that was restored to service by a BellSouth technician, KCI obtained test-specific WFA reports to document each test result.

Figure VI-1.2 depicts the test approach used by KCI for each test performed in Sub-Test 2.

FigureVI-1.2: Sub-Test 2 Approach



The following steps were used in executing Sub-Test 2:

- Step 1: KCI designed faults to be inserted based on the *Supplemental Test Plan* requirements
- Step 2: KCI inserted faults at designated COs.
- Step 3: KCI reported troubles by calling the UNE Center.
- Step 4: BellSouth provided a commitment date and time for repair activities and a log number for tracking purposes.
- Step 5: BellSouth technician repaired the fault and called the KCI CLEC to close call.
- Step 6: KCI verified repair of the fault.
- Step 7: KCI documented the time to repair and observations of end-to-end repair activities.

Sub-Test 2 consisted of 15 xDSL Capable UNE Loop fault insertions for the M&R performance test.

2.6 Analysis Methods

The M&R11 test included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the M&R-11 test. The data collected were analyzed employing the evaluation criteria referenced above.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table shown below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VI-1.4: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
End-to-End M&R Process			
M&R-11-1-1	BLS has documented M&R process flows for handling xDSL troubles tickets.	Satisfied	The BLS *ADSL – Basic Maintenance Flows* document provides a clear and complete description of trouble ticket flows for wholesale problem management.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-11-1-2	BLS M&R process flows for xDSL trouble management operate as documented.	Satisfied	The process flows described in the BLS *ADSL – Basic Maintenance Flows* document are accurate. KCI interviewed BLS employees involved in fulfilling trouble management functions and verified that their descriptions of the actual processes mapped to those documented in the BLS *ADSL – Basic Maintenance Flows.* Interviews were conducted with representatives from the DSG & UNE Centers.
M&R-11-1-3	BLS provides commitment date and time when logging a trouble call.	Satisfied	The BLS *Unbundled ADSL/HDSL Capable Loops* under *Maintenance & Repair Procedures (DSLPKG.DOC 3/92000)* provides a 24 hour resolution time for all xDSL Capable Loop troubles reported to the UNE Center. The BLS UNE Center provided a 24 hour commitment time for each of KCI's 15 trouble calls.
M&R-11-1-4	Technicians close the trouble ticket using correct codes.	Satisfied	The BLS *WFA/C Work and Force Administration Control Field Definitions JA-283* provides a clear and complete description of closing codes. The 15 xDSL WFA / C OSSLOG reports denote proper use of BLS closure codes for each trouble ticket.
M&R-11-1-5	Closed trouble tickets are called in by technicians.	Satisfied	BLS notified KCI for each of the 15 trouble tickets logged and closed.
M&R-11-1-6	BLS has a documented escalation process for xDSL service.	Satisfied	BLS has a documented process for escalations and followed the process consistently when requested. The escalation process was tested and verified by reporting three xDSL troubles exceeding the 24 hour commitment time.
M&R-11-1-7	BLS follows documented processes for logging, tracking, and reporting of trouble tickets.	Satisfied	BLS followed their documented processes for logging, tracking, and reporting KCI generated trouble tickets within the xDSL testing. The repeat trouble ticket process was tested and verified on one trouble ticket. The one repeat trouble was logged and tracked until closure.

B. Test Results: Trouble Analysis Facilitation Interface (TAFI) Functional Test of Resale Lines (M&R-12)

1.0 Description

The objective of the TAFI Functional Test of Resale Lines was to validate the existence of TAFI trouble reporting and screening functionality for telephone number (TN) assigned resale service customers in accordance with the *CLEC TAFI User Guide* (*User Guide*). This test cycle was executed in BellSouth's TAFI production environment by exercising a defined set of functions associated with trouble management activities against resale test bed accounts. Scenarios testing these functions were executed via a LAN-to-LAN connection and via dial-up access in order to evaluate differences in system response times associated with the methods of access.

The functional elements specifically targeted by this test include the entry and resolution of trouble reports, query and receipt of status reports, access to test capabilities, access to trouble history, and error conditions. TAFI functionality was evaluated in conjunction with the documentation provided addressing its use. In addition, TAFI usability was considered as part of this test.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section VI, "M&R Overview" for a description of BellSouth's TAFI interface.

2.2 Scenarios

TAFI functionality was tested by manually processing Maintenance and Repair (M&R) related scenarios in TAFI via both dial-up and LAN-to-LAN connections. The transactions used in this evaluation were chosen to test the applicable TAFI functions across the line types specified in Table VI-2.1 and were not intended to demonstrate statistical significance. The following table lists the scenarios used to test each of the functions included in the TAFI functionality test.

Table VI-2.1: TAFI Functional Scenarios

Scenario Number	Scenario Description
1	Business customer with resale POTS line is experiencing problems with their three-way calling vertical feature.
2	Business customer with resale POTS line is experiencing problems with their call waiting vertical feature.

Scenario Number	Scenario Description
3	Business customer with resale POTS line is experiencing problems with their call forwarding and three- way calling vertical features.
4	Business customer with resale POTS line is hearing other conversations on their line.
5	Residential customer with resale POTS line is hearing a roaring sound on their line as well as experiencing no dial tone at times.
6	Business customer with resale POTS line is experiencing problems with their call forwarding and three- way calling vertical features.
7	Residential customer with resale POTS line is getting a wrong number when making an outgoing call.
8	Business customer with resale POTS line is experiencing troubles with their three-way calling vertical feature as well as transmission problems.
9	Residential customer with resale POTS line is experiencing problems with their speed calling vertical feature.
10	Business customer with resale POTS line is experiencing a problem with their inside wiring or jack.
11	Business customer with resale POTS lines is experiencing troubles with incoming calls on two lines.
12	Business customer with resale POTS lines is experiencing transmission troubles on two lines.
13	Business customer with resale POTS lines is experiencing trouble making outgoing calls on two lines.
14	Business customer with resale POTS lines is experiencing physical trouble on two lines.
15	Business customer with resale POTS lines is experiencing dial tone related troubles on two lines.
16	Business customer with resale POTS lines is experiencing troubles with incoming calls on two lines.

2.3 Test Targets & Measures

The test targets were TAFI and the *CLEC TAFI User Guide* (Issue 1, March, 2000 and Issue 2, April, 2000). The *CLEC TAFI User Guide* is provided to CLEC personnel attending BellSouth's CLEC TAFI training class. It is also available online at the BellSouth Interconnection site at http://www.interconnection.bellsouth.com/guides/guides_p.html. This manual is both a training tool and a reference tool. The TAFI training provided to the CLECs is a two-day course with a standard charge for each participant.

Processes, sub-processes, and evaluation measures are summarized in the following table. The last column, "Test Cross-Reference," indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

Table VI-2.2: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Trouble reports	Create trouble report	Presence of Functionality	M&R-12-1-1
		Accuracy of Response	M&R-12-1-1
		TAFI Usability	M&R-12-3-1
	Modify trouble report	Presence of Functionality	M&R-12-1-2
		Accuracy of Response	M&R-12-1-2
		TAFI Usability	M&R-12-3-2
	Create repeat report	Presence of Functionality	M&R-12-1-3
		Accuracy of Response	M&R-12-1-3
		TAFI Usability	M&R-12-3-3
	Create subsequent report	Presence of Functionality	M&R-12-1-4
		Accuracy of Response	M&R-12-1-4
		TAFI Usability	M&R-12-3-4
	Enter Multiple Trouble Reports (MTRs)	Presence of Functionality	M&R-12-1-5
		Accuracy of Response	M&R-12-1-5
		TAFI Usability	M&R-12-3-5
	Enter and Retrieve Trouble Reports from Queues	Presence of Functionality	M&R-12-1-6
		Accuracy of Response	M&R-12-1-6
		Timeliness of Response	M&R-12-2-1
		TAFI Usability	M&R-12-3-6
	Execute Supervisor Functions	Presence of Functionality	M&R-12-1-7
		Accuracy of Response	M&R-12-1-7
		Timeliness of Response	M&R-12-2-2
		TAFI Usability	M&R-12-3-7
	Close Trouble Report	Presence of Functionality	M&R-12-1-8
		Accuracy of Response	M&R-12-1-8
		TAFI Usability	M&R-12-3-8
	Cancel Trouble Report	Presence of Functionality	M&R-12-1-9
		Accuracy of Response	M&R-12-1-9
		TAFI Usability	M&R-12-3-9

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Access to test capability	Initiate port and loop-port test	Presence of Functionality	M&R-12-1-10
		Accuracy of Response	M&R-12-1-10
		Timeliness of Response	M&R-12-2-3
		TAFI Usability	M&R-1-3-10
	View port and loop-port test results	Presence of Functionality	M&R-12-1-11
		Accuracy of Response	M&R-12-1-11
		Timeliness of Response	M&R-12-2-3
		TAFI Usability	M&R-12-3-11
Downstream System Reports	Retrieve LMOS recent status report	Presence of Functionality	M&R-12-1-12
		Accuracy of Response	M&R-12-1-12
		Timeliness of Response	M&R-12-2-4
		TAFI Usability	M&R-12-3-12
	Obtain customer line record (BOCRIS)	Presence of Functionality	M&R-12-1-13
		Accuracy of Response	M&R-12-1-13
		Timeliness of Response	M&R-12-2-5
		TAFI Usability	M&R-12-3-13
	Obtain Predictor results	Presence of Functionality	M&R-12-1-14
		Accuracy of Response	M&R-12-1-14
		Timeliness of Response	M&R-12-2-6
		TAFI Usability	M&R-12-3-14
	View DLR (Display Line Record)	Presence of Functionality	M&R-12-1-15
		Accuracy of Response	M&R-12-1-15
		Timeliness of Response	M&R-12-2-7
		TAFI Usability	M&R-12-3-15
	View SOCS pending order	Presence of Functionality	M&R-12-1-16
		Accuracy of Response	M&R-12-1-16
		Timeliness of Response	M&R-12-2-8
		TAFI Usability	M&R-12-3-16
Access error reports	Host request errors	Presence of Functionality	M&R-12-1-17
		Accuracy of Response	M&R-12-1-17
		TAFI Usability	M&R-12-3-17

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Trouble history	Retrieve Trouble History	Presence of Functionality	M&R-12-1-18
		Accuracy of Response	M&R-12-1-18
		Timeliness of Response	M&R-12-2-9
		TAFI Usability	M&R-12-3-18
General	TAFI Usability	TAFI Usability	M&R-12-3-19

2.4 Data Sources

The data for M&R12 were collected during participation in a TAFI training course, through interviews with BellSouth personnel, through reviews of BellSouth documentation, and through the execution of functional test scenarios in BellSouth's TAFI production environment. The data collected for M&R12 are summarized in the table below.

TableVI-2.3: Data Sources for TAFI Functional Test

Document	File Name	Location in Work Papers	Source
BellSouth Residential Repair Center Interview Summaries and Approvals	No Electronic Copy	M&R-1-A-2	BLS/KCI
BellSouth Business Repair Center Interview Summaries and Approvals	No Electronic Copy	M&R-1-A-3	BLS/KCI
TAFI Online Help	No Electronic Copy	M&R-12-A-3	BLS
Excerpts of TAFI Architecture from the CLEC TAFI Specifications document	No Electronic Copy	M&R-1-A-5	BLS
Functional Test Approach Statements	No Electronic Copy	M&R-12-A-5	KCI
Functional Test Logs: LAN-to-LAN	No Electronic Copy	M&R-12-A-6	KCI
Functional Test Logs: Dial-Up	No Electronic Copy	M&R-12-A-7	KCI
Functional Test Logs: SOCS	No Electronic Copy	M&R-12-A-8	KCI
Screen Prints: LAN-to-LAN	No Electronic Copy	M&R-12-A-9	KCI
Screen Prints: Dial-Up	No Electronic Copy	M&R-12-A-10	KCI
Screen Prints: SOCS	No Electronic Copy	M&R-12-B-11	KCI

Document	File Name	Location in Work Papers	Source
Legacy Access Times for CLEC TAFI and BLS TAFI Report (April 2000)	No Electronic Copy	M&R-12-B-12	BLS
CLEC TAFI User Guide (Issue 1)	Clec101g.pdf	M&R-8-A-16	BLS
CLEC TAFI User Guide (Issue 2)	Clec_trn.pdf	M&R-8-A-16	BLS
CLEC TAFI User Guide (Issue 3)	Gtaff001.pdf	M&R-8-A-16	BLS

2.4.1 Data Generation/Volumes

This test relied on the results expected as a result of the examination of the *CLEC TAFI User Guide* and the submission of trouble-related transactions through the TAFI interface. This test did not rely on volume testing.

2.5 Evaluation Methods

In preparation for the functional testing of resale lines, information gathered during the interviews with BellSouth Customer Service Associates (CSAs), Maintenance Administrators (MAs), and management personnel from the Residential Repair Center (RRC) and Business Repair Center (BRC) was reviewed. This test cycle was executed by exercising a defined set of TAFI functions associated with trouble management activities against test bed accounts[1]. The *CLEC TAFI User Guide* and M&R test bed data were used to manually process the 16 test scenarios, using TAFI, as documented in Section 2.2. During testing, other functionality such as edit rules and designed errors (e.g., invalid entries, cancels, and repeat troubles) were checked. These 16 scenarios comprised the input used to test the 19 functions defined in Table VI-2-2 on business and residential resale lines.

The following steps outline the test approach.

1. The *CLEC TAFI User Guide* was reviewed to determine how to process each of the functional tests associated with the 16 M&R scenarios defined in Section 2.2.
2. Paper-based Functional Test Approach Statements including expected results for each scenario were completed using the *CLEC TAFI User Guide*. As part of this process, KCI considered the usability of the *CLEC TAFI User Guide*, commenting on attributes such as ease of use and clarity. As each M&R scenario was used to test multiple functions, multiple Approach Statements were often created for each scenario.

[1]See Section IV, "Pre-Ordering, Ordering & Provisioning Overview" for a description of the test bed used for this evaluation.

3. The statements created in Step 2 were used to provide the key data entered in the TAFI system during test execution. However, due to the decision tree logic embedded in TAFI, the exact data required to perform some of the functions could not be predetermined for the Functional Test Approach Statements by referencing the user manual. Therefore, the *User Guide* was actively utilized in conjunction with the data from the paper forms during test execution.
4. In order to prevent technicians from being inappropriately dispatched and interrupting BellSouth operations, KCI, with BellSouth's concurrence, took the following steps for each trouble report created:
   - The phrase *TST TCKT DN DISP / PLS IGNR* was placed in the narrative section of each trouble report.
   - The commitment time was set at a date one month out.
   - The CLEC contact number posted on each report was 404-954-5715, a working number that connected to a KCI tester's desk.
5. During test execution, Functional Test Logs were utilized to document steps taken by KCI, as well as system responses. Appropriate categories of evaluation criteria were considered as these system responses and comments were recorded.
6. As part of the data entry process in Step (3), TAFI fields were validated to ensure that invalid data were flagged, and that required fields were populated.

2.6 Analysis Methods

The M&R-12 TAFI Functional Test of Resale Lines included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the TAFI Functional Test of Resale Lines.

The data collected from transaction processing were analyzed relative to the evaluation criteria referenced above.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VI-2.4: Evaluation Criteria and Results - Presence of Functionality

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-12-1-1	The user is able to enter a trouble report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to create 30 trouble tickets and responded as expected 30 times.
M&R-12-1-2	The user is able to modify a trouble report using TAFI and receive a satisfactory response.	Satisfied	"Modify" is not a formal function available in TAFI. Rather, modifications to a trouble ticket are performed through the creation of a subsequent report or through edit functions in the trouble report screen during initial trouble report creation. Edit rules, in terms of required fields, were specifically tested in six scenarios and six satisfactory responses were received. In order to test this function, KCI entered data into fields incorrectly. In these instances, TAFI automatically flagged the field tested with the cursor and provided an instructive comment in the status field. Similarly, KCI left some required fields blank in order to test TAFI. As described above, TAFI flagged the required field with the cursor and provided instructive commentary in the status field. In all instances where modifications were made, TAFI responded as expected.
M&R-12-1-3	The user is able to create a repeat report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to create 16 repeat reports and responded as expected in 14 instances. In two instances, slight discrepancies relative to the expected results were noted due to special circumstances. According to the *CLEC TAFI User Guide*, TAFI automatically denotes a report as a repeat if there has been another trouble reported on the line within the last 30 days. However, in both instances, a trouble was entered and closed; yet in follow-up entries of the same telephone number (TN), the reports were not recognized as repeat reports. This occurred

Test Cross-Reference	Evaluation Criteria	Result	Comments
			because the tickets had been closed by the user, as prompted by TAFI, prior to trouble report creation. As an actual trouble ticket was never created in the LMOS system, no record of a prior trouble existed to denote the 'new' reports as repeat reports.
M&R-12-1-4	The user is able to create a subsequent report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to create 30 subsequent reports and responded as expected 30 times.
M&R-12-1-5	The user is able to enter multiple trouble reports (MTRs) using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to enter 12 multiple trouble reports for accounts experiencing problems on multiple lines using the new method detailed in the *CLEC TAFI User Guide* (Issue 2, April 2000). Of the 12 multiple trouble report transactions attempted, six were submitted successfully while six were unsuccessful. For each of the six unsuccessful transactions, KCI was able to create the "parent" ticket but unable to link the "child" report to the parent. LMOS errors and other messaging indicating that no links existed were received. As a result, KCI issued Exception 50. In response to this exception, BLS included additional information in Issue 3 of the *CLEC TAFI User Guide*, dated May 2000, stating under what circumstances the MTR function is not appropriate. A review of the *CLEC TAFI User Guide* (Issue 3, May 2000) revealed that additional language explaining these points to the TAFI user has been incorporated as indicated by BLS. See Exception 50 for additional information on this issue. This exception is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-12-1-6	The user is able to enter and retrieve trouble reports from the queue in TAFI and receive a satisfactory response.	Satisfied	TAFI was used to enter 14 trouble reports into the queue, 11 manually and three automatically. 14 reports were successfully removed from the queue, 12 manually and two automatically.
M&R-12-1-7	The user is able to execute supervisor functions within TAFI and receive a satisfactory response.	Satisfied	TAFI was used to execute supervisor functions such as reviewing and reassigning queued reports on four lines and responded as expected for each line.
M&R-12-1-8	The user is able to close a trouble report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to close 35 trouble tickets and responded as expected 35 times.[2]
M&R-12-1-9	The user is able to cancel a trouble report using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to cancel 32 trouble tickets and responded as expected 32 times.
M&R-12-1-10	The user is able to conduct a port and loop-port test (also known as Mechanized Loop Tests (MLT)) using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to conduct 18 Mechanized Loop Tests (MLT) and responded as expected 18 times. MLTs are not run for subsequent reports, which is indicated on page 194 of the *User Guide* (Issue 3 May, 2000).
M&R-12-1-11	The user is able to view port and loop-port test (MLT) results using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to view 18 MLT test results and responded as expected 18 times.
M&R-12-1-12	The user is able to retrieve a LMOS recent status report and receive a satisfactory response.	Satisfied	TAFI was used to retrieve eight LMOS recent status reports and retrieved eight reports as expected.

[2] KCI was unable to close six additional trouble tickets using the TAFI application during functional testing. Instead, these tickets were manually closed by calling the BellSouth Resale Maintenance Center (BRMC). As described in Exception 10 (M&R 1-1-8), which is now closed, TAFI cannot be used to cancel/close subsequent trouble reports that were in dispatched status. Each of these six trouble tickets were subsequent trouble reports in dispatched status.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-12-1-13	The user is able to obtain customer line record information (BOCRIS CSR) using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to view 12 BOCRIS CSR reports and responded as expected 12 times.
M&R-12-1-14	The user is able to obtain Predictor results using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to obtain Predictor results in 11 instances and responded as expected 11 times. Predictor is not run for subsequent reports, which is indicated on page 194 of the *User Guide* (Issue 3 May, 2000).
M&R-12-1-15	The user is able to view Display Line Record (DLR) information using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to view eight DLR reports and responded as expected eight times.
M&-R-12-1-16	The user is able to view SOCS pending order information using TAFI and receive a satisfactory response.	Satisfied	Initially, the retrieval of SOCS pending service order information using TAFI produced inconsistent results using both UNE and resale lines. As a result of these inconsistencies, KCI issued Exception 36. BLS provided KCI with two responses in addition to participating in a series of real time dialogues to determine the specific nature of the inconsistencies and to provide the details as to under what specific circumstances a TAFI user can use this function. KCI was able to successfully view 16 of 23 pending service orders during retest activities. Of the seven total inconsistent responses , reasonable explanations have been provided for all but two. See Exception 36 for additional information on this issue. This exception is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-12-1-17	The user is able to view and resend transactions that incurred host request errors using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to resend three transactions that had incurred host request errors and received three satisfactory responses.
M&R-12-1-18	The user is able to retrieve trouble history using TAFI and receive a satisfactory response.	Satisfied	TAFI was used to retrieve trouble history in twelve instances and responded as expected twelve times.

Table VI-2.5: Evaluation Criteria and Results - Timeliness Evaluation[3]

Test Cross-Reference	Evaluation Criteria	Result		Comments
		LAN-to-LAN	Dial-Up	
M&R-12-2-1	The user receives timely responses when entering and retrieving trouble reports from the queue in TAFI.	Satis-fied	Satis-fied	Trouble reports were placed in queue virtually instantaneously. Trouble reports were removed from queue virtually instantaneously. There was no significant time difference between a LAN-to-LAN and dial-up connection.
M&R-12-2-2	The user receives timely responses when executing TAFI supervisor functions.	Satis-fied	Satis-fied	The supervisor was able to reassign trouble reports from the queue virtually instantaneously. Trouble reports were transferred to the new user in 39 seconds using a dial-up connection and 1:28 for LAN-to-LAN. The time difference between a LAN-to-LAN and dial-up connection does not negatively impact dial-up users.

[3] BellSouth does not provide standard service quality measurements (SQMs) that are applicable to the functions evaluated. Although BellSouth does not provide a standard SQM for any of the functions listed above, they do monitor legacy access times for both CLEC and BellSouth Retail TAFI users on a monthly basis. KCI compared the response times recorded during functional testing for DLETH, DLR, Predictor, CRIS, LMOS and SOCS to the April 2000 Legacy Access Times Reports provided by BLS in order to provide a baseline. KCI did not, however, validate the BellSouth retail numbers provided.. KCI's response times experienced for these specific functions were generally consistent with the BellSouth reported timeliness responses recorded for both CLEC and BellSouth Retail TAFI users for April 2000, the time period during which TAFI functional testing took place. BellSouth states in the *CLEC TAFI End-User Training and User Guide* that an MLT test will take two to three minutes. This statement was used as a benchmark for timeliness assessment of MLTs.

Test Cross-Reference	Evaluation Criteria	Result		Comments
		LAN-to-LAN	Dial-Up	
M&R-12-2-3	The user receives timely responses from the MLT test.	Satis-fied	Satis-fied	MLT results were received in a time period ranging from 39 to 58 seconds for LAN-to-LAN access and from 37 to 58 seconds for Dial-Up access. There was no significant time difference between a LAN-to-LAN and dial-up connection. MLT results were received in less than the 2-3 minutes stated in the CLEC TAFI End-User Training Manual (Issue 1, March 2000).
M&R-12-2-4	The user receives timely responses when retrieving a LMOS recent status report using TAFI.	Satis-fied	Satis-fied	LMOS recent status reports were retrieved almost instantaneously. There was no significant time difference between a LAN-to-LAN and dial-up connection.
M&R-12-2-5	The user receives timely responses when obtaining customer line record information using TAFI.	Satis-fied	Satis-fied	BOCRIS customer line information was retrieved almost instantaneously. There was no significant time difference between a LAN-to-LAN and dial-up connection.
M&R-12-2-6	The user receives timely responses when obtaining Predictor results using TAFI.	Satis-fied	Satis-fied	Predictor results were available in a time period ranging from 33 to 38 seconds for LAN-to-LAN access, and between 34 seconds and 1:18 for dial-up access. Because it is not necessary for a customer to remain on the phone while Predictor is being run, the results above are not considered productivity impacting.
M&R-12-2-7	The user receives timely responses when retrieving DLR information using TAFI.	Satis-fied	Satis-fied	DLR information was retrieved within 10 seconds. There was no significant time difference between a LAN-to-LAN and dial-up connection.
M&R-12-2-8	The user receives timely responses when retrieving SOCS pending order	Satis-fied	Satis-fied	SOCS pending service order information was retrieved almost instantaneously. There was no significant time

Test Cross-Reference	Evaluation Criteria	Result		Comments
		LAN-to-LAN	Dial-Up	
	information using TAFI.			difference between a LAN-to-LAN and dial-up connection.
M&R-12-2-9	The user receives timely responses when retrieving trouble history using TAFI.	Satis-fied	Satis-fied	DATH trouble history reports were retrieved virtually instantaneously for dial-up access and within five seconds for LAN-to-LAN access. Five of the six DLETH trouble history reports were retrieved within 10 seconds while one DLETH report was retrieved within 11 seconds. The time difference between a LAN-to-LAN and dial-up connection does not negatively impact the dial-up users.

Table VI-2.6: Evaluation Criteria and Results - Usability

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-12-3-1	TAFI is a user-friendly system for creating trouble reports.	Satisfied	Overall, TAFI is easy to use as a system for creating trouble reports. TAFI has a pick and choose design that utilizes a guided menu referred to as "flows." In addition, TAFI will not allow a trouble report to be submitted until all required fields are completed. If a user attempts to submit a ticket without completing the necessary fields, an error message is displayed and the cursor is moved to the required field to be populated. Because different fields are required depending on the trouble type, this feature helps to reduce the complexity of the create process. However, KCI noted the following minor issues that impact TAFI's usability in trouble report creation: • The lack of a "miscellaneous" flow to follow for unusual calls can confuse an inexperienced TAFI user.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			• Prompts directing the TAFI user to use the F9 key to open the Access and Commitments (A/C) window during the creation of some trouble reports are communicated inconsistently. In some instances, TAFI instructs the user to obtain the customer's access information and provides a prompt to use the F9 key to do so. In other instances, no prompt is provided. Thus, an inexperienced user could easily complete the trouble call without collecting necessary data from the customer. • While entering some trouble reports, the user is unable to access the Access and Commitments window using F9 until the end of the flow, when TAFI presents a message stating, "Advise customer to hang-up." Without the ability to access F9 at the most logical time, there is a high likelihood of trouble call completion before key information is obtained. While this lack of prompts and blocking mechanism have been addressed to some degree in TAFI 2000.2, KCI continued to experience this issue during the testing of scenarios in 2000.2.
M&R-12-3-2	TAFI is a user-friendly system for modifying trouble reports.	Satisfied	Modifying a trouble report in TAFI is relatively straightforward. However, the edit rules for modifying fields are inconsistent. For example, the Commitment field requires the user to first delete the contents in order to replace a character, while the narrative field allows the user to overwrite the contents or insert text. This ability to overwrite the contents of the narrative field could cause a TAFI user to delete the auto-filled trouble description.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-12-3-3	TAFI is a user-friendly system for creating repeat reports.	Satisfied	TAFI automatically creates a repeat trouble report if a trouble ticket is entered for a TN for which a trouble report has been created and closed within the last 30 days.
M&R-12-3-4	TAFI is a user-friendly system for creating subsequent reports.	Satisfied	TAFI automatically creates a subsequent trouble report when the TAFI user enters a TN for which a pending trouble ticket exists.
M&R-12-3-5	TAFI is a user-friendly system for entering multiple trouble reports (MTR).	Satisfied	The method for entering a MTR consists of entering a Parent (P) or Child (C) in the MTR field of the Access and Commitments window and a TN in the link field of the trouble report screen. With the use of instructions provided in the *CLEC TAFI User Guide* (EP_-Issue 2 April 2000), the process is logical and straightforward to perform.
M&R-12-3-6	TAFI is a user-friendly system for entering and retrieving trouble reports from the queue.	Satisfied	Trouble reports are queued using the F8 function key, and are retrieved by highlighting and selecting the report in the user's queue. While the instructions to retrieve items from the queue are available as a prompt on the TAFI screen, the system provides no information regarding how to queue the report. This information is, however, clearly provided in the *User Guide*, and the function is easy to perform.
M&R-12-3-7	TAFI is a user-friendly system for executing supervisor functions.	Satisfied	Supervisor functions are executed through the use of function keys. Details regarding the function keys and their associated tasks are provided on the TAFI screen, as well as in the *User Guide*. During functional testing in M&R-1 as well as functional testing in M&R-12, the supervisor chose F5 to reassign queued reports to another user. TAFI responded with an unfiltered list of all in-session TAFI users from which to select, rather than with a filtered list of internal CLEC users. As a result, KCI issued Exception 37.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			BLS responded that this was a result of a system error and would be addressed in TAFI R2000.3 scheduled for June 1, 2000. Retest activities conducted on July 25 in TAFI R2000.3.1.1 indicated that this issue has been successfully addressed. See Exception 37 for additional information on this issue. This exception is closed.
M&R-12-3-8	TAFI is a user-friendly system for closing trouble reports.	Satisfied	Trouble reports are closed using a Front End Close Out option or an override option, both accessed via the F12 key. In addition, because TAFI is a logic-driven system, it can automatically offer a close recommendation, which the user can easily accept.
M&R-12-3-9	TAFI is a user-friendly system for canceling trouble reports.	Satisfied	Trouble reports can be cancelled by using the F12 key override option.
M&R-12-3-10	TAFI is a user-friendly system for initiating port and loop-port (MLT) tests.	Satisfied	TAFI automatically initiates MLT tests when appropriate.
M&R-12-3-11	TAFI is a user-friendly system for viewing port and loop-port (MLT) test results.	Satisfied	MLT test results are available using the F11 key.
M&R-12-3-12	TAFI is a user-friendly system for retrieving a LMOS recent status report.	Satisfied	The report is available using the F11 key.
M&R-12-3-13	TAFI is a user-friendly system for obtaining customer line record information.	Satisfied	The Business Office Customer Record Inquiry System (BOCRIS), which accesses customer line record information, is available using the F11 key.
M&R-12-3-14	TAFI is a user-friendly system for obtaining Predictor results.	Satisfied	Predictor test results are available using the F11 key.
M&R-12-3-15	TAFI is a user-friendly system for viewing DLR information.	Satisfied	DLR information is available using the F11 key.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-12-3-16	TAFI is a user-friendly system for viewing SOCS pending order information.	Satisfied	SOCS pending order information is available using the F11 key.
M&R-12-3-17	TAFI is a user-friendly system for viewing and resending trouble reports that incurred host request errors.	Satisfied	Trouble reports are viewed and resent using function keys. Prompts describing the tasks associated with relevant function keys are available on the TAFI screen.
M&R-12-3-18	TAFI is a user-friendly system for retrieving trouble history.	Satisfied	Trouble history reports are available using the F11 key.
M&R-12-3-19	TAFI is a user-friendly system for handling non-designed UNE M&R issues.	Satisfied	TAFI is a logical system for administering trouble reports for non-designed UNEs. It also acts as a central repository of useful information for users, such as status reports, test results, and trouble history. TAFI provides hot keys and utilizes function keys in order to provide information with a minimal number of keystrokes. However, TAFI contains numerous undocumented messages as well as messages intended for BellSouth personnel. These messages can cause a CLEC to misdirect its customer or report a trouble incorrectly. Based on the existence of these messages, KCI issued Exception 13, which focused on five specific messages. In response to the exception, BLS committed to modify TAFI to address some of these issues in the 2000.2 and 2000.3 TAFI releases, scheduled for April 15, 2000 and September 2000, respectively. In addition, BLS stated that the Customer Proprietary Network Information (CPNI) messaging had been fixed in TAFI 2000.1, released in January 2000. KCI's retesting activities revealed that, while only one of the two CPNI messages has been addressed, an explanation of the other message

Test Cross-Reference	Evaluation Criteria	Result	Comments
			is provided on page 31 of the *CLEC TAFI User Guide* (Issue 2, April 2000). Retesting activities and resale functional testing conducted in TAFI 2000.2 have shown that the remaining four messages have been addressed. See Exception 13 for additional information on this issue. This exception is closed.

C. Test Results: Electronic Communications Trouble Administration (ECTA) Functional Test of Resale Lines (M&R13)

1.0 Description

The ECTA Functional Test evaluated the functionality of BellSouth's ECTA Gateway for Maintenance and Repair trouble report processing. The objectives of the test were to evaluate ECTA Gateway functionality and to measure ECTA Gateway response times. This test was conducted by submitting trouble administration transactions against test bed accounts to the ECTA Gateway and analyzing ECTA Gateway responses to these transactions[1].

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

See Section VI, "Maintenance & Repair Overview" for a description of BellSouth's maintenance and repair processes, the ECTA Gateway, and CLEC interface options.

2.2 Scenarios

The following table outlines the scenarios and functional elements used in this test. In addition, the table denotes the number of transactions that were valid ("valid") and the number of transactions that contained intentional errors ("error"). The transactions used in this evaluation were chosen to test the applicable ECTA functions across line types specified in Table VI-3.1 below and were not intended to demonstrate statistical significance.

[1] See Section VI, "M & R Overview," for details on the Maintenance and Repair test bed.

Table VI-3.1: Test Scenarios

	Line Description	Trouble	Enter Trouble Ticket	Request Trouble Ticket Status	Add Trouble Information	Modify Trouble Administration Information	Cancel Trouble Report	Verify Repair Completion	Perform MLT
1	POTS	No Dial Tone	1 Valid + 1 Error	1 Valid		1 Valid + 1 Error			2 Valid
2	POTS	No Dial Tone	1 Valid + 1 Error	2 Valid	1 Valid	1 Valid + 1 Error	1 Valid		
3	PBX[2]	Receives Calls for Wrong Number	1 Valid						
4	PBX	Can't Call Out							
5	Synchronet	Can't Be Heard (Distant)	4 Valid + 2 Error	1 Valid	1 Valid	1 Valid + 2 Error	2 Valid +1 Error		
6	POTS	No Dial Tone	1 Valid					1 Valid	2 Valid

2.3 Test Targets & Measures

The test target was the maintenance and repair functionality for resale lines as provided via the ECTA Gateway. Sub-processes, functions, and evaluation criteria are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

Table VI-3.2: Test Target Cross-Reference

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
Trouble Reports	Create trouble report	Presence of Functionality	M&R-13-1-1
		Timeliness of Response	M&R-13-2-1
	Request trouble ticket status	Presence of Functionality	M&R-13-1-2
		Timeliness of Response	M&R-13-2-2
	Add trouble information	Presence of Functionality	M&R-13-1-3
		Timeliness of Response	M&R-13-2-3

[2] A trouble ticket could not be created, therefore no other tests could be performed.

Sub-Process	Function	Evaluation Criteria	Test Cross-Reference
	Modify trouble report	Presence of Functionality Timeliness of Response	M&R-13-1-4 M&R-13-2-4
	Cancel trouble report	Presence of Functionality Timeliness of Response	M&R-13-1-5 M&R-13-2-5
	Verify repair completion	Presence of Functionality Timeliness of Response	M&R-13-1-6 M&R-13-2-6
Access to Test Capabilities	Conduct Mechanized Line Test	Presence of Functionality Timeliness of Response	M&R-13-1-7 M&R-13-2-7

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VI-3.3: Data Sources for ECTA Functional Test of Resale Lines

Document	File Name	Location in Work Papers	Source
Joint Implementation Agreement for Electronic Communications Trouble Administration (ECTA) Gateway for Local Service Version 10/07/98[3]	CLEC_JIA.doc	M&R-2-A-1	BLS
American National Standard for Telecommunications – Operations, Administration, Maintenance and Provisioning (OAM&P) – Extension to Generic Network Information Model for Interfaces between Operations Systems across Jurisdictional Boundaries to Support Fault Management (Trouble Administration) (ANSI T1.227-1995)	ANSI+T1[1].227-1995.pdf	M&R-2-A-2	American National Standards Institute

[3] This document outlines points specific to the implementation of an ANSI T1.227-, T1.228-, and T1.262-compliant CLEC interface to BellSouth's ECTA Gateway. BLS provided KCI with a generic version of this document for use in the M&R-2, M&R-3, M&R-4, and M&R-13 evaluations. In addition, this document was evaluated, along with JIAs actually enacted with CLECs, in M&R-9: ECTA Documentation Evaluation.

Document	File Name	Location in Work Papers	Source
American National Standard for Telecommunications – Operations, Administration, Maintenance and Provisioning (OAM&P) – Services for Interfaces between Operations Systems across Jurisdictional Boundaries to Support Fault Management (Trouble Administration) (ANSI T1.228-1995)	ANSI+T1[1].228-1995+(R1999).pdf	M&R-2-A-3	American National Standards Institute
American National Standard for Telecommunications – Operations, Administration, Maintenance and Provisioning (OAM&P) – Extension to Generic Network Model for Interfaces across Jurisdictional Boundaries to Support the Service Test Function (ANSI T1.262-1998)	ANSI+T1[1].262-1998.pdf	M&R-2-A-4	American National Standards Institute
E-Mail Communication Re: ECTA Functionality	No Electronic Copy	M&R-2-A-5	BLS
Functional Test Logs	No Electronic Copy	M&R-2-A-6	KCI

2.4.1 Data Generation/Volumes

ECTA system responses were captured for M&R scenarios processed using the Test Interface to the ECTA Gateway. No volume testing was required for this evaluation.

2.5 Evaluation Methods

The ECTA Functional Test evaluated the functional elements of the trouble reporting and screening process for both telephone number-assigned and circuit identified resale lines, as delivered to CLECs via the ECTA system. The objective of the ECTA Functional Test was to validate the existence and timeliness of ECTA trouble reporting and screening functionality for both telephone number-assigned and circuit identified resale customers, in accordance with BellSouth's specifications and the American National Standards Institute (ANSI) T1.227, T1.228 and T1.262 standards for trouble administration.

This test cycle was executed by exercising a defined set of ECTA functions associated with trouble management activities against test bed accounts[4]. The functional elements targeted by this test included access to test capabilities, trouble report entry, query and receipt of trouble report status information, modification and addition of information to trouble reports, and

[4] See Section VI, "M & R Overview" for a description of the M&R test bed.

cancellation/closure of trouble reports. In addition, error conditions were included to assess the ECTA Gateway's response to incorrect information. The ECTA Functional Test was conducted against BellSouth's production system.

The functional evaluation tested each of the ECTA functional processes against two criteria: presence of functionality and timeliness of system responses.

The following steps outline the test approach:

1. A list of test scenarios was developed to exercise the full functionality of the ECTA Gateway across all available resale line types (see Table VI-3.1). To obtain an exhaustive list of available ECTA Gateway functionality, KCI simulated the normal process followed by a CLEC in implementing an interface to the BellSouth ECTA Gateway. The normal process involves a CLEC requesting that BellSouth support certain functionality/system objects in the ECTA Gateway, and negotiations between BellSouth and the CLEC to define final functionality and object support. KCI replicated this request/negotiation process by presenting BellSouth ECTA managers and developers with a list of T1M1 compliant functions[5] and asking BellSouth to cull from that list an exhaustive set of available ECTA Gateway functions.
2. A Test Scenario Portfolio was developed for each scenario. These portfolios included:

    - Data Entry Files for each ECTA function within a scenario that requires data to be entered into the Test Interface[6].
    - System steps to be submitted to the Test Interface.
    - BellSouth Maintenance Administrator steps for functions that required responses from back-end systems.
    - Expected results for each function.

    Data entry was based on information obtained from the *Joint Implementation Agreement (JIA) for Electronic Communications Trouble Administration (ECTA) Gateway for Local Service* version 10/07/98, and information provided by BellSouth Maintenance and Systems Development personnel on use of the BellSouth Test Interface.
3. Data Entry Files from Step 2 were uploaded into the BellSouth Test Interface system.
4. Using the Test Scenario Portfolios, the test scenarios were executed by:

[5] The ANSI T1.228 standard lists 18 functions that can be included in a T1M1 compliant gateway. In addition, ANSI T1.262 adds the POTS line testing function (MLT) to the original 18.

[6] See Section VI, "M & R Overview" for details on the BellSouth ECTA Test Interface.

- Using the Test Interface to access and submit Data Entry Files to the ECTA Gateway.
- Using the Test Interface to submit transactions directly to the ECTA Gateway.
- Prompting a BellSouth Maintenance Administrator to submit responses to the ECTA Gateway from a back-end system.

5. The ECTA Gateway system agent log[7] and response messages to the ECTA Test Interface were analyzed to evaluate responses and determine response times from the ECTA Gateway. System responses were documented in a test log and errors were categorized by the following underlying causes:
   - ECTA functional deficiency
   - User error (transactions containing user errors were corrected and resubmitted)
6. Data from Step 5 were compiled and mapped against the individual assessment criteria.

2.6 Analysis Methods

The ECTA Functional Test included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth - Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards and guidelines for the ECTA Functional Test.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

[7] A sample of agent log transactions was audited to validate the veracity of the information contained therein.

Table VI-3.4: M&R-13: Evaluation Criteria and Results – Presence of Functionality

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-13-1-1	The user is able to enter a trouble report into ECTA and receive a satisfactory response.	Satisfied	ECTA was used to enter 12 trouble reports. Satisfactory responses were received for eight of the 12 reports. One test transaction failed when attempting to create a trouble ticket for a PBX circuit. KCI issued Exception 96 on this issue. BLS replied to this exception by stating that: 1) as of yet, no CLECs had requested that ECTA allow trouble tickets to be issued on PBX circuits; and 2) if a CLEC were to request this ability, the CLEC and BLS would negotiate the necessary changes to the ECTA Gateway using BLS's change control process. Given the low relative incidence of PBX troubles that could be reported using the ECTA Gateway, and the fact that alternative methods exist to report these troubles (BLS's TAFI interface and a call to a BLS Service Center), KCI concurred with BLS that changes to the ECTA Gateway were unecessary at this time and closed Exception 96. See Exception 96 for additional information on this issue. In addition, the ECTA Gateway failed to notify the user that invalid information had been entered into the commitmentTimeRequest object on one trouble ticket. KCI issued Exception 81 on this issue stating that in the absence of any specifically delineated standard set of responsibilities, standard programming practices dictate that both parties in a Manager / Agent electronic communications system relationship should validate data to the degree reasonably possible.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			• BLS replied to this exception by stating that it does not plan to add attribute value error checking, which is beyond its commitment in the response to Exception 12[8]. BLS stated that the Manager (CLEC) is responsible for insuring that their users enter correct information into their 'front end' system and that their system correctly translates the user's input to the ANSI standard values defined in the JIA, which are transmitted to ECTA. In addition, production clients have been successfully reporting their customers' troubles without incident. BLS further contended that modifications that would be necessary to validate data would be costly (and that cost would be passed along to the CLECs using ECTA) , that the necessary modifications to the ECTA Gateway would slow down the response time of the gateway, and that these modifications would require modifications to the existing CLEC interfaces. Two other trouble tickets contained intentional errors: one in the 'managedObjectHours' field and one in the 'tspPriority' field. As with the above, the ECTA Gateway did not indicate that invalid data had been entered into the trouble tickets. To address the error validation issue, BLS elected to bring the issue to the CLEC community via the Change Control Process and to

[8] Exception 12 was issued as a part of the M&R-2 ECTA Functional Test and dealt with the lack of data validation in the ECTA Gateway. BellSouth responded to that exception by modifying the programming of the ECTA Gateway to include validation of data entered into the 'closeOutVerification' object.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			make the programming changes if the CLECs requested them. At the October 25, 2000 Change Control Meeting, the CLEC community did not prioritize ECTA attribute validation, and BLS cancelled this specific item as an issue to be addressed. While the lack of data validation limits the functionality of the interface, CLECs have been given an appropriate opportunity to address the issue via the Change Control Process. Exception 81 is closed.
M&R-13-1-2	The user is able to request trouble report status from ECTA and receive an satisfactory response.	Satisfied	ECTA was used to check the status of four trouble tickets. Satisfactory responses were received for all four.
M&R-13-1-3	The user is able to add trouble information to an ECTA trouble report and receive a satisfactory response**.**	Satisfied	ECTA was used to add information to two trouble tickets. Satisfactory responses were received for both.
M&R-13-1-4	The user is able to modify trouble administration information on an ECTA trouble report and receive a satisfactory response.	Satisfied	ECTA was used to modify information on seven trouble tickets. Satisfactory responses were received for three. On two modify transactions, the ECTA Gateway failed to notify the user that improper information had been entered. The fields that contained intentional errors were repeatReport and perceivedTroubleSeverity. These issues were addressed in Exception 81. See the discussion of the data validation issue in the comments for criterion M&R-13-1-1. Two other trouble modify transactions contained intentional errors: one in the preferredPriority field and one in the aLocationAccessHours field. As with the above, the ECTA Gateway did not indicate that invalid data had been entered into the trouble

Test Cross-Reference	Evaluation Criteria	Result	Comments
			tickets.
M&R-13-1-5	The user is able to cancel a trouble report in ECTA and receive a satisfactory response.	Satisfied	ECTA was used to cancel three trouble tickets. Satisfactory responses were received for two of the three transactions. On one transaction, the ECTA Gateway failed to notify the user that invalid information had been entered into the 'cancelRequestedByManager' field. The transaction did, however, properly cancel the trouble ticket.
M&R-13-1-6	The user is able to respond to trouble repair completion notifications and receive a satisfactory response	Satisfied	When KCI first tested this function, the ECTA Gateway was unable to properly change the trouble ticket status to accept this transaction because the functionality had not been properly created to interpret a negative MLT result and change the trouble ticket status to "request close." KCI issued Exception 85 and BLS modified the ECTA Gateway's programming to correct the issue. During retesting, the ECTA Gateway was able to properly update the trouble ticket status, indicating that Exception 85 had been addressed. Exception 85 is closed. See Exception 85 for additional information on this issue. During retesting, ECTA was used to verify repair completion on two trouble tickets. Satisfactory responses were received for both. In one instance, a BLS maintenance technician accessed the trouble ticket while an MLT was running. As a result of this, the ECTA Gateway was unable to change the trouble ticket status to "request close." This instance was not, however, a breakdown in the ECTA Gateway itself and therefore does not affect the result of this criterion.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-13-1-7	The user is able to conduct a Mechanized Line Test and receive a satisfactory response.	Satisfied	ECTA was used to conduct four MLTs. Satisfactory results were received for all four.

Table VI-3.5: M&R-13 Evaluation Criteria and Results -- Timeliness of Response

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-13-2-1	The user receives a timely response when entering a trouble report using ECTA[9].	Satisfied	All responses to trouble ticket creates were received within eight to 17 seconds. The response for an invalid create transactions was received within one second.
M&R-13-2-2	The user receives a timely response when requesting trouble report status using ECTA[9].	Satisfied	All responses to status requests were received within one second.
M&R-13-2-3	The user receives a timely response when adding trouble information using ECTA[9].	Satisfied	All responses when adding trouble information were received within six to 14 seconds.
M&R-13-2-4	The user receives a timely response when modifying trouble report administration information using ECTA[9].	Satisfied	All responses when modifying trouble administration information were received within six to 14 seconds.
M&R-13-2-5	The user receives timely response when canceling a trouble report using ECTA[9].	Satisfied	All responses when canceling a trouble ticket were received within six to eight seconds.
M&R-13-2-6	The user recieves a timely response when responding to a verify repair completion[9].	Satisfied	All responses when responding to a verify completion request were received within eight to 10 seconds.

[9] BellSouth's *Joint Implementation Agreement (JIA) for Electronic Communications Trouble Administration (ECTA) Gateway for Local Service* Version 10/07/98 states "The end-to-end protocol target response time will be 30 seconds or less for 90% of the requests while handling 40 messages per minute. End to End [sic] maximum response time will not exceed 180 seconds." This benchmark was used for criteria M&R-13-2-1 through M&R-13-2-6. Due to the low level of ECTA usage, actual messages per minute during functional testing were well below 40.

Test Cross-Reference	Evaluation Criteria	Result	Comments
M&R-13-2-7	The user receives a timely response when conducting an Mechanized Line Test using ECTA.	Satisfied	All responses when conducting an MLT were received within 66 to 73 seconds. The benchmark used for M&R-13-2-7 was two to three minutes as outlined for MLT test response time in the *CLEC TAFI End-User Training and User Guide*, Issue 6.

Change Management

VII. Change Management (CM) Test Results and Analysis Section

1.0 Description

The purpose of this section is to present the specific test, results, and analysis from KCI's evaluation of the processes and other operational elements associated with BellSouth's release of the OSS '99 applications package. The CM2: OSS '99 Release Evaluation examined the methods and procedures that BellSouth used to develop and release the OSS '99 applications package and supporting documentation. The objective of this evaluation was to assess: 1) the adequacy, accuracy, and timeliness of BellSouth's OSS '99 change management procedures and release documentation; and 2) the availability of interface testing support and functioning test environments during the OSS '99 Release.

2.0 Methodology

The scope of the CM2 test in Georgia entailed documentation reviews and interviews with BellSouth personnel involved with the OSS '99 Release. Documentation collected and reviewed for this evaluation included project plans, team rosters, document change logs, beta testing agreements, test cases, technical specifications, and interface requirements.

2.1 Business Process Description

BellSouth's OSS '99 Release was developed to address multiple interface enhancement requests that BellSouth had received from Competitive Local Exchange Carriers (CLECs) via the *Electronic Interface Change Control Process* (EICCP), the change control process that was in effect at the time. The OSS '99 Release also sought to incorporate the "best" features of the Telecommunications Industry Forum (TCIF) Electronic Data Interchange (EDI) Guidelines Issues 8, 9, and 10.

In October 1998, BellSouth assembled a core OSS '99 Release project team that included representatives from BellSouth and eight CLECs. This team met weekly from November 1998 through February 2000 to provide status on the resolution of project issues, update the OSS '99 Work Schedule, and review OSS '99 sub-team reports. The OSS '99 Release project included 10 sub-teams, each of which included BellSouth and CLEC representation. Organized by system feature/function (e.g., digital loops, hunting, blocking, selective routing, etc.), these sub-teams developed the business requirements documentation for each of the pre-order and order interfaces impacted by the OSS '99 Release. Pre-ordering interfaces that were affected included the Telecommunications Access Gateway (TAG), Robust TAG (RoboTAG), and the Local Exchange Navigation System (LENS). Ordering interfaces impacted included TAG, RoboTAG, LENS, and Electronic Data Interchange (EDI).

BellSouth reviewed preliminary OSS '99 business requirements with CLECs at a joint meeting in January 1999. The final scope of the OSS '99 Release and a tentative system

implementation date were delivered to CLECs in February 1999. In March 1999, BellSouth and CLECs conducted an official review of all OSS '99 business requirements at the BellSouth Executive Learning Center in Atlanta, Georgia. Following this review, in April 1999, BellSouth delivered the final business requirements to the CLECs, and system coding for the OSS '99 Release began.

Prior to the implementation of the OSS '99 Release, BellSouth conducted internal testing; external testing with CLEC participation followed. External testing included EDI and LENS beta testing, which was comprised of syntax, carrier, and service readiness testing. One CLEC participated in the EDI beta testing. Eight CLECs participated in the LENS beta testing.

The OSS '99 Release was implemented in two phases: Non-Local Number Portability (LNP) functionality in December 1999, and LNP functionality in January 2000. Following implementation, the OSS '99 Release core project team disbanded in February 2000.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Bed

Test beds were not applicable to this test.

A. Test Results: OSS '99 Release Evaluation (CM-2)

1.0 Description

The objective of the CM-2: OSS '99 Release Evaluation was to examine the methods and procedures that BellSouth used in applying its change management process to a major software release. The OSS '99 applications package and supporting documentation were evaluated to assess the process that BellSouth uses to manage changes to interfaces supporting CLEC wholesale customers. This evaluation focused on 1) the adequacy, accuracy, and timeliness of BellSouth's OSS '99 change management procedures and release documentation; and 2) the availability of interface testing support and functioning test environments during the OSS '99 Release.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

BellSouth developed the OSS '99 Release package to address multiple interface enhancement requests that it had received from Competitive Local Exchange Carriers (CLECs) via the *Electronic Interface Change Control Process* (EICCP)[1]. The OSS '99 Release also sought to incorporate the "best"[2] features of the Telecommunications Industry Forum (TCIF) Electronic Data Interchange (EDI) Guidelines, Issues 8, 9, and 10.

In October 1998, BellSouth assembled a core OSS '99 Release project team that included representatives from BellSouth and eight CLECs. This team met weekly from November 1998 through February 2000 to provide status on the resolution of project issues, update the OSS '99 Work Schedule, and review OSS '99 sub-team reports. The OSS '99 Release project included 10 sub-teams, each of which was comprised of both BellSouth and CLEC participants. Organized by system feature / function (e.g., digital loops, hunting, blocking, selective routing, etc.), these sub-teams developed the business requirements documentation for each of the pre-order and order interfaces included within the scope of the OSS '99 Release. Pre-ordering interfaces that were affected included the Telecommunications Access Gateway (TAG), Robust TAG (RoboTAG), and the Local Exchange Navigation System (LENS). Ordering interfaces impacted included TAG, RoboTAG, LENS, and Electronic Data Interchange (EDI). BellSouth reviewed preliminary OSS '99 business requirements with CLECs at a

[1] The BellSouth process for managing change among CLECs and BellSouth that was in effect prior to and during the OSS '99 Release period.

[2] The OSS '99 Release was designed to address the interface enhancement requests that BellSouth had received from EICCP participants. BellSouth worked with CLECs to determine which enhancement requests would be included in the final scope of the OSS '99 Release.

joint meeting in January 1999. The final scope of the OSS '99 Release and a tentative system implementation date were delivered to CLECs in February 1999. In March 1999, BellSouth and CLECs conducted an official review of all OSS '99 business requirements at the BellSouth Executive Learning Center in Atlanta, Georgia. Following this review, in April 1999, BellSouth delivered the final business requirements to the CLECs, and system coding for the OSS '99 Release began.

Prior to the implementation of the OSS '99 Release, BellSouth conducted internal testing. External testing with CLEC participation followed. External testing included EDI and LENS beta testing. External EDI beta testing stages consisted of connectivity, syntax, carrier, and service readiness testing. External LENS beta testing consisted of carrier and service readiness testing. One CLEC participated in the EDI beta testing. Eight CLECs participated in the LENS beta testing. BellSouth provided interested CLECs with the opportunity to conduct TAG and RobTAG beta testing, though no CLECs elected to participate during the OSS '99 Release period.

The OSS '99 Release was implemented in two phases: Non-Local Number Portability (LNP) functionality in December 1999, and LNP functionality in January 2000. Following implementation, the OSS '99 Release core project team disbanded in February 2000.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target was the BellSouth OSS '99 Release process. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

Table VII-1.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Change Management: OSS '99 Release	Implementing Change	Adequacy and completeness of change implementation process	CM-2-1-1 CM-2-1-2
	Documentation	Adequacy, accuracy, completeness, and timeliness of release documentation	CM-2-1-3 CM-2-1-4 CM-2-1-5

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Availability of Functioning Test Environments	Availability of functioning test environments for all supported interfaces	CM-2-1-6 CM-2-1-7
	Provision of Support for Interface Testing	Availability and documentation of provision of support for interface testing	CM-2-1-8 CM-2-1-9

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VII-1.2: Data Sources for OSS '99 Release Evaluation

Document	File Name	Location in Work Papers	Source
BST Customized LSOG 4 forms (LSR, End User Information, Number Portability, Loop Service with Number Portability)	http://www.interconnection.bellsouth.com/guides/guides.html	CM-2-A-1	BLS
OSS '99 Parking Lot Issues (1/25/99)	No Electronic Copy	CM-2-A-2	BLS
CLECs' Questions about OSS '99 – Data Element Documents (3/14/99)	No Electronic Copy	CM-2-A-3	BLS
CLEC Questions/Issues	CLECDOC.DOC	CM-2-A-4	BLS
OSS '99 Project Plan	No Electronic Copy	CM-2-A-5	BLS
BellSouth/CLECs Project OSS '99 -- Final Scope	No Electronic Copy	CM-2-A-6	BLS
OSS '99 Requirement Documents --6/4/99	No Electronic Copy	CM-2-A-7	BLS
OSS '99 CLEC Documents Matrix—7/31/99	No Electronic Copy	CM-2-A-8	BLS
OSS '99 CLEC Documents Matrix—12/29/99	CDOC1229.DOC	CM-2-A-9	BLS
OSS '99 CLEC Documents Matrix —1/13/00	CDOC0113.DOC	CM-2-A-10	BLS
OSS '99 CLEC Document Matrix (1/17/00)	CDOC0117.DOC	CM-2-A-11	BLS

Document	File Name	Location in Work Papers	Source
OSS '99 LEO Requirements for CLECs 1 of 6 e-mail (January 17, 2000)	FW OSS'99 LEO Requirements for CLECs – 1 of 6.msg	CM-2-A-12	BLS
OSS '99 LEO Requirements for CLECs – 2 of 6 e-mail (January 17, 2000)	FW OSS'99 LEO Requirements for CLECs – 2 of 6.msg	CM-2-A-13	BLS
OSS '99 LEO Requirements for CLECs – 3 of 6 e-mail (January 17, 2000)	FW OSS'99 LEO Requirements for CLECs – 3 of 6.msg	CM-2-A-14	BLS
OSS '99 LEO Requirements for CLECs – 4 of 6 e-mail (January 17, 2000)	FW OSS'99 LEO Requirements for CLECs – 4 of 6.msg	CM-2-A-15	BLS
OSS '99 LEO Requirements for CLECs – 5 of 6 e-mail (January 17, 2000)	FW OSS'99 LEO Requirements for CLECs – 5 of 6.msg	CM-2-A-16	BLS
OSS '99 LEO Requirements for CLECs – 6 of 6 e-mail (January 17, 2000)	FW OSS'99 LEO Requirements for CLECs – 6 of 6.msg	CM-2-A-17	BLS
OSS '99 Work Schedule for CLEC Community (07/30/99)	CSOTS.XLS	CM-2-A-18	BLS
OSS '99 Project Team Meeting Notice for Wednesday, September 1, 1999	C0901NTC.DOC	CM-2-A-19	BLS
OSS '99 Work Schedule for CLEC Community (8/27/99)	OSS99B.XLS	CM-2-A-20	BLS
OSS '99 Project Team Meeting Cancellation notice e-mails (for September 8, 1999)	OSS'99 Project Status Meeting.msg	CM-2-A-21	BLS
LSNP Loop Service Number Portability, All Data Elements – Feature 67, Version 5.3 (September 14, 1999)	c-9-14-99-LSNP.doc	CM-2-A-22	BLS

Document	File Name	Location in Work Papers	Source
LSNP Loop Service Number Portability, All Data Elements (1/24/00)	CLSNP124.DOC	CM-2-A-23	BLS
OSS '99 Project Team Meeting Notice for Wednesday, September 15, 1999	C0915NTC.DOC	CM-2-A-24	BLS
BST/CLEC OSS '99 Meeting Minutes – September 1, 1999	C0901MIN.DOC	CM-2-A-25	BLS
OSS '99 Project Status Report – September 13, 1999	PS0913.DOC	CM-2-A-26	BLS
OSS '99 Work Schedule for CLEC Community (9/13/99)	OSS99B.XLS	CM-2-A-27	BLS
OSS '99 Project Team Meeting Notice for Wednesday, September 29, 1999	C0929NTC.DOC	CM-2-A-28	BLS
BST/CLEC OSS '99 Meeting Minutes – September 15, 1999	C0915MIN.DOC	CM-2-A-29	BLS
OSS '99 Project Status Report – September 17, 1999	PS0917.DOC	CM-2-A-30	BLS
OSS '99 Work Schedule for CLEC Community (9/17/00)	OSS99B1.XLS	CM-2-A-31	BLS
OSS '99 Beta Testing Team Meeting Notice for Thursday, September 23, 1999	BT923N.DOC	CM-2-A-32	BLS
OSS '99 Beta Testing Team Meeting Minutes from September 16, 1999	BT916M.DOC	CM-2-A-33	BLS
EDI Testing Agreement with AT&T (9/16/99)	TEST916.DOC	CM-2-A-34	BLS
OSS '99 EDI Beta-Testing Agreement with AT&T (10/29/99)	FTEST.DOC	CM-2-A-35	BLS

Document	File Name	Location in Work Papers	Source
TCIF Issue 9 EDI Map and Application File Format Design for a Purchase Order (850) / Purchase Order Change (860) Version 1.5 – 9/23/99	No Electronic Copy	CM-2-A-36	BLS
865 Purchase Order Change Acknowledgment/Request – Seller Initiated (Version 1.3)	865v1_3.rtf	CM-2-A-37	BLS
OSS '99 Technical Specs Change History (9/23/99)	chgs1_3.doc	CM-2-A-38	BLS
OSS '99 Project Team Meeting Revised Notice for Wednesday, October 13, 1999	C1013N~1.DOC	CM-2-A-39	BLS
BST/CLEC OSS '99 Meeting Minutes – September 15, 1999	C0915MIN.DOC	CM-2-A-40	BLS
OSS '99 Project Status Report – October 11, 1999	PS1011.DOC	CM-2-A-41	BLS
ENCORE User Requirements for FOC/JEOPARDY/POS For OSS '99 (Final LEO5000.doc), Version 9.0	LEO5000.DOC	CM-2-A-42	BLS
OSS '99 Work Schedule for CLEC Community (10/19/99)	OSS99B1.XLS	CM-2-A-43	BLS
OSS '99 Project Team Meeting Notice for Wednesday, October 20, 1999	C1020NTC.DOC	CM-1-A-44	BLS
BST/CLEC OSS '99 Meeting Minutes – October 13, 1999	C1013MIN.DOC	CM-2-A-45	BLS
OSS '99 Project Status Report – October 19, 1999	PS1019.DOC	CM-2-A-46	BLS

Document	File Name	Location in Work Papers	Source
LEO-IG Volume 4, Issue 9a—EDI Documentation for OSS '99 (Revision History, Table of Contents, EDI Overview, Transaction Sets 850, 855, 860, 865, 997, EDI Testing Guidelines) [October 29, 1999]	http://www.interconnection.bellsouth.com/guides/guidepdf/leo4_is9a1.pdf	CM-2-B-1	BLS
OSS '99 Project Team Meeting Notice for Wednesday, November 3, 1999	C11039~1.DOC	CM-2-B-2	BLS
OSS '99 Project Status Report – November 2, 1999	PS110299.DOC	CM-2-B-3	BLS
BST/CLEC OSS '99 Meeting Minutes – October 20, 1999	C10209~1.DOC	CM-2-B-4	BLS
OSS '99 Project Status Report—November 6, 1998	PS1106.DOC	CM-2-B-5	BLS
OSS '99 Work Schedule for CLEC Community (11/02/99)	OSS99B2.XLS	CM-2-B-6	BLS
OSS '99 Project Team Meeting Notice for Wednesday, November 10, 1999	C11109~1.DOC	CM-2-B-7	BLS
BST/CLEC OSS '99 Meeting Minutes – November 3, 1999	C11039~2.DOC	CM-2-B-8	BLS
OSS '99 Project Status Report – November 9, 1999	PS110999.DOC	CM-2-B-9	BLS
OSS '99 Work Schedule for CLEC Community (11/02/99)	OSS99B2.XLS	CM-2-B-10	BLS
OSS '99 Project Team Meeting Notice for Wednesday, November 17, 1999	C11179~1.DOC	CM-2-B-11	BLS

Document	File Name	Location in Work Papers	Source
BST/CLEC OSS '99 Meeting Minutes November 10, 1999	C11109~2.DOC	CM-2-B-12	BLS
OSS '99 Project Status Report for November 16, 1999	PS111699.DOC	CM-2-B-13	BLS
OSS '99 Work Schedule for CLEC Community (November 16, 1999)	OSS99B.XLS	CM-2-B-14	BLS
OSS '99 Impacted Interfaces e-mail (December 7, 1999)	OSS '99.msg	CM-2-B-15	BLS
OSS '99 Project Team Meeting Cancellation notice e-mail	FW: OSS'99 Project Status Report.msg	CM-2-B-16	BLS
OSS '99 LEO Requirements Matrix e-mail (December 30, 1999)	FW: OSS'99 Requirements for CLECs - #4.msg	CM-2-B-17	BLS
OSS '99 Project Status Meeting e-mail (January 12, 2000)	FW: OSS'99 Project Status Meeting.msg	CM-2-B-18	BLS
ENCORE User Requirements for Update and Add Global Requirements for OSS '99 – Final (LEO5415.DOC) – December 7, 1999	LEO54151.DOC	CM-2-B-19	BLS
ENCORE User Requirements for Update and Add Global Requirements for OSS '99 – Final (LEO5415.DOC) – January 13, 2000	LEO541511.DOC	CM-2-B-20	BLS
OSS '99 LEO Requirements for CLECs-#2 e-mail (December 30, 1999)	FW: OSS'99 LEO Requirements for CLECs - #2.msg	CM-2-B-21	BLS
OSS '99 LEO Requirements for CLECs - #3 e-mail (January 3, 2000)	FW: OSS'99 LEO Requirements for CLECs - #3.msg	CM-2-B-22	BLS

Document	File Name	Location in Work Papers	Source
OSS '99 Project Team Meeting Notice for Wednesday, January 12, 2000	011200NTC.DOC	CM-2-B-23	BLS
OSS '99 Project Team Meeting Minutes – January 12, 2000	I011200M.DOC	CM-2-B-24	BLS
OSS '99 Project Team Meeting Notice for Wednesday, January 19, 2000	C01190~1.DOC	CM-2-B-25	BLS
OSS '99 Project Team Meeting Minutes – January 12, 2000	C011200M.DOC	CM-2-B-26	BLS
OSS '99 Migration / Recovery Plan for CLECs (12 / 20 / 99)	MIGRPL~1.DOC	CM-2-B-27	BLS
OSS '99 Project Team Meeting Notice for Wednesday, January 26, 2000	C01260~1.DOC	CM-2-B-28	BLS
OSS '99 Project Team Meeting Notice for Wednesday, January 19, 2000	C01190~1.DOC	CM-2-B-29	BLS
OSS '99 Project Status Report – January 21, 2000	PS012100.DOC	CM-2-B-30	BLS
OSS '99 Work Schedule for CLEC Community (1 / 21 / 00)	OSS99B1.XLS	CM-2-B-31	BLS
OSS '99 Project Team Meeting Notice for Wednesday, February 2, 2000	C0202NT.DOC	CM-2-B-32	BLS
BST / CLEC OSS '99 Meeting Minutes – January 26, 2000	C01260~2.DOC	CM-2-B-33	BLS
OSS '99 Project Status Report – January 31, 2000	PS013100.DOC	CM-2-B-34	BLS
OSS '99 Work Schedule for CLEC Community (01 / 31 / 00)	OSS99B1.XLS	CM-2-B-35	BLS

Document	File Name	Location in Work Papers	Source
BST/CLEC OSS '99 Meeting Minutes – February 2, 2000	FW: OSS'99 Project Team Minutes from 2/02/00.msg	CM-2-B-36	BLS
OSS '99 Project Status Report -- February 5, 1999	No Electronic Copy	CM-2-B-37	BLS
BST/CLEC OSS '99 Meeting Minutes [EICCP]—February 24, 1999	No Electronic Copy	CM-2-B-38	BLS
AT&T Non-LNP Test Cases for OSS '99	ATTPL.DOC	CM-2-B-39	BLS
AT&T LNP Test Cases for OSS '99	ATTLNPS.DOC	CM-2-B-40	BLS
AT&T Test Case Data—Directory Listing Only (BLS.BS.JB.01.03)	ATTJB991.DOC	CM-2-B-41	BLS
AT&T Test Case Data—New – Loop Only – Analog – Non-Designed (BLS.BS.AB.0102)	ATTNON~1.DOC	CM-2-B-42	BLS
AT&T Test Data Script—Partial Migration—Port Loop Combo (BLS.BS.MB.0101)	ATTPLC1.DOC	CM-2-B-43	BLS
AT&T Test Case Data—New – Loop Only – Analog – Designed (BLS.BS.AB.0101 and Digital DS1)	ATTDIG.DOC	CM-2-B-44	BLS
AT&T Test Case Data—New – Loop Only – Analog – Designed (BLS.BS.AB.0101)	ATTDES.DOC	CM-2-B-45	BLS
AT&T Test Data Script—New – Port Loop Combo (BLS.BS.MB.0102)	ATTPLC2.DOC	CM-2-C-1	BLS
AT&T Test Data Script—Change – Port Loop Combo (BLS.BS.MB.0103)	ATTPLC3.DOC	CM-2-C-2	BLS

Document	File Name	Location in Work Papers	Source
AT&T Test Data Script—Change – Port Loop Combo (BLS.BS.MB.0104)	ATTPLC5.DOC	CM-2-C-3	BLS
AT&T Test Data Script—Partial Disconnect – Port Loop Combo (BLS.BS.MB.0106)	ATTPLC7A.DOC	CM-2-C-4	BLS
AT&T Test Data Script—Seasonal Suspend – Port Loop Combo (BLS.BS.MB.0105)	ATTPLC~1.DOC	CM-2-C-5	BLS
AT&T Test Data Script—Seasonal Restore – Port Loop Combo (BLS.BS.MB.0105)	ATTPLC~2.DOC	CM-2-C-6	BLS
AT&T Test Data Script—Disconnect – Port Loop Combo (BLS.BS.MB.0106)	ATTPLC~3.DOC	CM-2-C-7	BLS
REQ TYP=C --- LNP Number Portability –- P Activity Type – All Fields TEST CASE ID: BLS.BS.CB.0101 Case #1	ATTLNP8.DOC	CM-2-C-8	BLS
REQ TYP=C --- LNP Number Portability –- Q Activity Type – All Fields TEST CASE ID: BLS.BS.CB.0201 Case #2	ATTLNP7.DOC	CM-2-C-9	BLS
REQ TYP=C --- LNP Number Portability –- P Activity Type – All Fields TEST CASE ID: BLS.BS.CB.0102 Case #3	ATTLNP6.DOC	CM-2-C-10	BLS
REQ TYP=C --- LNP Number Portability –- Q Activity Type – All Fields TEST CASE ID: BLS.BS.CB.0202 Case #4	ATTLNP5.DOC	CM-2-C-11	BLS
REQ TYP=C --- LNP Number Portability –- V Activity Type – All Fields TEST CASE ID: BLS.BS.CB.01.03 Case #5	ATTLNP4.DOC	CM-2-C-12	BLS

Document	File Name	Location in Work Papers	Source
REQ TYP=C --- LNP Number Portability –- P Activity Type – All Fields TEST CASE ID: BLS.BS.CB.0204 Case #6	ATTLNP3.DOC	CM-2-C-13	BLS
REQ TYP=B --- Loop w / Number Portability –- P Activity Type – All Fields TEST CASE ID: BLS.BS.CB.0402 Case #7	ATTLNP2.DOC	CM-2-C-14	BLS
REQ TYP=B --- Loop w / Number Portability –- V Activity Type – All Fields TEST CASE ID: BLS.BS.BB.0502 Case #8	ATTLNP1.DOC	CM-2-C-15	BLS
LEO Automatic Test System—Inbound & Outbound	LEOTAUTO.DOC	CM-2-C-16	BLS
OSS '99 LNP Beta-Testing Summary Updates	LBTU0114.DOC	CM-2-C-17	BLS
OSS '99 Beta-Testing Summary Updates (Non-LNP)	NLBTU1216.DOC	CM-2-C-18	BLS
ENCORE Electronic Interface Ordering (EIO) Release Implementation Plan (X908R) for Electronic Data Interchange (EDI) EIO Release 6.0	60X908R.DOC	CM-2-C-19	BLS
LENS Beta Test	BETACUST.DOC	CM-2-C-20	BLS
LENS Testing Agreement	BETALENS.DOC	CM-2-C-21	BLS
CM-2: OSS '99 Release Evaluation—Follow-up Interview Questions	CM-2 Follow-up Interview Questions.doc	CM-2-C-22	KCI
Interview Request--OSS '99 Release Evaluation	GACM-2_INT REQ022300.doc	CM-2-C-23	KCI
Documentation Request—OSS '99 Release Evaluation	GACM-2_DOC REQ022300.DOC.doc	CM-2-C-24	KCI
Change Management Interview Report -- 3/2/00	CM-2 INTERVIEW REPORT_3.2.00.DOC	CM-2-C-25	KCI

Document	File Name	Location in Work Papers	Source
Change Management Interview Report – 3/15/00	CM-2 INTERVIEW REPORT_Follow-up_3.15.00.DOC	CM-2-C-26	KCI
Change Management Interview Report – 3/7/00	CM-2 INTERVIEW REPORT_3.7.00.DOC	CM-2-C-27	KCI
Change Management Interview Report – 3/15/00	CM-2 INTERVIEW REPORT_Follow-up_3.15.00b.DOC	CM-2-C-28	KCI
Electronic Interface Change Control Process, Interconnection Services	No Electronic Copy	CM-1-A-2	BLS
ENCORE User Requirements to Provide WSOP (Working Service on Premise) Ability for OSS'99	LEO4409.doc	CM-2-C-30	BLS
LS Loop Service Data Elements, All LSOG 4 New Deletes	OSSLS_1A.DOC	CM-2-C-31	BLS
OSS '99 February Calendar of Meetings	CREQSCH.DOC	CM-2-C-32	BLS
OSS '99 Meeting Announcement	OSS'99 Meeting.msg	CM-2-C-33	BLS
OSS'99 Project Team Meeting Minutes (December 2, 1998)	C1202MIN.DOC	CM-2-C-34	BLS
OSS'99 Project Summary Report – December 4, 1998	PSUM1204.DOC	CM-2-C-35	BLS
OSS'99 Project Team Meeting Notice for Wednesday, December 9, 1998	C1209NTC.DOC	CM-2-C-36	BLS
Joint Implementation Agreement for Electronic Data Interchange Local Order and Preorder	JIA.DOC	CM-2-C-37	BLS
BellSouth/CLECs Project OSS99	JIAA1.DOC	CM-2-C-38	BLS
OSS'99 Project Plan	JIAA3.DOC	CM-2-C-39	BLS
OSS'99 [Workplan] – 12/04/98	OSS99.XLS	CM-2-C-40	BLS

Document	File Name	Location in Work Papers	Source
OSS'99 Project Status Report (March 26, 1999)	PS0326.DOC	CM-2-C-41	BLS
OSS'99 Project Team Meeting Notice for Wednesday, March 31, 1999	C0331NTC.DOC	CM-2-C-42	BLS
OSS'99 [Workplan] – 3/26/99	OSS99.XLS	CM-2-C-43	BLS
CLEC Questions/Issues	CLECDOC.DOC	CM-2-C-44	BLS
OSS'99 Project Status Report (May 7, 1999)	PS0507.DOC	CM-2-C-45	BLS
BST/CLEC OSS '99 Meeting Minutes (May 5, 1999)	C0505MIN.DOC	CM-2-C-46	BLS
OSS'99 Project Team Meeting Notice for Wednesday, May 12, 1999	C0512NTC.DOC	CM-2-C-47	BLS
OSS'99 [Workplan] – 5/07/99	OSS99B1.XLS	CM-2-C-48	BLS
OSS'99 Project Status Report (June 25, 1999)	PS0625.DOC	CM-2-C-49	BLS
OSS'99 Project Team Meeting Notice for Wednesday, June 30, 1999	C0630NTC.DOC	CM-2-C-50	BLS
BST/CLEC OSS'99 Meeting Minutes (June 16, 1999)	C0623MIN.DOC	CM-2-C-51	BLS
OSS'99 Work Schedule for CLEC Community – 6/25/99	OSS99B.XLS	CM-2-C-52	BLS
OSS'99 Project Team Meeting Notice for Wednesday, July 21, 1999	C0721NTC.DOC	CM-2-C-53	BLS
BST/CLEC OSS'99 Meeting Minutes (July 14, 1999)	C0714MIN.DOC	CM-2-C-54	BLS
OSS'99 Project Status Report (July 16, 1999)	PS0716.DOC	CM-2-C-55	BLS
LENS 6.0 Beta – Bulk Order Summary by CLEC, 9/13/99 – 9/24/99	BETARE~1.XLS	CM-2-C-56	BLS

Document	File Name	Location in Work Papers	Source
LENS Proposed Beta Testing of Release 6.0	BETA1.DOC	CM-2-C-57	BLS
LENS 6.0 Beta Pre-Release – Information Presentation	BETALENS.PPT	CM-2-C-58	BLS
LENS Beta Return to Production	BETARE~1.DOC	CM-2-C-59	BLS
LENS 6.0 Release - a.k.a. LENS'99 – Overview Presentation	BETASTAT.PPT	CM-2-C-60	BLS
Electronic Interface Trends – "Inside the LSR Numbers"	TRENDS.PPT	CM-2-C-61	BLS
LENS September Pre-Release – Notes 7/13/99	BETA.DOC	CM-2-C-62	BLS
LENS Beta Test	BETA2.DOC	CM-2-C-63	BLS
LENS Bulk and Fast Path Order Summary	BETASTAT.XLS	CM-2-C-64	BLS
LENS Beta Results	LENSBETA.XLS	CM-2-C-65	BLS
1999 CLEC Activity	LSRINFO.XLS	CM-2-C-66	BLS
Telecommunications Access Gateway (RoboTAG) Testing Agreement for Network One	NETWOR~1.DOC	CM-2-C-67	BLS
LENS 6.x Production Servers	LENSPR~1.DOC	CM-2-C-68	BLS
LENS Test Servers	LENSTE~1.DOC	CM-2-C-69	BLS
Telecommunications Access Gateway Test Environment	TAG.BMP	CM-2-D-1	BLS
Network One [RoboTAG] Test Scripts	Network One Test Cases.msg	CM-2-D-2	BLS
EDI Test Environment	EDICR.PPT	CM-2-D-3	BLS
Status of CLECs (Principals in OSS'99)	CVR628.DOC	CM-2-D-4	BLS
Telecommunications Access Gateway (TAG) Testing Agreement for First Tel	No Electronic Copy	CM-2-D-5	BLS

Document	File Name	Location in Work Papers	Source
[TAG] Testing Summary	No Electronic Copy	CM-2-D-6	BLS
First Tel Test Case 1	No Electronic Copy	CM-2-D-7	BLS
First Tel Test Case 2	No Electronic Copy	CM-2-D-8	BLS
First Tel Test Case 3	No Electronic Copy	CM-2-D-9	BLS
First Tel Test Case 4	No Electronic Copy	CM-2-D-10	BLS
First Tel Test Case 5	No Electronic Copy	CM-2-D-11	BLS
First Tel Test Case 6	No Electronic Copy	CM-2-D-12	BLS
First Tel Test Case 8	No Electronic Copy	CM-2-D-13	BLS
First Tel Test Case 9	No Electronic Copy	CM-2-D-14	BLS
SRT Restoral	No Electronic Copy	CM-2-D-15	BLS
First Tel CLEC Survey	No Electronic Copy	CM-2-D-16	BLS
Telecommunications Access Gateway (RoboTAG) Testing Agreement for Network One	No Electronic Copy	CM-2-D-17	BLS
Network One Test Case Log	No Electronic Copy	CM-2-D-18	BLS
BLS written responses to KCI clarification questions	No Electronic Copy	CM-2-D-19	BLS
KCI Observation 50 and BLS response	No Electronic Copy	CM-2-D-20	KCI/BLS
Encore Electronic Interface Ordering (EIO) – Test Approach Document (T910) For Electronic Data Interchange (EDI), EIO Release 6.0	99EDTST1.DOC	CM-2-E-1	BLS
ENCORE Electronic Interface Ordering (EIO) Release 6.0 Test Approach (T910), Document Version 1.1	99TEST1.DOC	CM-2-E-2	BLS
TAG Test Strategy Release 3.0/3.1 (T911), Version 1.0	99TGATS1.DOC	CM-2-E-3	BLS

Document	File Name	Location in Work Papers	Source
Staged Testcase Specifications (STTS) for Telecommunications Access Gateway (TAG), TAG Version 7.1	99TGTST1.DOC	CM-2-E-4	BLS

2.4.1 Data Generation/Volumes

This test relied on interviews with BellSouth personnel and documentation reviews.

2.5 Evaluation Methods

The OSS '99 Release Evaluation entailed documentation reviews and interviews with BellSouth personnel responsible for or involved with the OSS '99 Release. Documentation collected and reviewed for this evaluation included project plans, team rosters, document change logs, beta testing agreements, test cases, technical specifications and diagrams, and interface requirements.

2.6 Analysis Methods

The OSS '99 Release Evaluation included a checklist of evaluation criteria developed by KCI during the preparation of test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures provided the framework of norms, standards, and guidelines for the OSS '99 Release Evaluation.

3.0 Results Summary

This section identifies the evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Descriptions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VII-1.3: CM-2 Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
CM-2-1-1	The release provided reasonable intervals for considering and notifying customers about proposed changes.	Satisfied	KCI interviews and documentation reviews revealed that BLS conducted regular OSS '99 core team meetings, sub-team meetings, and *ad hoc* conference calls. BLS and CLECs held weekly OSS '99 Release core team meetings to update the OSS '99 Project Plan, to discuss and help to resolve existing OSS '99

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Release issues, and to review weekly reports from the 10 OSS '99 sub-teams. These sub-teams, which included BLS and CLEC members, met more frequently than the core team and developed the OSS '99 requirements documentation for each of the interfaces included in the OSS '99 Release. The BLS OSS '99 Release Program Manager published and distributed a calendar that identified the schedule for all core and sub-team meetings. Included in the *OSS '99 Project Status Report*, this schedule was distributed to BLS and CLECs on a weekly basis. These meetings served to notify the CLECs of proposed changes to be incorporated in the OSS '99 release. The *OSS '99 Project Status Report* also referenced the scope of the OSS '99 Release, including a description of the interface features / functionality to be included in the OSS '99 Release. KCI interviews and documentation reviews revealed that implementation of the OSS '99 Release occured in two phases: Non-Local Number Portability (LNP) functionality in December 1999, and LNP functionality in January 2000. Developed by the 10 BLS / CLEC sub-teams between November 1998 and March 1999, the final OSS '99 business requirements were delivered to CLECs in April 1999. The OSS '99 Release Program Manager redistributed these business requirements to CLECs on a monthly basis between April 1999 and January 2000, regardless of whether or not changes had been made. Changes that were made to OSS '99 business requirement documentation, such as modifications to rules and values associated with data element fields,

Test Cross-Reference	Evaluation Criteria	Result	Comments
			were those identified by sub-team members or by BLS / CLEC participants at weekly core team meetings. BLS also distributed to CLECs on a weekly basis the *BST/CLEC OSS'99 Meeting Minutes* and the *OSS'99 Project Team Meeting Notice*, the latter of which provided an agenda for the next scheduled meeting.

Test Cross-Reference	Evaluation Criteria	Result	Comments
CM-2-1-2	The release process included provisions for allowing and incorporating input from customers.	Satisfied	KCI interviews and documentation reviews revealed that BLS developed the OSS '99 Release to address multiple interface enhancement requests that BLS had received through the *Electronic Interface Change Control Process* (EICCP), which was the process in place prior to and during the OSS '99 Release period by which BLS and CLECs managed requested changes to BLS local electronic interfaces. BLS solicited input from the CLECs during the weekly OSS '99 Release core team meetings and sub-team meetings. CLECs were able to provide input and voice their concerns about specific interface requirements; "Review Project Status" and "Open Discussion" were standard agenda items for these meetings. The BLS OSS '99 Release Program Manager established and published – via the *OSS'99 Project Status Report* – conference bridge numbers for each of the sub-teams so that the CLECs and BLS were able to discuss OSS '99 Release requirements on a daily basis if needed. The Program Manager also captured a variety of CLEC feedback / issues in a document entitled *CLECs' Questions About OSS '99 Data Element Documents*. Published monthly, this document provided answers and updates to CLEC questions regarding the OSS '99 Release feature / functionality requirements. CLEC input was addressed in subsequent pre-release versions, as appropriate.

Test Cross-Reference	Evaluation Criteria	Result	Comments
CM-2-1-3	Initial interface specifications, which defined applicable business rules, data formats and definitions, and transmission protocols, were made available to customers.	Satisfied	To provide the "foundation" interface requirements by which system coding could be performed for the OSS '99 Release in March 1999, BLS provided CLECs with *ENCORE User Requirements to provide WSOP (Working Service on Premise) Ability for OSS '99.* BLS reviewed preliminary user requirements with the CLECs at a joint meeting in January 1999. On March 15 – 16, 1999, BLS and the CLECs conducted an official walk-through of all OSS '99 Release requirements. KCI interviews and documentation reviews revealed that BLS appointed leads for each OSS '99 Release sub-team. These leads were responsible for collecting and distributing interface requirements documentation to their respective sub-teams and also to the OSS '99 Release Program Manager once the requirements were 75% to 80% complete. Following receipt of the requirements, the Program Manager provided the updated requirements documentation to BLS's *Electronic Interface Change Control Process* team for distribution to all CLECs in April 1999.
CM-2-1-4	Revised interface specifications, following assimilation of customer input, were made available to customers.	Satisfied	On February 23, 1999, the OSS '99 Release Program Manager compiled the preliminary OSS '99 requirements into the *BellSouth / CLECs Project OSS '99 Final Scope* document, and subsequently distributed it to the CLECs. On February 24, 1999, BLS held a joint meeting with the CLECs to review this document. Following a joint walk-through of requirements developed by the 10 BLS / CLEC sub-teams, BLS delivered the final OSS '99 Release requirements to CLECs in April 1999. Throughout the OSS '99 Release, the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Program Manager collected questions and issues logs from each of the interface sub-teams on a monthly basis and sent updates, incorporating CLEC input, to the CLECs via the EICCP once per month.
CM-2-1-5	Accurate and complete revision summary documentation was provided to customers.	Satisfied	A Change History matrix was contained within each of the OSS '99 interface requirements documents. To track document updates and to verify that all sub-teams were working from the most recent document versions, the OSS '99 Release Program Manager published and distributed monthly the *OSS '99 CLEC Documents Matrix*, as well as the documents it referenced. This matrix identified the document's name, LEO document number, version number, version date, and date that it was distributed to CLECs. The OSS '99 Release Program Manager also used version numbers and color coding to help highlight updates made to CLEC documentation. When a change was made to one or more of these documents, all CLEC documents were redistributed, regardless of whether or not changes had been made to the previous version. EDI revision summaries were provided to CLECs via the following two documents: – *TCIF Issue 9 EDI Map and Application File Format Design for a Purchase Order (850) / Purchase Order Change (860*). This document contains a record of changes made to the EDI map. – *OSS '99 EDI Technical Specs Change History Log*. This document contains a record of changes made to the data format and contents of the Purchase

Test Cross-Reference	Evaluation Criteria	Result	Comments
			order (850), Purchase Order Change (860), and Purchase Order Change Acknowledgement/Request (865).
CM-2-1-6	Functioning testing environments were made available to customers for all supported interfaces.	Satisfied	BLS captured LNP and Non-LNP EDI beta testing progress/activity in the following documentation: *OSS '99 LNP Beta-Testing Summary Updates* and *OSS '99 Beta-Testing Summary Updates.* These documents tracked specific LSR test cases from submission through receipt of corresponding Completion Notices. LENS, TAG, and RoboTAG testing activities were captured in the following documents respectively: *LENS Beta Results, TAG Testing Summary*, and the *Network One Test Case Log*. BLS conducted multiple phases of testing for the OSS '99 Release: • Component/Unit Testing • Assembly Testing • System Testing • Integration (End-to-End) Testing • Internal "Sanity" Testing • User Acceptance (UAT) • Beta Testing The document entitled *ENCORE ELECTRONIC INTERFACE ORDERING (EIO) – Test Approach Document (T910) for Electronic Data Interchange (EDI)* outlined BLS's approach for conducting Component and Assembly Testing for the OSS '99 Release. The document entitled *ENCORE Electronic Interface Ordering (EIO) Release 6.0 – Test Approach* referenced the System Functionality Testing plan followed during the OSS '99 Release. The Beta Testing phase was conducted with CLEC participation and included the following sub-

Test Cross-Reference	Evaluation Criteria	Result	Comments
			levels of testing: • Connectivity • Syntax • Carrier-to-Carrier • Service Readiness Testing (SRT) BLS published beta testing documentation, namely the *OSS '99 EDI-Beta-Testing Agreement* and *OSS '99 LENS Testing Agreement*, for participating CLECs. This documentation provided testing procedures and made reference to the testing environments to be used during the Connectivity, Syntax, Carrier-to-Carrier, and SRT. The documents entitled *Telecommunications Access Gateway (TAG) Testing Agreement for First Tel* and *Telecommunications Access Gateway (RoboTAG) Testing Agreement for Network One* also provided participating CLECs with descriptions of the various types of testing to be conducted, including Connectivity, Validity, and SRT. KCI interviews and documentation reviews revealed that BLS's Local Carrier Service Center (LCSC) maintained the OSS '99 Release test environment. The OSS '99 Release test environment was the same test environment that BLS uses for all of its testing within the LCSC. The LCSC also maintained the testing procedures, including BLS's internal test plan and implementation checklist, which included the following documents: – *Encore Electronic Interface Ordering (EIO) Release Implementation Plan (X908R) For Electronic Data Interchange (EDI) EIO Release 6.0* – *LEO Automatic Test System INBOUND & OUTBOUND.* In addition, the *LEO-IG Volume 4, Issue 9a-EDI Documentation for OSS*

Test Cross-Reference	Evaluation Criteria	Result	Comments
			'99 – EDI Testing Guidelines for Competitive Local Exchane Carriers provided forms for the CLECs to complete in order to establish connectivity to the test environment.
CM-2-1-7	Carrier-to-carrier test environments were stable and segregated from BLS production and development environments.	Satisfied	The *OSS '99 EDI-Beta-Testing Agreement* and *LEO-IG Volume 4, Issue 9a-EDI Documentation for OSS '99 – EDI Testing Guidelines for Competitive Local Exchange Carriers* documentation states that the Connectivity, Syntax, and Carrier Testing occurred in a test environment, while the SRT occurred in BLS's production environment. During the OSS '99 Release, BLS provided CLECs with access to dedicated CLEC EDI and LENS test environments that were not completely segregated from the BLS production environment. In the case of EDI, test files co-existed with production files in a common EDI translation environment, but were logically segregated by indicators that differentiated the output files from the application interfaces: "T" for test files and "P" for production files. Test files were then relegated to test environments or production environments for downstream systems for additional processing and order generation based on those indicators. EDI Trading Partner (TP) files were established in the Harbinger Operation Center for the testers' Trading Partner logon identifiers to point to test libraries in order to execute the test maps. During internal EDI testing, before actual CLEC participation in beta and SRT, BLS used test tools to simulate CLEC system users. TAG and RoboTAG interfaces provided the CLECs with access to a test environment that was completely segregated from the BLS

Test Cross-Reference	Evaluation Criteria	Result	Comments
			production environment. Those environments required the CLECs to direct their test files to separate Internet Protocol (IP) addresses at which the test environments resided. Test files submitted to the TAG and RoboTAG interfaces were processed and sent to downstream test environments for further processing and order generation. As noted in the documents entitled *Current Inbound EDI Test and Production* and *Current Outbound EDI Test and Production*, test and production environments were differentiated by IP addresses, maps, and dataset names. During KCI's evaluation interviews, the BLS OSS '99 Release Program Manager noted that a specific testing IP address (90.12.72.1) was established for connectivity to reserved test boxes. The document entitled *Telecommunications Access Gateway Test Environment* references the IP address (90.70.125.2) associated with the midrange and mainframe systems in BLS's Development, System Readiness Test (SRT), Volume Test, RSIMMS Test, Production, and IOT environments. The Program Manager also noted that user authorization and access controls limited user privileges to the test environment so that the testers could not access the production environment. While KCI believes that an ideal carrier testing process stipulates completely segregated test and production environments, BLS's process for logically separating test orders from production orders was adequate for carrier testing. According to the BLS EDI technical team, EDI testing occurred in Site D of the BLS IBM MVS mainframe in Birmingham, Alabama. The EDI

Test Cross-Reference	Evaluation Criteria	Result	Comments
			maps were located in test map libraries for testing prior to implementation. Eventually, BLS moved the test maps to the production libraries to conduct the SRT. BLS's EDI implementation procedures were referenced in the following document: *Encore Electronic Interface Ordering (EIO) Release Implementation Plan (X908R) For Electronic Data Interchange (EDI) EIO Release 6.0.* No implementation procedures were provided for LENS. Regarding the stability of the OSS '99 EDI Test Environment, OSS '99 Release testing issue logs (i.e., *OSS '99 LNP Beta-Testing Summary Updates* and *OSS '99 Beta-Testing Summary Updates)* were reviewed during the OSS '99 Evaluation to determine if any problems existed within the BLS test environment. The documents entitled *LENS Beta Results, TAG Testing Summary*, and *Network One Test Case Log* summarized interface testing results for LENS, TAG, and RoboTAG respectively. No environment-related issues were found.
CM-2-1-8	BellSouth provided telephone customer support for interface testing to the CLECs (with on-call support available 24 hours a day, seven days a week for emergencies).	Satisfied	KCI interviews and documentation reviews revealed that throughout the OSS '99 Release interface testing, BLS provided customer and technical support. BLS's testing documentation detailed Operating Procedures that included hours of availability for technical support. This documentation also identified "Terms and Conditions" for emergencies and weekend support and provided contact numbers, including Contact Type, Name, Phone, and Fax. This information was provided in the following documents: • OSS '99 EDI Beta-Testing Agreement

Test Cross-Reference	Evaluation Criteria	Result	Comments
			• OSS '99 LENS Beta-Testing Agreement • LEO-IG Volume 4, Issue 9a-EDI Documentation for OSS '99 – EDI Testing Guidelines for Competitive Local Exchange Carriers According to the BLS OSS '99 Release Program Manager, the test and production environments received equal technical support under BLS's existing maintenance agreements. During the testing phases, maintenance was performed nightly, and daily reviews of the testing activities were conducted with the participating CLECs. Technical support hours during the interface testing were from 8:00 A.M. to 6.00 P.M. EDT; 24 x 7 support was not included or required in accordance with the Testing Agreements signed by both BLS and CLECs.
CM-2-1-9	Procedures were defined to log and communicate software "bugs," errors, and omissions in specifications, as well as other issues discovered during carrier-to-carrier testing.	Satisfied	BLS provided participating CLECs with testing documentation that defined procedures to follow when bugs, errors, or omissions were discovered during interface testing. These documents included: • OSS '99 EDI Beta-Testing Agreement ▪ LEO-IG Volume 4, Issue 9a-EDI Documentation for OSS '99 – EDI Testing Guidelines for Competitive Local Exchane Carriers BLS also developed error / issue logs to track the errors and issues reported during the interface testing. These logs included: • Defect Log (EDI Test Agreement) • Discovery Log (EDI Test Agreement) • OSS '99 LNP Beta-Testing

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Summary Updates • OSS '99 (Non-LNP) Beta-Testing Summary Updates In addition, the BLS EDI team maintained an error testing log and utilized an internal tracking system called the Electronic Tracking and Reporting System (eTARS) to document the test results. During the OSS '99 interface testing, daily conference calls were held with the participating CLECs to review issues and identify target dates for resolution. These issues were captured in the error/issue documentation listed above. The OSS '99 Project Manager distributed testing status information to CLECs via the OSS '99 Release core team meetings and via the EICCP.

Performance Metrics

VIII. Performance Metrics Review (PMR) Results and Analysis

1.0 Description

The purpose of this section is to present the specific tests, results, and analysis from KCI's evaluation of the processes and other operational elements associated with BellSouth's production of performance metrics.

The Performance Metrics Review (PMR) includes six components:

- Data Collection and Storage Verification and Validation – the evaluation of key policies and practices for collecting and storing raw data necessary for the creation of performance metrics;
- Metrics Definition Documentation and Implementation Verification and Validation – the evaluation of the overall policies and practices for documenting and implementing metrics definitions, including their completeness, accuracy, and logic;
- Metrics Change Management Verification and Validation – the evaluation of the overall policies and practices for managing changes in BellSouth's production and reporting of metrics;
- Metrics Data Integrity Verification and Validation – the evaluation of the overall practices and policies for processing the data used by BellSouth in the production of the reported performance metrics and standards, focusing on the completeness and accuracy of the data;
- Metrics Calculation and Reporting Verification and Validation – the evaluation of the processes used to calculate performance metrics and retail analogs; and
- Statistical Evaluation of Transactions – Test Metrics – the evaluation of BellSouth's service performance for the KCI test CLEC using statistical methods to make comparisons to parity and benchmark standards specified by the Georgia Public Service Commission (GPSC).

2.0 Methodology

The scope of the PMR tests entailed the following types of activities:

- Review, comparison, and analysis of BellSouth manuals, such as the *Service Quality Measurement* (SQM) manual and the *Raw Data Users Manual*;
- Review of documentation on BellSouth's metrics operations, including the *Issues Management and Change Control Process Guide*, among others;
- Review of BellSouth queries and computer code;
- Extensive interviews of BellSouth personnel (and BellSouth contractors);

- Observation of BellSouth executing its procedures;
- Tours of BellSouth facilities;
- Review of specific data elements;
- Creation of computer code to replicate BellSouth SQM reports;
- Calculation of test statistics; and
- Comparison of KCI data and computations to corresponding values provided and/or calculated by BellSouth, or standards specified by the GPSC.

For all six of the tests described above, when discrepancies between data sources or metrics values arose, or when KCI questioned processes or definitions, KCI conducted additional discussions with BellSouth. KCI issued exceptions if the issues could not be resolved, and re-tested the issues in question after BellSouth addressed them.

2.1 Business Process Description

On a monthly basis, BellSouth generates and reports performance measurement statistics called SQMs. The SQM plan for Georgia, which is updated periodically, contains definitions of the SQMs along with business rules, exclusions, calculation descriptions, and levels of disaggregation. SQMs have been established for every service domain and are calculated for both CLECs and BellSouth. Most of the SQMs are calculated for individual CLECs, but some are calculated for the CLEC aggregate only, or for the CLEC aggregate and BellSouth Retail. Each month, BellSouth extracts and assembles data from various databases in its Operational Support Systems (OSS) to calculate SQM values. BellSouth has developed a tool called Performance Measurement Analysis Platform (PMAP) to calculate many of the SQM values. For the remaining SQMs, BellSouth employs a variety of smaller, special-purpose tools. The SQM values are reported each month on BellSouth's PMAP Web site (https://pmap.bellsouth.com), including the values not calculated using PMAP. BellSouth enables CLECs to download their own SQM values from the Web site. They can also download the corresponding raw data for those SQMs that were validated using the PMAP tool. The *PMAP Raw Data Users Manual* provides detailed calculation instructions for those SQMs. Aggregate CLEC and BellSouth SQM values are presented on the Web site for public access.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Bed

Test beds were not applicable to this test.

A. Test Results: Data Collection and Storage Verification and Validation Review (PMR1)

1.0 Description

The objective of the Data Collection and Storage Verification and Validation Review (PMR1) was to evaluate the key policies and procedures for collecting and storing both the raw data that BellSouth uses to create Service Quality Measurement (SQM) reports, and the preliminary data that BellSouth uses to produce the raw data.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

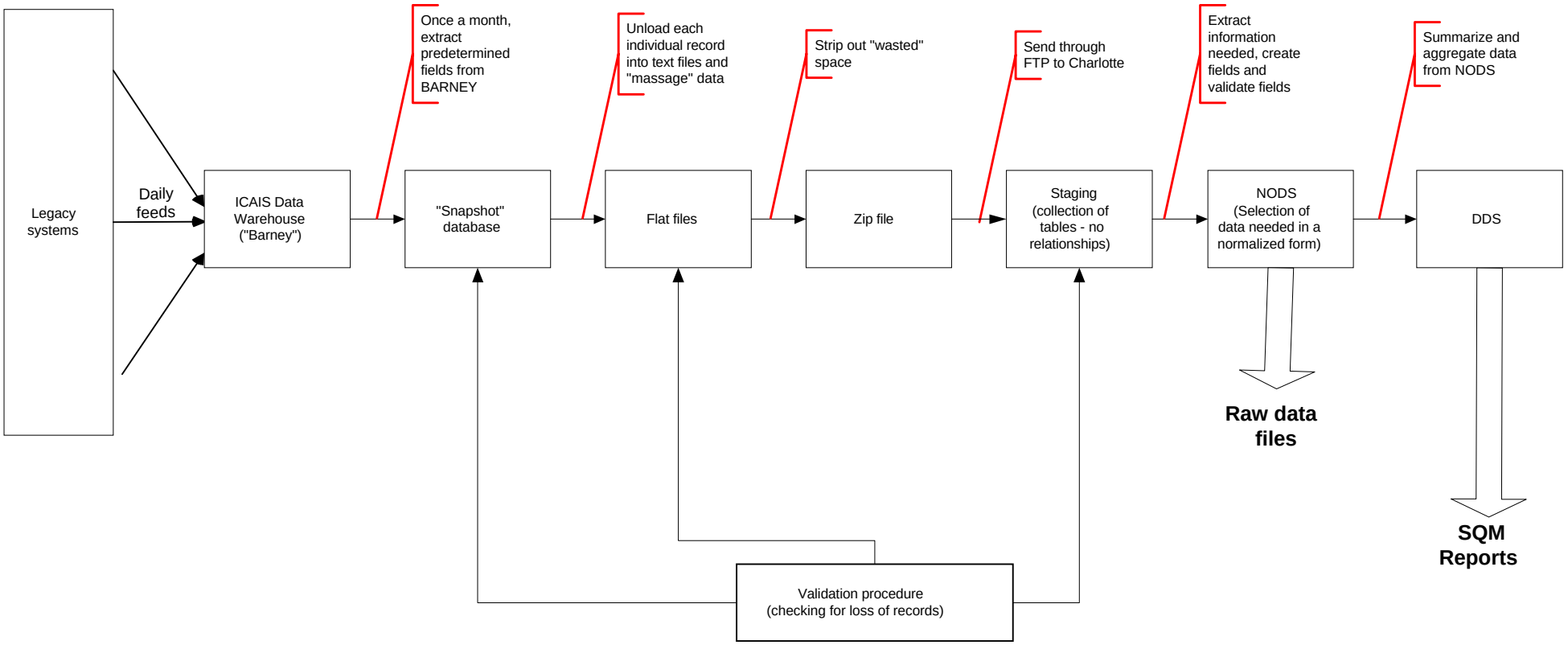
Figure VIII-1.1 shows the primary data collection process used by BellSouth to generate SQM reports. SQM reports are based on raw data created from data captured in BellSouth's legacy/source systems during the course of BellSouth business operations. Data accumulated in these systems are transferred on a daily basis to the Interexchange Carrier Analysis and Information System (ICAIS) data warehouse, which BellSouth calls Barney. These daily transfers are initiated and executed by automated scripts. Each month, a "snapshot" database is extracted from Barney and sent to Staging, a database used to store the data that will be analyzed. The snapshot database contains the records and data fields needed to calculate the SQMs. The transfer to Staging happens in three steps, as shown in the figure below. Validation checks are conducted during the process to verify counts of records and to protect against data loss. From staging, the data tables are transferred to the Normalized Operational Data Store (NODS), which puts the data into normalized form. NODS then passes the data to Dimensional Data Store (DDS), which summarizes and aggregates the data. SQM reports are generated by queries run against the DDS data. Data from NODS are also used to generate the raw data files, which are made available to CLECs and are used by BellSouth for validation purposes.

The Staging, NODS, and DDS systems are collectively known as the Performance Measurement and Analysis Platform (PMAP). Certain SQMs are calculated using PMAP exclusively, while others, referred to as "manual" SQMs, are calculated using data collected and stored by other systems. As shown in the figure, data tables for these SQMs are in some cases loaded into Staging or NODS. From these points, the data are handled in the same way as other SQM data. Some SQMs do not flow through the PMAP system at all. For such SQMs, BellSouth personnel coordinate the collection of the necessary data, produce reports, and post the results on the PMAP Web site.

Eventually, BellSouth intends to produce all SQMs using PMAP with data collected by Staging.

Data storage and backup occurs at several points in the SQM data collection process. Individual backup schedules are maintained for the various legacy / source systems. The Barney data warehouse is the primary data storage location for data used to generate non-manual SQMs. Data storage for manual SQMs varies according to the specific data collection process used.

Figure VIII-1.1: BellSouth PMAP Data Collection



2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target was the collection and storage of data for the production of SQMs. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

Table VIII-1.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Collection of Data	Data collection policies & procedures for CLEC and retail data	Adequacy and completeness of data collection policies and procedures	PMR-1-1-1
	Identified data collection control points	Applicability of and measurability from control points	PMR-1-1-2
	Data collection tools	Adequacy and scalability of data collection tools	PMR-1-1-3
	Internal controls	Adequacy and completeness of the internal control process	PMR-1-1-4
Storage of Data	Data storage policies & procedures for CLEC and retail data	Adequacy and completeness of data storage policies and procedures	PMR-1-2-1
	Identified storage sites	Applicability of and measurability from control points	PMR-1-2-2
	Data storage tools	Adequacy and scalability of data storage tools	PMR-1-2-3
	Internal controls	Adequacy and completeness of the internal control process	PMR-1-2-4

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VIII-1.2: Data Sources for Data Collection and Storage Verification and Validation Review

Document	File Name	Location in Work Papers	Source
KCI Request for Documents 121799	Request for Documents 121799.doc	PMR-1-A-1	KCI
BLS Raw Data Validation Procedures	RWDATVAL.doc	PMR-1-A-1	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response to Question 1B of KCI Memo	QUES1B.doc	PMR-1-A-1	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response to Question 1D of KCI Memo	QUES1D.doc	PMR-1-A-1	BLS Interconnection Operations – CLEC Performance Measurements
KCI Request for Documents 010700	Request for Documents 0107.doc	PMR-1-A-2	KCI
BLS Response to January 7, 2000 Request for Documentation memo	PROCES~1.doc	PMR-1-A-2	BLS Interconnection Operations – CLEC Performance Measurements
Georgia Public Service Commission Docket No. 7892-U	7892_ORDER.TIF	PMR-1-A-2	BLS Interconnection Operations – CLEC Performance Measurements
KCI Request for Completed Run Books	PMR1012500DocRqstAlford.doc	PMR-1-A-3	KCI

Document	File Name	Location in Work Papers	Source
KCI Request concerning Data Retention	PMR_000222DataReqAlford.doc	PMR-1-A-4	KCI
BLS Response to KCI request concerning Data Retention	FW	PMR-1-A-4	BLS Interconnection Operations – CLEC Performance Measurements
KCI Request for Updated Issue Tracker	PMR3030300DocRqstAlford.doc	PMR-1-A-5	KCI
KCI Request for Documents on Preparation of Service Order Accuracy	PMR124030300DocRqst Alford	PMR-1-A-6	KCI
BLS Sample Run Documentation – Service Order Accuracy	SAMPLE~1.DOC	PMR-1-A-6	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the January 13, 2000 interview with Bill Sellers	PMR1_000113_IntReport Alford.doc	PMR-1-A-7	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response to request for documentation resulting from interview with Bill Sellers	WES0006.DOC	PMR-1-A-7	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of February 2, 2000 interview with Stephanie Ford and Richard Bray	PMR2_000202_IntReport Moulin.doc	PMR-1-A-8	KCI
BLS Spreadsheet comparing number of records in various filed	No Electronic Copy	PMR-1-A-8	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
KCI Interview Report of the February 8, 2000 interview regarding Legacy Source systems	PMR1_000208_IntReport Alford.doc	PMR-1-A-9	KCI
BLS Response to 2/8 Meeting Action Items	KPMG 02152000 Audit Response.doc	PMR-1-A-9	BLS Interconnection Operations – CLEC Performance Measurements
BLS Storage Manager Overview	KPMG Audit Attach #3.XLS	PMR-1-A-9	BLS Interconnection Operations – CLEC Performance Measurements
BLS LCSC Order Tracker Release Management Process	KPMG Audit Attach #5.vsd	PMR-1-A-9	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 11, 2000 interview regarding EDS' backup procedures and policies	PMR1_000211_IntReport Alford.doc	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
BLS E-mail from Bill Sellers about interview regarding EDS' backup procedures and policies	No Electronic Copy	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
KCI E-mail to Bill Sellers about interview regarding EDS' backup procedures and policies	No Electronic Copy	PMR-1-A-10	KCI
BLS History file for PMAP Test	History.txt	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS PMAP Regions	Regions.txt	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
BLS Sample Backup Reports	Example Backup Reports.doc	PMR-1-A-10	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 21, 2000 interview with Ray Lee	PMR1_000221_IntReport Alford.doc	PMR-1-A-11	KCI
BLS Completed Interview Guide from Ray Lee	IGLEE2.DOC	PMR-1-A-11	BLS Interconnection Operations – CLEC Performance Measurements
BLS Responses on Interview Summary from February 21, 2000 interview with Ray Lee	RAYSUM.DOC	PMR-1-A-11	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 28, 2000 interview regarding backup policies for Legacy Source systems	PMR1022800IntReportA lfordEDS.doc	PMR-1-B-12	KCI
BLS Responses on Interview Summary from February 28, 2000 interview, as an E-mail from Dan Baxter	No Electronic Copy	PMR-1-B-12	BLS Interconnection Operations – CLEC Performance Measurements
BLS Responses on Interview Summary from February 28, 2000 interview	PMR1022800IntSumAlfo rd EDS Feedback.doc	PMR-1-B-12	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS List of participants in February 28, 2000 interview and walkthrough	02282000 Interview_Walkthrough Participants - Backup Process.doc	PMR-1-B-12	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report for the February 28, 2000 walkthrough of the Regional Data Center	PMR1_022800_WalkThroughRptAlford.doc	PMR-1-B-13	KCI
BLS Response on Interview Summary from February 28, 2000 walkthrough	KPMG walkthrough feedback.doc	PMR-1-B-13	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 29, 2000 and March 1, 2000 meetings with various SMEs	PMR1_000229_IntReportAlfordSMEs.doc	PMR-1-B-14	KCI
BLS Response on Interview Summary from the February 29, 2000 interview with Terri Ferrara	KPMG-I~1.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the March 1, 2000 interview with Treva Garner	TGSMEI~1.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the February 29, 2000 interview with Linda Gilley	GILLEY.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the March 1, 2000 interview with Steve Elliott	KPMGNTV1.DOC	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS Response on Interview Summary from the March 1, 2000 interview with Ted McDonald	No Electronic Copy	PMR-1-B-14	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the March 6, 2000 interview regarding backup policies for BONIS	PMR1_000306_IntRptAlfordEDS.doc	PMR-1-B-15	KCI
BLS Response on the Interview Summary from the March 6, 2000 interview regarding BONIS backup policies	PMR1030600IntSumEDS Alford FEEDBACK.doc	PMR-1-B-15	BLS Interconnection Operations – CLEC Performance Measurements
BLS List of participants in the March 6, 2000 interview regarding BONIS backup policies	0306000 Interview Participants - BONIS backup.doc	PMR-1-B-15	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report for the March 6, 2000 walkthrough of the PMAP Production Facilities	PMR1_030600_WalkthroughRptAlford.doc	PMR-1-B-16	KCI
BLS PMAP 2.0 March Production Runs	No Electronic Copy	PMR-1-B-16	BLS Interconnection Operations – CLEC Performance Measurements
BLS E-mail provided to SMEs of Run Jobs	No Electronic Copy	PMR-1-B-16	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the March 7, 2000 interview regarding the OS/DA metric and data collection by QMIS	PMR1_000307_IntReportAlfordQMIS.doc	PMR-1-B-17	KCI

Document	File Name	Location in Work Papers	Source
BLS Georgia DA Data Input	No Electronic Copy	PMR-1-B-17	BLS Interconnection Operations – CLEC Performance Measurements
BLS Carolina / Georgia Toll Data Input	No Electronic Copy	PMR-1-B-17	BLS Interconnection Operations – CLEC Performance Measurements
BLS Corrections to OS / DA Diagram from Interview Summary	No Electronic Copy	PMR-1-B-17	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the March 7, 2000 interview with Phil Porter	PMR1_000307_IntRptAlfordPorter.doc	PMR-1-B-18	KCI
BLS Confirmation of the Interview Summary sent by KCI regarding the March 7, 2000 interview with Phil Porter	No Electronic Copy	PMR-1-B-18	BLS Interconnection Operations – CLEC Performance Measurements
BLS Service Quality Measurements Functional Organization	MOOREORG.PPT	PMR-1-B-19	BLS Interconnection Operations – CLEC Performance Measurements
BLS OSS Interface Availability Schedule Web site	No Electronic Copy	PMR-1-B-20	BLS Interconnection Operations – CLEC Performance Measurements
BLS flow chart of the flow of information from Source Systems, through Staging, NODS, and DDS	PAGE4.DOC	PMR-1-B-21	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS procedures used to calculate Coordinated Customer Conversions	CCCREP~1.DOC	PMR-1-B-22	BLS Interconnection Operations – CLEC Performance Measurements
BLS procedures used to gather data for OSS Response Interval	No Electronic Copy	PMR-1-B-23	BLS Interconnection Operations – CLEC Performance Measurements
BLS sample e-mail notifying the SMEs of validation results	No Electronic Copy	PMR-1-B-24	BLS Interconnection Operations – CLEC Performance Measurements
BLS flow charts describing how E911 data is used in / by different systems	No Electronic Copy	PMR-1-B-25	BLS Interconnection Operations – CLEC Performance Measurements
BLS information regarding Average Answer Time in Repair Centers (Business)	No Electronic Copy	PMR-1-B-26	BLS Interconnection Operations – CLEC Performance Measurements
BLS response from Dan Baxter regarding for February 28, 2000 interview regarding OSS Interface Availability and REM	FW	PMR-1-B-27	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report for the February 22, 2000 interview regarding Service Order Accuracy	PMR50222000IntRptFreundlich.doc	PMR-1-B-28	KCI
KCI Interview Report for the February 2, 2000 interview regarding Average Speed of Answer	PMR4_000202IntReportASALCSCWong.doc	PMR-1-C-29	KCI

Document	File Name	Location in Work Papers	Source
KCI Interview Report for the February 3, 2000 interview regarding Average Speed of Answer	PMR4_000203IntReportASABusinessWong.doc	PMR-1-C-30	KCI
KCI Interview Report for the February 18, 2000 interview regarding OSS Interface Availability	PMR4_000218IntReportAvailabilityWong.doc	PMR-1-C-31	KCI
KCI Interview Report for the February 17, 2000 interview regarding Billing metrics	PMR4_000217IntReportBillingMoulinWong.doc	PMR-1-C-32	KCI
KCI Interview Report for the February 17, 2000 interview regarding E911 metrics	PMR4_000217IntReportE911Wong.doc	PMR-1-C-33	KCI
KCI Interview Report for the February 15, 2000 interview regarding Average Speed to Answer	PMR4_000215IntReportASAResidenceWong.doc	PMR-1-D-34	KCI
KCI Interview Report for the February 14, 2000 interview regarding Average Answer Delay	PMR4_000214IntReportAvgDelayBusinessWong.doc	PMR-1-D-35	KCI
KCI Interview Report for the February 15, 2000 interview regarding Average Answer Delay	PMR4_000215IntReportAvgDelayResidenceWong.doc	PMR-1-D-36	KCI
KCI Interview Report for the February 1, 2000 interview	PMR41 and5_000201IntRptWong.doc	PMR-1-D-37	KCI
KCI Interview Report for the February 23, 2000 interview regarding OSS Response Interval	PMR4_000223IntReportM&ROSSResponseIntervalWong.doc	PMR-1-D-38	KCI
BLS PMAP Run Book, Draft 11/02/99—BLS Proprietary	RUNBOO~1.DOC	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS Performance Measurement and Analysis Platform (PMAP) Backup & Disaster Recovery Overview—BLS Proprietary	Backrec.doc	PMR-1-P-41	BLS Interconnection Operations – CLEC Performance Measurements
BLS Periodic Activities of an Oracle DBA—BLS Proprietary	DBAHBV3.doc	PMR-1-P-41	BLS Interconnection Operations – CLEC Performance Measurements
BLS Audit and Control Doc. for KCI —BLS Proprietary	Audit and Control Points2.doc	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements
BLS *Issue Tracker*, issues #5000 - #5543—BLS Proprietary	No Electronic Copy	PMR-1-P-44	BLS Interconnection Operations – CLEC Performance Measurements
BLS *Issue Tracker*, issues #5536 - #5686—BLS Proprietary	No Electronic Copy	PMR-1-P-44	BLS Interconnection Operations – CLEC Performance Measurements
BLS "Binder4.zip / Binder5.zip" Zip Disk—BLS Proprietary	Zip Disk	PMR-1-P-45	BLS Interconnection Operations – CLEC Performance Measurements
BLS PMAP Run Book "December Run" —BLS Proprietary	No Electronic Copy	PMR-1-P-46	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS PMAP Run Book "Jan 2000 Run Book" —BLS Proprietary	No Electronic Copy	PMR-1-P-46	BLS Interconnection Operations – CLEC Performance Measurements
BLS Implementation Manual—BLS Proprietary	No Electronic Copy	PMR-1-P-47	BLS Interconnection Operations – CLEC Performance Measurements
BLS Audit Attachment #1—BLS Proprietary	KPMG Audit Attach #1.doc	PMR-1-P-48	BLS Interconnection Operations – CLEC Performance Measurements
BLS DCIB Backup SAM Manual—BLS Proprietary	DCI Backup SAM.doc	PMR-1-P-49	BLS Interconnection Operations – CLEC Performance Measurements
BLS Disaster Recovery Plan for CRIS—BLS Proprietary	DISPEDEN.DOC	PMR-1-P-50	BLS Interconnection Operations – CLEC Performance Measurements
BLS Disaster Recovery Plan for ARIS/EXACT—BLS Proprietary	DRARIS.DOC	PMR-1-P-51	BLS Interconnection Operations – CLEC Performance Measurements
BLS List of Participants in the February 28, 2000 interview and Walkthrough—BLS Proprietary	02282000 Interview_Walkthrough Participants – Backup Process.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS backup schedule for SOCS—BLS Proprietary	SOCS Backup Schedule.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements
BLS backup schedule for LMOS—BLS Proprietary	LMOS Backup Schedule.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements
BLS backup schedule for TIRKS—BLS Proprietary	TIRKS Backup Schedule.doc	PMR-1-P-52	BLS Interconnection Operations – CLEC Performance Measurements
BLS backup documentation for CRIS—BLS Proprietary	No Electronic Copy	PMR-1-P-53	BLS Interconnection Operations – CLEC Performance Measurements
BLS February 2000 Run Book—BLS Proprietary	No Electronic Copy	PMR-1-P-54	BLS Interconnection Operations – CLEC Performance Measurements
BLS January 2000 data from CRIS—BLS Proprietary	No Electronic Copy	PMR-1-P-55	BLS Interconnection Operations – CLEC Performance Measurements
User requirements document – Usage measured—BLS Proprietary	REQUIR~1.DOC	PMR-1-P-56	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS audit documentation request for ICAIS Parity Reporting System—BLS Proprietary	Smith – Audit113099.doc	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements
BLS data dictionary, part 1—BLS Proprietary	DATADIC1.XLS	PMR-1-P-58	BLS Interconnection Operations – CLEC Performance Measurements
BLS data dictionary, part 2—BLS Proprietary	DATADIC2.XLS	PMR-1-P-58	BLS Interconnection Operations – CLEC Performance Measurements
BLS data dictionary, part 3—BLS Proprietary	DATADIC3.XLS	PMR-1-P-58	BLS Interconnection Operations – CLEC Performance Measurements

2.4.1 Data Generation/Volumes

This test did not rely on data generation or volume testing.

2.5 Evaluation Methods

KCI evaluated the data collection and storage policies and procedures in three steps. First, KCI examined the documentation provided to CLECs regarding the production of performance measures. Next, KCI interviewed BellSouth personnel using the interview guides that KCI developed based on the initial documentation reviews. From the information obtained in these meetings, KCI identified other key personnel to interview and other documents to examine. Third, KCI conducted a walkthrough of the BellSouth facilities where performance measures are produced, backup services are provided, and performance measurement data are stored.

2.6 Analysis Methods

The Data Collection and Storage Verification and Validation Review included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth-Georgia OSS Evaluation. These evaluation criteria, provided the

framework of norms, standards and guidelines for the Data Collection and Storage Verification and Validation Review.

KCI analyzed the data collected for this review according to the evaluation criteria referenced above.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VIII-1.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-1	BLS has adequate and complete data collection policies and procedures.	Satisfied	BLS has established and documented procedures to collect data mechanically for its PMAP SQMs at pre-determined times. These include checks to verify the data and determine whether the collected data are updates of previously collected data. These procedures are documented in the following: Audit and Control Points2 and the PMAP Run Books. BLS has established procedures to collect data manually on a regular schedule for its manual SQMs. KCI observed no distinctions in the way BLS collects Retail data and CLEC data.
PMR-1-1-2	BLS has well-identified points of data collection.	Satisfied	BLS has defined the extraction tables for its PMAP SQMs and has identified the sources for all manual SQMs. BLS follows established procedures to collect these data. These procedures are documented in PMR1_000208_IntReportAlford.doc, KPMG 02152000 Audit Response.doc, PMR1_000229_IntReportAlfordSMEs.doc, PMR1_000307_IntReportAlfordQMIS.doc , CCCREP~1.DOC, PMR50222000IntRptFreundlich.doc, PMR4_000217IntReportBillingMoulinWong.doc, PMR4_000217IntReportE911Wong.doc, and Smith-Audit113099.doc.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-1-1-3	BLS has tools in place that enable it to collect data in an adequate and scalable manner.	Satisfied	BLS populates the tables in Staging with snapshots of Barney data. These snapshots contain more data than is required for production of the current SQMs. The PMAP production team has been experiencing difficulty in creating these snapshots due to space limitations in Barney and is working on loading data directly into Staging without using Barney. In some areas, manual data collection has become onerous. The growth of collocation, for example, has increased the amount of data that must be manually collected to compute the related SQMs.[1] The Service Order Accuracy SQM is still produced through a labor-intensive manual process though it is based on random samples instead of the entire service order population. BLS indicated during several interviews that work is underway to mechanize these processes as part of PMAP 3.0.
PMR-1-1-4	BLS has adequate and complete internal controls for its data collection processes.	Satisfied	BLS has tested the queries used by Barney to verify that the data are collected and transferred accurately. KCI reviewed the audit report[2] detailing these queries, and also conducted tests independently as part of its review of data integrity (PMR-4). Data are then transferred into PMAP using File Transfer Protocol (FTP), which has built-in verification checks. There are also record counts, FTP process verification checks, and internal tracking of errors to ensure data have been correctly transferred. Manual data collection includes checklists and other controls to ensure that the data collected are accurate.

[1] BellSouth is testing a mechanical procedure to process these measures through PMAP, and is encouraging the mechanization of data collection from all legacy/source systems.

[2] Referenced as "Smith – Audit113099.doc" in "Data Sources" section of this report.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			KCI based its satisfactory result for this criterion on BLS's representation that it is mechanizing these manual processes as part of PMAP 3.0.
PMR-1-2-1	BLS has adequate and complete data collection policies and procedures.	Not Complete	Barney retains raw, unprocessed data dating back to 1997. Within PMAP, BLS retains 36 months of DDS level data and 13 months of NODS level data. BLS backs up data in the legacy / source systems that provide data for both PMAP and manual SQMs. BLS has documented backup schedules and processes for determining which data to back up. Many of the legacy / source systems for manual SQM data do not retain sufficient source data to re-create prior month's reports. Most of these systems do not retain data for more than 45 to 60 days and several systems retain data for only a few days. One system could not provide sufficient data for re-creating any prior month's historical SQM report. KCI suggested that the raw data, the early-stage data, and the SQM reports be retained for a sufficient length of time to support any audits that might be required by the GPSC. See Exception 79 for additional information.
PMR-1-2-2	BLS is able to identify the storage sites for the data used in metrics calculations.	Satisfied	BLS has centralized its data centers in Charlotte, NC and in Birmingham, AL. PMAP production systems are located in Charlotte, but the developers are located in Birmingham. All legacy / source systems have been centralized in these locations. During a walkthrough of the facilities, KCI determined that BLS has a system in place to locate backups for all data, whether used in PMAP or manual SQMs. It tracks its tapes within the silos and ejects them when they have not been recently accessed. When these tapes are ejected, they are automatically assigned a storage location. BLS also has controls to determine whether these tapes are

Test Cross-Reference	Evaluation Criteria	Result	Comments
			available for reuse.
PMR-1-2-3	BLS has tools in place that enable it to store data in an adequate fashion and scale.	Satisfied	BLS has established procedures for monitoring its available storage capacity for online systems, including the legacy / source systems and the PMAP Systems as well as procedures for monitoring backup capacity for all systems. BLS has also established policies and procedures for acquiring additional capacity. BLS monitors available space on PMAP and can add additional within four weeks.
PMR-1-2-4	BLS has internal controls in place that assure that data stored accurately reflect data that was collected.	Satisfied	Backups have validation checks for operators. Logs also indicate when backups have failed. This is documented in PMR1022800IntReportAlfordEDS.doc, PMR1_022800_WalkThroughRptAlford.doc, PMR1_000306IntRptAlfordEDS.doc, and PMR41and5_000201IntRptWong.doc.

B. Test Results: Metrics Definition Documentation and Implementation Verification and Validation Review (PMR2)

1.0 Description

The objective of the Metrics Definition Documentation and Implementation Verification and Validation Review (PMR-2) was to evaluate the definitions of the Service Quality Measurements (SQMs) and the associated descriptions of the calculations in the October 22, 1999 version of BellSouth's Georgia SQM documentation.

The Metrics Definition Documentation and Implementation Verification and Validation Review evaluated the completeness and logic of the stated definitions and calculations, as well as their mutual consistency. The test then compared the descriptions of the calculations and exclusions in the SQM documentation to the computation instructions in BellSouth's *PMAP Raw Data Users Manual*,[1] unless the SQM was a "manual SQM" (i.e., an SQM that is wholly or primarily calculated outside of PMAP), in which case KCI compared the descriptions of the calculations and exclusions to the computation instructions provided by BellSouth subject matter experts.

BellSouth applies exclusions, either in the process of creating the raw data or when the SQMs are calculated. KCI examined exclusions of the former type in this evaluation, by investigating whether BellSouth actually implemented them. KCI examined the implementation of the other exclusions as part of the PMR5 Calculation Validation test.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

BellSouth updates SQM documentation on a quarterly basis, subject to approval by the Georgia Public Services Commission (GPSC). For each SQM, this document contains the definition, the exclusions, the business rules, the levels of disaggregation, and the calculation description, along with other information pertaining to report structure, data retention, and evaluation standards. This document is the official reference for all SQMs reported by BellSouth.

[1] PMAP is the acronym for BellSouth's Performance Measurement Analysis Platform.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target was the set of definitions, calculation descriptions, and associated information in the October 1999 SQM documentation. Processes, sub-processes, and evaluation measures are presented in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

Table VIII-2.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Pre-Ordering	Average OSS Response Time and Response Interval	Adequacy and completeness of the SQM definition	PMR2-1-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-1-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-1-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-1-4
	OSS Interface Availability	Adequacy and completeness of the SQM definition	PMR2-2-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-2-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-2-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-2-4
Ordering	Percent Rejected Service Requests	Adequacy and completeness of the SQM definition	PMR2-3-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-3-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-3-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-3-4
	Reject Interval	Adequacy and completeness of the SQM definition	PMR2-4-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-4-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-4-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-4-4

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Firm Order Confirmation Timeliness	Adequacy and completeness of the SQM definition	PMR2-5-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-5-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-5-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-5-4
	Speed of Answer in Ordering Center	Adequacy and completeness of the SQM definition	PMR2-6-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-6-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-6-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-6-4
Provisioning	Mean Held Order Interval & Distribution Intervals	Adequacy and completeness of the SQM definition	PMR2-7-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-7-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-7-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-7-4
	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Adequacy and completeness of the SQM definition	PMR2-8-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-8-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-8-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-8-4
	Percent Missed Installation Appointments	Adequacy and completeness of the SQM definition	PMR2-9-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-9-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-9-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-9-4
	Average Completion Interval Order Completion Interval Distribution	Adequacy and completeness of the SQM definition	PMR2-10-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-10-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-10-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-10-4
	Average Completion Notice Interval	Adequacy and completeness of the SQM definition	PMR2-11-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-11-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-11-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-11-4

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Coordinated Customer Conversions	Adequacy and completeness of the SQM definition	PMR2-12-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-12-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-12-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-12-4
	Percent Provisioning Troubles Within 30 Days	Adequacy and completeness of the SQM definition	PMR2-13-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-13-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-13-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-13-4
	Total Service Order Cycle Time	Adequacy and completeness of the SQM definition	PMR2-14-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-14-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-14-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-14-4
	Service Order Accuracy	Adequacy and completeness of the SQM definition	PMR2-15-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-15-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-15-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-15-4
Maintenance & Repair	Missed Repair Appointments	Adequacy and completeness of the SQM definition	PMR2-16-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-16-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-16-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-16-4
	Customer Trouble Report Rate	Adequacy and completeness of the SQM definition	PMR2-17-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-17-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-17-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-17-4
	Maintenance Average Duration	Adequacy and completeness of the SQM definition	PMR2-18-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-18-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-18-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-18-4

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Percent Repeat Troubles Within 30 Days	Adequacy and completeness of the SQM definition	PMR2-19-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-19-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-19-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-19-4
	Out of Service > 24 hours	Adequacy and completeness of the SQM definition	PMR2-20-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-20-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-20-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-20-4
	OSS Interface Availability	Adequacy and completeness of the SQM definition	PMR2-21-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-21-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-21-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-21-4
	OSS Response Interval and Percentages	Adequacy and completeness of the SQM definition	PMR2-22-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-22-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-22-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-22-4
	Average Answer Time – Repair Centers	Adequacy and completeness of the SQM definition	PMR2-23-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-23-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-23-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-23-4
Billing	Invoice Accuracy	Adequacy and completeness of the SQM definition	PMR2-24-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-24-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-24-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-24-4
	Mean Time to Deliver Invoices	Adequacy and completeness of the SQM definition	PMR2-25-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-25-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-25-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-25-4

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Usage Data Delivery Accuracy	Adequacy and completeness of the SQM definition	PMR2-26-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-26-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-26-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-26-4
	Usage Data Delivery Completeness	Adequacy and completeness of the SQM definition	PMR2-27-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-27-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-27-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-27-4
	Usage Data Delivery Timeliness	Adequacy and completeness of the SQM definition	PMR2-28-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-28-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-28-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-28-4
	Mean Time to Deliver Usage	Adequacy and completeness of the SQM definition	PMR2-29-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-29-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-29-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-29-4
Operator Services (Toll) and Directory Assistance	Average Speed to Answer (Toll)	Adequacy and completeness of the SQM definition	PMR2-30-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-30-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-30-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-30-4
	Percent Answered within "X" Seconds (Toll)	Adequacy and completeness of the SQM definition	PMR2-31-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-31-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-31-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-31-4
	Average Speed to Answer (DA)	Adequacy and completeness of the SQM definition	PMR2-32-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-32-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-32-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-32-4

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Percent Answered within "X" Seconds (DA)	Adequacy and completeness of the SQM definition	PMR2-33-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-33-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-33-3
		Consistency between he stated exclusions and their implementation in the raw data creation process	PMR2-33-4
E911	Timeliness	Adequacy and completeness of the SQM definition	PMR2-34-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-34-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-34-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-34-4
	Accuracy	Adequacy and completeness of the SQM definition	PMR2-35-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-35-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-35-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-35-4
	Mean Interval	Adequacy and completeness of the SQM definition	PMR2-36-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-36-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-36-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-36-4
Trunk Group Performance	Trunk Group Service Report	Adequacy and completeness of the SQM definition	PMR2-37-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-37-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-37-3

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-37-4
	Trunk Group Service Detail	Adequacy and completeness of the SQM definition	PMR2-38-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-38-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-38-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-38-4
	Trunk Group Performance-Aggregate[2]	Adequacy and completeness of the SQM definition	PMR2-39-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-39-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-39-3

[2] This SQM was documented only in the 2/24/00 version of the SQM documentation and did not exist in the 10/22/99 version. Therefore, the PMR2 test for this SQM was performed solely based on the 2/24/00 version.

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-39-4
	Trunk Group Performance-CLEC Specific[3]	Adequacy and completeness of the SQM definition	PMR2-40-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-40-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-40-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-40-4
Collocation	Average Response Time	Adequacy and completeness of the SQM definition	PMR2-41-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-41-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-41-3

[3] This SQM was documented only in the 2/24/00 version of the SQM documentation and did not exist in the 10/22/99 version. Therefore, the PMR2 test for this SQM was performed solely based on the 2/24/00 version.

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-41-4
	Average Arrangement Time	Adequacy and completeness of the SQM definition	PMR2-42-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-42-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-42-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-42-4
	Percent Due Dates Missed	Adequacy and completeness of the SQM definition	PMR2-43-1
		Adequacy, completeness, and logic of the SQM calculation description	PMR2-43-2
		Consistency between (a) the SQM calculation description and exclusions, and (b) computation instructions provided by BLS	PMR2-43-3
		Consistency between the stated exclusions and their implementation in the raw data creation process	PMR2-43-4

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VIII-2.2: Data Sources for Metrics Definition Documentation and Implementation Verification and Validation Review

Document	File Name	Location in Work Papers	Source
Pre-Ordering OSS Response Interval Interview Report of the January 21, 2000 interview.	PMR4_000121_IntRptWong_PreOrderOSSIntvl.doc	PMR-2-A-1	KCI
Pre-Ordering OSS Response Interval summarized raw data for November, 1999.	Response Data For November 1999.xls	PMR-2-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Response Interval raw data for November 19, 1999.	tag_preorder.flat.file.20000119	PMR-2-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Response Interval summarized raw data for November 19, 1999.	TAG Data Test Case (Summary).xls	PMR-2-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Response Interval response regarding the 't.resp_time' field used in the raw data.	No Electronic Copy	PMR-2-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Response Interval report, November 1999.	OSS_Response_Time_Interval.XLS	PMR-2-A-1	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Pre-Ordering OSS Interface Availability raw data.	KPMG2.XLS	PMR-2-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Interface Availability calculating instructions.	AUDITK~1.DOC	PMR-2-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Interface Availability information regarding the retention of schedules.	KPMGSC~1.DOC	PMR-2-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Interface Availability website used to communicate schedules to the CLECs.	No Electronic Copy	PMR-2-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Interface Availbility response to Interview Guide.	OSSINTER.DOC	PMR-2-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Interface Availbility description of the extraction of data from REM.	REM Availability Calculations.doc	PMR-2-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering OSS Interface Availability Interview Report of the February 18, 2000 interview.	PMR4_000218IntReportAvailabilityWong.doc	PMR-2-A-2	KCI

Document	File Name	Location in Work Papers	Source
Pre-Ordering OSS Interface Availability report, November 1999	OSS Interface Availability SQM.xls	PMR-2-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP response to questions regarding raw data	RAWDATA.XLS	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP clarifications to RAWDATA.XLS regarding raw data	Q&AKPMG.XLS	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP methodology on how some raw data fields were derived	ORFILE2.DOC	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP response to request regarding the derivation of raw data fields	ORFILE.DOC	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP response to questions regarding specific raw data fields	20000113.DOC	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP response to questions regarding raw data variables in LEO and LON	DATARE~1.DOC	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP Interview Report for the March 13, 2000 interview	PMR2_000313_IntReportMoulin_OrdPMAP.doc	PMR-2-A-3	KCI

Document	File Name	Location in Work Papers	Source
Ordering PMAP information regarding a table used for the FOC Timeliness metric	FOCTIM~1.DOC	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP information regarding a table used for the FOC Timeliness metric	NOE3D1~1.DOC	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP information regarding a table used for the Percent Rejeted Servie Requests metric	NOE0E6~1.DOC	PMR-2-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering PMAP reports for all metrics, November 1999	Many electronic files.	PMR-2-A-3	BLS (Performance Measurement Analysis Platform "PMAP" Web site)
Ordering PMAP raw data for all metrics, November 1999	order_servorder_KPMG_november_rawdata.txt order_rejintand%rejbyint_KPMG_november_rawdata.txt order_foctimeliness_KPMG_november_rawdata.txt order_foctimeliness(trunks)_KPMG_november_rawdata.txt order_fatalreject_KPMG_november_rawdata.txt	PMR-2-A-3	BLS (PMAP Web site)
Ordering Speed of Answer – Business information on how fields are calculated	No Electronic Copy	PMR-2-A-4	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Ordering Speed of Answer – Business response to various questions	No Electronic Copy	PMR-2-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering Speed of Answer – Business report, November 1999	Speed of Answer in Ordering Center SQM.xls	PMR-2-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering Speed of Answer – Business Interview Report for the February 3, 2000 interview	PMR4_000203IntReportASABusinessWong.doc	PMR-2-A-4	KCI
Ordering Speed of Answer – Residence information on a raw data field	No Electronic Copy	PMR-2-A-5	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering Speed of Answer – Residence report, November 1999	Speed of Answer in Ordering Center SQM.xls	PMR-2-A-5	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering Speed of Answer – Residence Interview Report for the March 23, 2000 interview	PMR2_000323_IntReportMoulin_ASA-Residence.doc	PMR-2-A-5	KCI
Ordering Speed of Answer – Residence Interview Report for the February 3, 2000 interview	PMR4_000203IntReportASAResidenceWong.doc	PMR-2-A-5	KCI
Ordering Speed of Answer – Residence raw data sample, November 1999	No Electronic Copy	PMR-2-A-5	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Ordering Speed of Answer – LCSC response to KCI's question regarding the raw data file	BDY.RTF	PMR-2-A-6	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering Speed of Answer – LCSC explanation of raw data fields	Explain ASA and Tot calls.doc	PMR-2-A-6	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering Speed of Answer – LCSC report, November 1999	Speed of Answer in Ordering Center SQM.xls	PMR-2-A-6	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering Speed of Answer – LCSC Interview Report of the February 3, 2000 interview	PMR4_000203IntReportASALCSCWong.doc	PMR-2-A-6	KCI
Ordering Speed of Answer – LCSC raw data sample, November 1999	dec_3rd week_LCSC Birm.txt	PMR-2-A-6	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP responses to questions about raw data fields	KPMGANS.XLS	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP information on missed appointment codes	MISSEDAP.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning PMAP location of raw data fields and information on how they are derived	KPMDOC01.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP response to KCI's interview guide regarding raw data fields, submitted by Mike Nason of BLS	1AINTE~1.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP response to KCI's interview guide regarding raw data fields, submitted by Terri Ferrara of BLS	BHAM-K~1.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP Interview Report of March 13, 2000 interview	PMR2_000313_IntReportMoulin_ProvPMAP.doc	PMR-2-B-7	KCI
Provisioning PMAP list of Missed Appointment Codes	MISSED~1.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP list of field names and values for a raw data table used for the TSOCT metric	MARCH1~1.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP response to KCI's questions regarding raw data tables	KPMGRD1.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP information regarding Missed Appointment Codes	No Electronic Copy	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning PMAP information regarding a table used for Percent Missed Installation Appointments	NODS_V~3.DOC	PMR-2-B-7	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning PMAP reports for all metrics, November 1999	Many electronic files.	PMR-2-B-7	BLS (PMAP Web site)
Provisioning PMAP raw data all metrics, November 1999	prov_ordercompintdist_KPMG_november_rawdata.txt prov_ordercompintdist(trunk)_KPMG_november_rawdata.txt prov_jeopnotint_KPMG_november_rawdata.txt prov_heldorders_KPMG_november_rawdata.txt prov_avecompnotint_KPMG_november_rawdata.txt prov_%missinstalapp_KPMG_november_rawdata.txt prov_%missinstalapp(trunk)_KPMG_november_rawdata.txt	PMR-2-B-7	BLS (PMAP Web site)
Provisioning CCC procedures for manual collection of data	CCCREP~1.DOC	PMR-2-B-8	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning CCC raw data, October 1999	GAOCTCCC.XLS	PMR-2-B-8	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning CCC screen shot from the CCSS system	COORDINATED	PMR-2-B-8	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning CCC Interview Report of the March 9, 2000 interview	PMR2_000309_IntReportMoulin_CCC.doc	PMR-2-B-8	KCI
Provisioning CCC Interview Report of the February 16, 2000 interview	PMR4_000216IntReportCCCWong.doc	PMR-2-B-8	KCI
Provisioning CCC report, November 1999	Coordinated_Customer_Conversions_111999.xls	PMR-2-B-8	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning SOA calculation procedures	SOA Procedures.doc	PMR-2-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning SOA report, November 1999	SOA_11~1.XLS	PMR-2-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning SOA Interview Report of the February 22, 2000	PMR5022200IntRptFreundlich.doc	PMR-2-B-9	KCI
Provisioning SOA response to Interview Summary	RE.DOC	PMR-2-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning SOA description of the sampling procedures	SAMPLE.DOC	PMR-2-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning SOA sample run documentation	SAMPLE~1.DOC	PMR-2-B-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning SOA Interview Report of the March 10, 2000 interview	PMR2_000310_IntReport_SOA.doc	PMR-2-B-9	KCI
Provisioning SOA Interview Report of the February 28, 2000 interview	PMR4_000228IntReportSOAMangla.doc	PMR-2-B-9	KCI
Provisioning SOA sample of raw data, November 1999	Mech GA Business under 10.xls	PMR-2-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
M&R PMAP response with descriptions of possible values for selected fields	MRAUD~1.XLS	PMR-2-B-10	BLS – Interconnection Operations – CLEC Performance Measurements
M&R PMAP Interview Report of the March 13, 2000 interview	PMR2_000313_IntReportMoulin_M&R_PMAP.doc	PMR-2-B-10	KCI
M&R PMAP response to KCI's questions regarding raw data field values	CAUSE_~1.XLS	PMR-2-B-10	BLS – Interconnection Operations – CLEC Performance Measurements
M&R PMAP reports for all metrics, November 1999	Many electronic files.	PMR-2-B-10	BLS (PMAP Web site)
M&R PMAP raw data files for all metrics, November 1999	maint_oos24_KPMG_november_rawdata.txt maint_missrepapp_KPMG_november_rawdata.txt maint_linesinserv_KPMG_november_rawdata.txt maint_custroubreprate_KPMG_november_rawdata.txt maint_avedur_KPMG_november_rawdata.txt maint_%reptroubwithin30_KPMG_november_rawdata.txt	PMR-2-B-10	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
M&R OSS Response Interval calulation procedures	No Electronic Copy	PMR-2-C-11	BLS – Interconnection Operations – CLEC Performance Measurements
M&R OSS Response Interval Interview Report for the March 21, 2000 interview	PMR2_000321_IntReportMoulin_M&R_OSSRespIntvl.doc	PMR-2-C-11	KCI
M&R OSS Response Interval Interview Report for the February 23, 2000 interview	PMR4_000223IntReportMROSSResponseIntervalWong.doc	PMR-2-C-11	KCI
M&R OSS Response Interval reports, November 1999	OSS Response Interval SQM (M&R) BST Total.xls OSS Response Interval SQM (M&R).xls	PMR-2-C-11	BLS (PMAP Web site)
M&R OSS Response Interval raw data file, November 1999	1199CLEC.xls	PMR-2-C-11	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – Business information on fields and procedures	No Electronic Copy	PMR-2-C-12	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – Business Interview Report for the February 14, 2000 interview	PMR4_000214IntReportAvgDelayBusinessWong.doc	PMR-2-C-12	KCI
M&R Average Answer Time – Business report, November 1999	Answer Time - Repair Center SQM.xls	PMR-2-C-12	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
M&R Average Answer Time – Business sample of raw data, October 1999	ASAOCT.XLS	PMR-2-C-12	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – UNE calculating formulas	No Electronic Copy	PMR-2-C-13	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – UNE report, November 1999	Answer Time - Repair Center SQM.xls	PMR-2-C-13	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – UNE raw data, October 1999	une.unl	PMR-2-C-13	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – UNE column names	columns.txt	PMR-2-C-13	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – BRMC calculating formulas	No Electronic Copy	PMR-2-C-14	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – BRMC responses to KCI's Interview Guide	INTERV~1.DOC	PMR-2-C-14	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
M&R Average Answer Time – BRMC Interview Report for the March 15, 2000 interview	PMR4_000215IntReportAvgDelayResidenceWong.doc	PMR-2-C-14	KCI
M&R Average Answer Time – BRMC report, November 1999	Answer Time – Repair Center SQM.xls	PMR-2-C-14	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – BRMC raw data, November 1999	brmc.unl	PMR-2-C-14	BLS – Interconnection Operations – CLEC Performance Measurements
M&R Average Answer Time – BRMC column names	columns.txt	PMR-2-C-14	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Invoice documentation regarding handling of data for Mean Time to Deliver Invoices metric	PURPOSE1.DOC PROCED~1.DOC PROCED~2.DOC PROCED~3.DOC	PMR-2-C-15	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Invoice phrase code list for CABS	ADJPC1~1.XLS	PMR-2-C-15	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Invoice Interview Report of the February 9, 2000 interview	PMR5_000209IntRptFreundlich.doc	PMR-2-C-15	KCI
Billing Invoice definitions of columns in raw data files	RESPON~1.DOC	PMR-2-C-15	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing Invoice response with general calculation information	0217IN~1.DOC	PMR-2-C-15	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Invoice Documentation for calculating BST Aggregate Adjustment data (CRIS) & total BST revenue	CLECDO~1.DOC	PMR-2-C-15	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Invoice flowchart of raw data files used for PMAP	DOCUME~1.DOC	PMR-2-C-15	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Invoice Interview Report for the February 17, 2000 interview	PMR4_000217IntReportBilling Wong.doc	PMR-2-C-15	KCI
Billing Invoice reports, November 1999	Invoice Accuracy CLEC (region).txt Invoice Accuracy SQM (Region).xls Mean Time to Deliver Invoice CLEC (Reg).txt Mean Time to Deliver Invoices SQM (Reg).xls	PMR-2-C-15	BLS (PMAP Web site)
Billing Usage responses to questions regarding the DAYS_DELAYED field	BILLLIN~4.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Usage document describing the requirements for ADUF, ODUF, and CMDS	REQUIR~1.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing Usage response to KCI's Interview Guide, submitted by Andy Plummer of BLS	BONNER.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Usage document describing how to manually calculate the ODUF Message Delay Report	KPMGMS~1.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Usage responses to KCI's Interview Summary, submitted by Andy Plummer of BLS	PACKKPMG.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Usage responses to KCI's Interview Summary and Interview Guide, submitted by Janet Landefeld of BLS	REPLUS~1.DOC REPLUS~2.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Usage describing the criteria for computing Usage metrics	USAGET~1.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Usage Interview Report of the March 7, 2000 interview	PMR2_000307_IntReportMoulin_BillingUsage.doc	PMR-2-C-16	KCI
Billing Usage flowchart of raw data files used for PMAP	DOCUME~1.DOC	PMR-2-C-16	BLS – Interconnection Operations – CLEC Performance Measurements
Billing Usage of the February 23, 2000 interview	PMR4_000223IntReportBillingWong.doc	PMR-2-C-16	KCI

Document	File Name	Location in Work Papers	Source
Billing Usage reports, November 1999	Usage Data Delivery Accuracy CLEC.txt Usage Data Delivery Accuracy SQM.xls Usage Timeliness & Completeness CLEC.txt Usage Timeliness & Completeness SQM.xls	PMR-2-C-16	BLS (PMAP Web site)
OS/DA instructions for calculating metrics	KPMGIN~1.DOC	PMR-2-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
OS/DA raw data for DA and Toll	NOV_DA.XLS NOV_TOLL.XLS	PMR-2-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
OS/DA response to KCI's question about OS measurements	No Electronic Copy	PMR-2-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
OS/DA Interview Report of the February 1, 2000 interview	PMR4,1 and5_000201IntRptWong.doc	PMR-2-C-17	KCI
OS/DA Interview Report of the March 7, 2000 interview	PMR1_000307_IntReportAlfordQMIS.doc	PMR-2-C-17	KCI
OS/DA response to KCI's request for information	KPMG327.DOC	PMR-2-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
OS/DA reports, November 1999	Speed to Answer Performance OS Toll SQM.txt Speed to Answer Performance OS DA SQM.txt	PMR-2-C-17	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
E911 raw data, October 1999	fsoi1099	PMR-2-C-18	BLS – Interconnection Operations – CLEC Performance Measurements
E911 calculation instructions	E911_I~1.DOC	PMR-2-C-18	BLS – Interconnection Operations – CLEC Performance Measurements
E911 descriptions of fields in raw data file	SCCSPEC2.DOC	PMR-2-C-18	BLS – Interconnection Operations – CLEC Performance Measurements
E911 revised calculation instructions	E911_I~3.DOC	PMR-2-C-18	BLS – Interconnection Operations – CLEC Performance Measurements
E911 response to KCI's Interview Summary	PMR4_0~1.DOC	PMR-2-C-18	BLS – Interconnection Operations – CLEC Performance Measurements
E911 Interview Report of February 17, 2000 interview	PMR4_000217IntReportE911Wong.doc	PMR-2-C-18	KCI
E911 reports, November 1999	E911 Tmlns & Accrcy SQM (BST & CLEC Resale).xls E911 Mean Intvl SQM (BST & CLEC Resale).xls	PMR-2-C-18	BLS (PMAP Web site)
Trunk Group Performance – Old reports, September 1999	CLECAL9.DOC CLECGT9.DOC LOCAL9.DOC	PMR-2-C-19	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Trunk Group Performance – Old reports, September 1999	ALL2.DOC SUJANCTT.PRN	PMR-2-C-19	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Old reports, September 1999	LOCGT9.DOC SUJANLOC.PRN CLECAL9.DOC	PMR-2-C-19	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Old Interview Report of March 2, 2000 interview	PMR4_000302IntReportTrunk Mangla.doc	PMR-2-C-19	KCI
Trunk Group Performance – New calculation instructions	Instructions for producing the Bell South reports for September 1999.doc	PMR-2-C-20	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – New calculations and description of processes	data processing document for KPMG.doc	PMR-2-C-20	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – New report	Trunk_Group_Blocking_022000.xls	PMR-2-C-20	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – New sample raw data file	testga.txt blk099ga.dct	PMR-2-C-20	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation raw data, October, 1999	GA1099RS.XLS	PMR-2-C-21	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Collocation Interview Report of the January 19, 2000 interview	PMR5_000119IntRptFreundlich.doc	PMR-2-C-21	KCI
Collocation alias list	GAAL1099.XLS	PMR-2-C-21	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation instructions	1099IN~1.DOC	PMR-2-C-21	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation report, October, 1999	AGGGA.XLS	PMR-2-C-21	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation Interview Report of the February 28, 2000 interview	PMR2_000228_IntRptMoulinCollocation.doc	PMR-2-C-21	KCI
Collocation report, November, 1999	Collocation_111999.xls	PMR-2-C-21	BLS – Interconnection Operations – CLEC Performance Measurements
PMAP Ordering Interview Report of the March 13, 2000 interview	PMR2_000313_IntRptMoulinPMAPOrd.doc	PMR2-C-22	KCI
PMAP M&R Interview Report of the March 13, 2000 interview	PMR2_000313_IntRptMoulinPMAPMR.doc	PMR2-C-22	KCI
PMAP Provisioning Interview Report of the March 13, 2000 interview	PMR2_000313_IntRptMoulinPMAPProv.doc	PMR2-C-22	KCI
Summary of information regarding NODS fields	NODS fields.xls	PMR2-C-23	KCI

Document	File Name	Location in Work Papers	Source
Information regarding the source data for the Average Speed of Answer reports, M&R OSS Response Intervals and both OSS Interface Availability Reports	ASA.DOC MR_RESP.DOC OSS_IA.DOC	PMR-2-C-24	BLS – Interconnection Operations – CLEC Performance Measurements
Corrected information regarding the source data for Average Speed of Answer Reports	ASA.DOC	PMR-2-C-24	BLS – Interconnection Operations – CLEC Performance Measurements
Data dictionary for raw data tables and fields	DATADIC2.XLS	PMR-2-C-25	BLS – Interconnection Operations – CLEC Performance Measurements
Responses with information regarding NODS fields	OP7_000306DataReqKanaujia.doc SQMANS~1.DOC	PMR-2-C-26	BLS – Interconnection Operations – CLEC Performance Measurements
Information on calculating all Billing metrics.	FW: BILLIN~1.DOC	PMR-2-C-27	BLS – Interconnection Operations – CLEC Performance Measurements
Code used in calculating Pre-Ordering OSS Response Interval	getresponse master script.docsql source.docmassage_perl.docresponse_production_table.doc dbload command files.doc load_data source.doc yesterday source.doc OSS Response Report Source.doc OSS Response Reporting Process.vsd OSS Response Data Process.vsd Cover Letter.doc	PMR-2-P-1	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Code used in calculating Provisioning CCC	CCC.4GL	PMR-2-P-2	BLS – Interconnection Operations – CLEC Performance Measurements
Code used in calculating Billing metrics	REPMEA~1.DOC DOCBST~1.DOC REPLIN~1.DOC SQLQUE~1.DOC REPLY0~1.DOC	PMR-2-P-3	BLS – Interconnection Operations – CLEC Performance Measurements
Code used in calculating Trunk Group Performance metrics	TRUNKG~1.DOC TRUNKG~2.DOC	PMR-2-P-4	BLS – Interconnection Operations – CLEC Performance Measurements
Code used in calculating Trunk Group Performance metrics	TRKGRPDT.DOC TRKGRPSM.DOC	PMR-2-P-4	BLS – Interconnection Operations – CLEC Performance Measurements
Code used in calculating Trunk Group Performance metrics	ALL2.SQL SUJANCTT.SQL CLEC.SQL RSTEWART.SQL LOCAL.SQL SUJANLOC.SQL	PMR-2-P-4	BLS – Interconnection Operations – CLEC Performance Measurements
SOCS User Guide	No Electronic Copy	PMR-2-P-5	BLS – Interconnection Operations – CLEC Performance Measurements
Raw data used in calculating Billing metrics, October, 1999	EYOCT~1.XLS	PMR-2-P-6	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Raw data used in the Average Completion Notice Interval, Jeopardy Interval and Total Service Order Cycle Time metrics	ACNIJE~1.XLS ACNIJE~1.DOC	PMR-2-P-7	BLS – Interconnection Operations – CLEC Performance Measurements

2.4.1 Data Generation/Volumes

This test relied on document reviews and interviews with BellSouth personnel.

2.5 Evaluation Methods

In the first stage of the Metrics Definition Documentation and Implementation Verification and Validation Review, KCI examined in detail the Definition, Calculation, and Business Rules sections for each SQM in the October 22, 1999 version of the SQM documentation. KCI also took into consideration changes published in the February 24, 2000 version of the SQM documentation. KCI examined the content of and the consistency among the statements related to each SQM.

In the second stage of this evaluation, KCI compared the statements in the Calculation and Exclusions sections for each SQM to the corresponding computation instructions published by BellSouth in the *PMAP Raw Data Users Manual*[4], or to the data provided by BellSouth SMEs in response to KCI requests. Whenever a disagreement was found, KCI attempted to determine which description coincided with the actual computations.

KCI added a third stage to this evaluation whenever the second stage revealed that some or all of the exclusions listed in the SQM documentation did not appear in the computation instructions. In that case, KCI reviewed the associated raw data creation process to determine if the exclusions in question were applied there instead.

2.6 Analysis Methods

The Metrics Definition Documentation and Implementation Verification and Validation Review test included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth-Georgia OSS Evaluation. These evaluation measures provided the framework of norms, standards and guidelines for Metrics Definition Documentation and Implementation Verification and Validation Review.

[4] Whenever the *PMAP Raw Data Users Manual* provided a different but otherwise identical set of instructions for Trunks data and Non-Trunks data, this test was restricted to evaluating the instructions for Non-Trunks data due to the higher availability of Non-Trunks data.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VIII-2.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Pre-Ordering - Average OSS Response Time and Response Interval			
PMR2-1-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average. An additional set of measures is also defined: the percentage of occurrences within specific intervals (less than 2.3 seconds and more than 6 seconds).
PMR2-1-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average (i.e., sum of the measurements divided by the number of measurements). The numerator uses appropriate time stamps to measure OSS response time. The documented calculation incorrectly states that the average response time should be multiplied by 100. However, this does not impede understanding of the definition of the SQM.
PMR2-1-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions prescribe the calculation of an average, as specified by the stated calculation. The numerator aggregates daily OSS response times over the reporting period. These daily OSS response times are automatically calculated within Navigator, a commercial system for which internal processes and programs are proprietary to third parties and were, therefore, not tested. The denominator aggregates daily accesses to the Pre-Ordering systems over the reporting period, as specified by the stated calculation. The instructions do not call for exclusion of records, which is consistent with the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			SQM documentation.
PMR2-1-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation does not list any exclusion for this SQM.
Pre-Ordering – OSS Interface Availability			
PMR2-2-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an availability measurement. OSS availability is defined as hours actually available as a percentage of hours scheduled for availability.
PMR2-2-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the stated calculation of the SQM was incomplete, as it did not detail the calculations of functional availability and scheduled availability. As a result, KCI issued Exception 93. BLS changed the July SQM to provide additional detail on the calculation of functional availability and scheduled availability. KCI's re-test of the changes found the additional detail adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.
PMR2-2-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Not Complete	The computation instructions call for the calculation of actual interface availability as a percentage of scheduled availability, as specified by the stated calculation. The instructions do not call for exclusion of records, which is consistent with the SQM documentation. However, the SQM documentation requires that all unscheduled full outages be reflected in the SQM calculation, as a reduction in reported availability. BLS's stated definition of full outages is fairly broad, and includes outages that affect access by the customers, regardless of the cause. However, BLS's change control Web site lists outages (for the LENS system in particular, for October

Test Cross-Reference	Evaluation Criteria	Result	Comments
			through December 2000) that are unscheduled and meet the stated definition of full outages, which are not reflected in the availability calculation. (BLS reported 100% availability for the LENS system in all three months.) BLS stated that it is instituting a process by which all relevant outages (including those listed on its change control Web site) will be taken into consideration when calculating the SQM values. Further, BLS will update the SQM documentation to clarify its position on the definition of full outages. See Exception 133 for additional information on this issue.
PMR2-2-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Not Complete	The SQM documentation does not explicitly list any exclusion for this SQM. However, as indicated in PMR2-2-3 above, BLS has incorrectly excluded a number of unscheduled, full outages listed on the change control Web site, from its calculation of this SQM for October through December 2000. BLS has stated that it is instituting a process by which all relevant outages (including those listed on its change control Web site) will be taken into consideration when calculating the SQM values. Further, BLS will update the SQM documentation to clarify its position on the definition of full outages. See Exception 133 for additional information on this issue.
Ordering – Percent Rejected Service Requests			
PMR2-3-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage. The 10/22/99 version of the Georgia SQM documentation contained an inappropriate definition of validity of LSRs relevant only to electronically submitted LSRs. This was corrected in the 2/24/00 version.
PMR2-3-2	The stated calculation is complete, logical, and consistent with the	Satisfied	The calculation is properly stated as a percentage.

Test Cross-Reference	Evaluation Criteria	Result	Comments
	definition.		The numerator, number of rejected service requests, is a subset of the denominator, total service requests received, which is logical.
PMR2-3-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The calculations in the computation instructions are consistent with the calculations in the stated calculation. The exclusion listed in the SQM documentation, Service Requests cancelled by the CLEC prior to being rejected/clarified, is not addressed in the computation instructions. See PMR2-3-4 and Exception 87 for additional information. Exception 87 is closed.
PMR2-3-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	KCI's initial evaluation revealed that the exclusion referred to in the PMR2-3-3 comments was not addressed in the raw data creation process. As a result, KCI issued Exception 87. BLS determined that the exclusion in question had been performed during BLS's staging process, but was changed during system modifications. A programming change was made to make the process consistent with BLS's computational instructions. KCI's subsequent review found the modified process consistent with the computational instructions. See Exception 87 for additional information on this issue. Exception 87 is now closed.
Ordering – Reject Interval			
PMR2-4-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration. The 10/22/99 version of the SQM documentation contains an inappropriate reference to validity of LSRs, relevant only to electronically-submitted LSRs. This was not corrected in the 2/24/00 version, however this reference has been eliminated in subsequent versions of the SQM documentation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-4-2	The stated calculation is complete, logical, and consistent with the definition.	Not Complete	The calculation is properly stated as an average. However, the stated calculation does not clearly state which time stamps BLS uses to measure reject duration. See Exception 122 for additional information on this issue.
PMR2-4-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Not Complete	KCI's initial evaluation revealed that fatal rejects were not included when computing this SQM for the fully mechanized category. Since fatal rejects are instantaneous, the numerator would be the same. However, the denominator would be increased by the number of fatal rejects. As a result, KCI issued Exception 87. The May SQM was modified to remove the reference to the inclusion of fatal rejects. KCI's re-test of the change to the SQM found it adequate since the method employed is more conservative. See Exception 87 for additional information on this issue. Exception 87 is closed. Additionally, the stated calculation does not clearly state which time stamps BLS uses to measure reject duration. Further, based upon KCI's understanding of the stated calculation, BLS is not using appropriate time stamps in its calculation of reject durations. See Exception 122 for additional information on these issues. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-4-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Ordering – Firm Order Confirmation Timeliness			
PMR2-5-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-5-2	The stated calculation is complete, logical, and consistent with the definition.	Not Complete	The calculation is properly stated as an average. However, the stated calculation does not clearly state which time stamps BLS uses to measure FOC duration. See Exception 122 for additional information on this issue.
PMR2-5-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Not Complete	The calculations in the computation instructions are not consistent with the calculations in the stated calculation. The stated calculation does not clearly state which time stamps BLS uses to measure FOC duration. Further, based upon KCI's understanding of the stated calculation, BLS may not be using appropriate time stamps in its calculation of FOC durations. See Exception 122 for additional information on these issues. The exclusion listed in the SQM documentation, Partially Mechanized or Non-Mechanized LSRs received and or FOCd outside of normal business hours, was not addressed in the initial computation instructions reviewed. However, this information is not essential to the SQM report generation process, because the exclusion is applied during the creation of the raw data. Additionally, this information is provided in subsequent versions of the computation instructions. See PMR2-5-4 and Exception 87 for additional information. Exception 87 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-5-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	KCI's initial evaluation revealed that the exclusion referred to in PMR2-5-3 was not addressed in the raw data creation process either. As a result, KCI issued Exception 87. BLS modified the May and July SQMs to include the exclusion and reflect current LCSC business hours. KCI's re-test of the changes found them adequate. See Exception 87 for additional information on this issue. Exception 87 is closed.
Ordering – Speed of Answer in Ordering Center			
PMR2-6-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-6-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the stated calculation of the SQM incorrectly included calls abandoned in the denominator. As a result, KCI issued Exception 93. BLS changed the July SQM to exclude abandoned calls. KCI's re-test of the changes were found adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.
PMR2-6-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for the calculation of Speed of answer as the aggregation of daily Delay To Handle (DTH) divided by daily Number of Calls Handled (NCH), where DTH is calculated as daily Average Speed to Answer (ASA) multiplied by NCH. Both ASA and NCH are automatically calculated within a commercial system, for which internal processes and programs are proprietary to third parties and were not tested. The instructions do not call for exclusion of records, which is consistent with the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			SQM documentation.
PMR2-6-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation does not list any exclusion for this SQM.
Provisioning – Mean Held Order Interval & Distribution Intervals			
PMR2-7-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM documentation as a whole provides a reasonable definition of the SQM, but the Definition section itself does not provide a complete definition.
PMR2-7-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The stated calculation of Mean Held Order Interval only accounts for delayed orders still pending at the end of the reporting month, and does not account for held orders during the reporting month that were closed before the end of the reporting month. As a result, KCI issued Exception 93. BLS modified the July SQM to clarify the definition and calculation of this metric. KCI's re-test of the changes found them adequate. See Exception 93 for additional information on these issues. KCI is preparing a closure statement for Exception 93. In the stated calculation of Held Order Distribution Interval, the numerator should refer to held orders not completed to be consistent with the denominator. Nevertheless, KCI believes that the stated calculation is substantially complete, logical, and consistent with the definition.
PMR2-7-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation found that the computation instructions called for held order interval to start with the earliest commitment date, which is inconsistent with the stated calculation of this interval. KCI found exclusions listed in the computation instructions that are inconsistent with the exclusions listed in the SQM documentation. As a result, KCI issued Exception 87. BLS modified

Test Cross-Reference	Evaluation Criteria	Result	Comments
			the May computational instructions and July SQM to resolve inconsistencies between the computational instructions and the SQM. KCI's re-test of the changes found them adequate. See Exceptions 87 and 105 for additional information on these issues. Exceptions 87 and 105 are closed. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-7-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Provisioning – Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices			
PMR2-8-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM documentation as a whole provides a reasonable definition of the SQM, but the Definition section itself does not provide a complete definition. Because the necessary information is provided within the SQM documentation, KCI considers the definition provided complete.
PMR2-8-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation of Average Jeopardy Notice Interval is properly stated as an average. The numerator uses appropriate time stamps to measure duration of jeopardy notice. The calculation of Percentage of Orders Given Jeopardy Notices is properly stated as a percentage. The numerator, orders given jeopardy notice, is a subset of the denominator, number of orders committed, which is logical.
PMR2-8-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure duration between date/time of jeopardy notice and commitment date/time. None of the exclusions listed in the SQM documentation is addressed in the computation instructions. See PMR2-8-4

Test Cross-Reference	Evaluation Criteria	Result	Comments
			and Exception 87 for additional information. Exception 87 is closed.
PMR2-8-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	KCI's initial evaluation revealed that the exclusions referred to in PMR2-8-3 were not addressed in the raw data creation process either. As a result, KCI issued Exception 87. BLS modified the May and July SQMs to reflect the inclusion of BLS caused statuses for jeopardy notices rather than list individual CLEC caused statuses for exclusion. KCI's re-test of the changes found them adequate. See Exception 87 for additional information on this issue. Exception 87 is closed.
Provisioning –Percent Missed Installation Appointments			
PMR2-9-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM documentation as a whole provides a reasonable definition of the SQM, but the Definition section itself does not provide a complete definition.
PMR2-9-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the stated calculation was expressed as a percentage of orders completed, but should be expressed as a percentage of orders processed (for which a commitment date has been issued). As a result, KCI issued Exception 93. BLS changed the July SQM was to include all orders with a past due completion date. KCI's re-test found the change adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.
PMR2-9-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The exclusions listed in the SQM documentation are all addressed in the computation instructions.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-9-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Provisioning – Average Completion Interval Order Completion Interval Distribution			
PMR2-10-1	The definition is complete and agrees with the name of the SQM.	Satisfied	Both sub-metrics for this SQM are properly defined, respectively, as an average of a duration and a percentage of occurrences falling within specific intervals.
PMR2-10-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation of the first sub-metric is properly stated as an average. The numerator uses appropriate time stamps to measure completion duration. The calculation of the second sub-metric is properly stated as a percentage. The numerator (service orders completed in "X" days) is a subset of the denominator (total service orders completed), which is logical.
PMR2-10-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions called for converting null completion duration to 0.33 days, inconsistent with SQM documentation. As a result, KCI issued Exception 84. The July SQM was updated to include the conversion of the null completion duration. KCI's re-test of the change found it adequate. See Exception 84 for additional information on this issue. Exception 84 is closed. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-10-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Provisioning – Average Completion Notice Interval			
PMR2-11-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-11-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that, for this average duration measurement, the numerator was based on orders notified and the denominator was based on orders completed in the reporting period. This resulted in an incorrect calculation. As a result, KCI issued Exception 93. BLS changed the July SQM to reflect that the denominator is based on orders notified. KCI's re-test found the change adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.
PMR2-11-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions called for orders to be limited to those completed before the end of the reporting period. However, there were no instructions to exclude orders completed before the beginning of the reporting period. The computation instructions incorrectly called for exclusions that are not listed in the SQM documentation. As a result, KCI issued Exception 87. BLS modified the May computational instructions and July SQM to make them consistent. KCI's re-test of the changes found them adequate. See Exception 87 for additional information on this issue. Exception 87 is closed.
PMR2-11-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	KCI's initial evaluation revealed that the program code for raw data creation limited orders to those completed before the end of the report period, but did not limit orders to those completed on or after the beginning of the report period.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			As a result, KCI issued Exception 87. BLS changed the May computational instructions to limit orders to those completed on or after the beginning of the report period. KCI's re-test of the change found it adequate. See Exception 87 for additional information on this issue. Exception 87 is closed.
Provisioning – Coordinated Customer Conversions (CCC)			
PMR2-12-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration. However, the title of the SQM does not clearly label it as a duration. Nevertheless, KCI considers the definition provided through the entire SQM documentation (Calculation, Business Rules, etc.) for this SQM complete, and does not believe that this omission interferes with the understanding of the SQM.
PMR2-12-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure CCC completion duration.
PMR2-12-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for aggregating CCC duration for each cross-connected item and dividing this by the sum of all items cross-connected. The computation instructions properly call for CCC duration for each cross-connected item to be calculated as the difference between cross-connection time and disconnection time.
PMR2-12-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The three exclusions listed in the SQM documentation are applied to raw data creation during manual transcription of data from the WFA-C system into an Excel spreadsheet in a manner consistent with the SQM documentation. The first exclusion, orders cancelled by the CLEC, is accomplished by not transcribing records that have no date

Test Cross-Reference	Evaluation Criteria	Result	Comments
			entered in the Due Date Complete field. The second exclusion, delays due to CLEC following disconnection of the unbundled loop, is accomplished by not transcribing records documented in the WFA-C data as including CLEC delays. Records that meet the criteria for the third exclusion, unbundled loops where there is no existing subscriber loop, are not included in the data used to prepare the raw data file.
Provisioning – Percent Provisioning Troubles Within 30 Days			
PMR2-13-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage. However, the SQM name initially referred to service order activity rather than service order completion. BLS has subsequently updated the name of this SQM to "Percent Provisioning Troubles within 30 days of Service Order Completion."
PMR2-13-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, service orders experiencing troubles within 30 days of provisioning, is a subset of the denominator, total service orders completed, which is logical. Initially, the documentation of the denominator was imprecise and not clearly stated as service orders completed in the month preceding the reporting period. BLS addressed this issue in subsequent versions of the documentation.
PMR2-13-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that exclusions listed in the computation instructions were inconsistent with the exclusions listed in the SQM documentation. As a result, KCI issued Exception 87. BLS changed the May computational instructions and July SQM to make them consistent. KCI's re-test of the changes found them adequate. See Exception 87 for additional information on this issue. Exception 87

Test Cross-Reference	Evaluation Criteria	Result	Comments
			is closed. The calculations in the computation instructions are consistent with the calculations in the stated calculation. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-13-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Provisioning – Total Service Order Cycle Time			
PMR2-14-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-14-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average.
PMR2-14-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions called for converting null completion duration to 0.33 days, inconsistent with SQM documentation. As a result, KCI issued Exception 84. The July SQM was updated to include the conversion of the null completion duration. KCI's re-test of the change found it adequate. See Exception 84 for additional information on this issue. Exception 84 is closed. The exclusion listed in the SQM documentation, L appointment coded orders, is not addressed in the computation instructions. See PMR2-14-4 and Exception 87 for additional information. Exception 87 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-14-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	KCI's initial evaluation revealed that the exclusion referred to in PMR2-14-3 was not addressed in the raw data creation process either. As a result, KCI issued Exception 87. The July SQM was updated to include the conversion of the null completion duration. KCI's re-test of the change found it adequate. See Exception 87 for additional information on this issue. Exception 87 is closed.
Provisioning – Service Order Accuracy			
PMR2-15-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The process to be performed to measure the accuracy of provision of service orders is properly defined as a comparison of items ordered and items completed.
PMR2-15-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a comparison of accurately fulfilled orders out of all orders completed. However, the sampling methodology is not adequately documented. Nevertheless, KCI considers the stated calculation complete, logical, and consistent with the definition.
PMR2-15-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions incorrectly prescribed that, for large sample sizes, items for which the service request and the service order cannot be compared should not be counted as an error but still included in the denominator. As a result, KCI issued Exception 87. BLS changed the July SQM to indicate that a service order that cannot be matched to a service request is not counted in either numerator or denominator. KCI's re-test of the change found it adequate. See Exception 87 for additional information on this issue. Exception 87 is closed. None of the exclusions listed in the SQM documentation are addressed in the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			computation instructions.
PMR2-15-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	All three exclusions listed in the SQM documentation are applied to raw data generation. The first exclusion, Cancelled Service Orders, is accomplished by matching records selected against records from the SOCS system that are for completed orders only. The second exclusion, order activities of BLS associated with internal or administrative use of local services, and the third exclusion, D & F orders, are accomplished by selecting records that have specific field values, which are documented in BLS's document entitled "Service Order Accuracy Sampling Process," dated 2/28/2000.
Maintenance & Repair – Missed Repair Appointments			
PMR2-16-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage and the definition is complete.
PMR2-16-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, troubles cleared past committed date and time, is a subset of the denominator, total troubles closed, which is logical.
PMR2-16-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions prescribe the calculation of a percentage, as specified by the stated calculation. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-16-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Maintenance & Repair – Customer Trouble Report Rate			
PMR2-17-1	The definition is complete and agrees with the name of the	Satisfied	The SQM is properly defined.

Test Cross-Reference	Evaluation Criteria	Result	Comments
	SQM.		
PMR2-17-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a ratio of occurrences of troubles per 100 lines.
PMR2-17-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions incorrectly called for including troubles reported and closed in the numerator while the stated calculation describes it as troubles reported (i.e., including pending trouble reports). As a result, KCI issued Exception 87. BLS changed the July SQM to include initial and repeated troubles in both the numerator and denominator. KCI's re-test of the changes found them adequate. See Exception 87 for additional information on this issue. Exception 87 is closed. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-17-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Maintenance & Repair – Maintenance Average Duration			
PMR2-18-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-18-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure maintenance duration.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-18-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation indicated that the computation instructions called for counting all closed trouble tickets *received within the reporting period* in the denominator, while the stated calculation describes it as the count of trouble tickets *closed during the reporting period* (some of which might have been *received* prior to the reporting period). As a result, KCI issued Exception 87. BLS's response to Exception 87 clarified the apparent inconsistency between the computational instructions and the stated calculation. KCI's re-test found this response to be adequate. See Exception 87 for additional information on this issue. Exception 87 is now closed. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-18-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Maintenance & Repair – Percent Repeat Troubles Within 30 Days			
PMR2-19-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage.
PMR2-19-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the stated calculation is expressed as a percentage of troubles closed but should be expressed as a percentage of troubles reported. As a result, KCI issued Exception 93. BLS changed the July SQM to reflect that the calculation is a percentage of troubles reported. KCI's re-test of the changes found them adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-19-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions incorrectly called for counting the number of closed trouble tickets reported during the reporting month and identified as repeat troubles. As a result, KCI issued Exception 87. BLS changed the July SQM to include repeat trouble tickets completed in the reporting month. KCI's re-test of the changes found them adequate. See Exception 87 for additional information on this issue. Exception 87 is closed. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-19-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Maintenance & Repair – Out of Service > 24 Hours			
PMR2-20-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage.
PMR2-20-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, troubles out of service for more than 24 hours, is a subset of the denominator, which is logical. The documentation of the denominator is imprecise and should clearly indicate that it refers to troubles closed. However, KCI considers the stated calculation as complete, logical, and consistent with the definition.
PMR2-20-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions prescribe the calculation of a percentage, as specified by the stated calculation. The exclusions listed in the SQM documentation are all addressed in the computation instructions.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-20-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Maintenance & Repair – OSS Interface Availability			
PMR2-21-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an availability measurement. OSS availability is defined as hours actually available as a percentage of hours scheduled for availability.
PMR2-21-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the stated calculation of the SQM was incomplete, as it did not detail the calculations of functional availability and scheduled availability. As a result, KCI issued Exception 93. BLS changed the July SQM to include the additional details of the calculation. KCI's re-test of the changes found them adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.
PMR2-21-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Not Complete	The computation instructions call for the calculation of actual interface availability as a percentage of scheduled availability, as specified by the stated calculation. The instructions do not call for exclusion of records, which is consistent with the SQM documentation. However, the SQM documentation requires that all unscheduled full outages be reflected in the SQM calculation, as a reduction in the reported availability. BLS's stated definition of full outages is fairly broad, and includes outages that affect access by the customers, regardless of the cause. Given the current processes and definitions, systems could be inaccessible to CLECs, representing an unscheduled full outage, without there being a corresponding reduction in the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			availability SQM value. BLS has stated that it is instituting a process by which all relevant outages (including those listed on its change control Web site) will be taken into consideration when calculating the SQM values. Further, BLS will update the SQM documentation to clarify its position on the definition of full outages. See Exception 133 for additional information on this issue.
PMR2-21-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Not Complete	The SQM documentation does not explicitly list any exclusion for this SQM. However, as indicated in PMR2-21-3 above, BLS could be incorrectly excluding unscheduled, full outages from its calculation of this SQM. BLS has stated that it is instituting a process by which all relevant outages (including those listed on its change control Web site) will be taken into consideration when calculating the SQM values. Further, BLS will update the SQM documentation to clarify its position on the definition of full outages. See Exception 133 for additional information on this issue.
Maintenance & Repair – OSS Response Interval and Percentages			
PMR2-22-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined. However, the reference to "OSS Response Interval" in the name incorrectly implies that response interval is reported, while only the number and percentages of request falling within specific interval categories are reported.
PMR2-22-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the calculation of the SQM, which measures percentage of requests falling within specific interval categories, was not properly stated. It did not describe counting the number of queries for which response time falls within a specific category. As a result, KCI issued Exception 93. BLS changed the name of the metric to ***OSS Response Percent within Interval***

Test Cross-Reference	Evaluation Criteria	Result	Comments
			in the July SQM. KCI's re-test of the change found it adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.
PMR2-22-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for counting the number of accesses and calculating the percentage of accesses falling within each category. The exclusion listed in the 10/22/99 SQM documentation, Queries received during scheduled system maintenance time, is not addressed in the computation instructions. This exclusion was removed, effective with the 2/24/00 version of the documentation. See PMR2-22-4 for additional information.
PMR2-22-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The 10/22/99 SQM documentation lists one exclusion: records for queries received during scheduled system maintenance time. Queries cannot be submitted while the system is down for maintenance, so no records that meet the exclusion criteria will ever be created. The 2/24/00 version has been revised to remove this exclusion.
Maintenance & Repair – Average Answer Time – Repair Centers			
PMR2-23-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-23-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure answer time. Although the denominator is imprecise (it should clearly indicate that it refers to calls handled and does not include abandoned calls), KCI considers the stated calculation complete, logical, and consistent with the definition.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-23-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for the calculation of answer time as the aggregation of daily Delay To Handle (DTH) divided by daily Number of Calls Handled (NCH), where DTH is calculated as daily Average Speed to Answer (ASA) multiplied by NCH. Both ASA and NCH are automatically calculated within a commercial system, for which internal processes and programs are proprietary to third parties and were not tested. The computation instructions do not call for exclusion of records, which is consistent with the SQM documentation.
PMR2-23-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation does not list any exclusion for this SQM.
Billing – Invoice Accuracy			
PMR2-24-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined, measuring invoice accuracy as a percentage.
PMR2-24-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the subcomponents of this percentage measurement were different and unrelated sets, resulting in an incorrect calculation. As a result, KCI issued Exception 93. BLS changed to July SQM to reflect that the metric addresses both current charges and adjustments to prior periods. KCI's re-test found the changes adequate. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC. The stated calculation should specify that the absolute value of billing related adjustments is used in the numerator.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-24-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions call for the calculation of a percentage, as specified by the stated calculation. None of the exclusions listed in the SQM documentation is addressed in the computation instructions. See PMR2-24-4 and Exception 83 for additional information. Exception 83 is closed.
PMR2-24-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	KCI's initial evaluation revealed that the listed exclusion was applied in the creation of raw data for CLEC records, but not for BLS records. As a result, KCI issued Exception 83. The exclusion listed was applied prior to receipt of the BLS data from its originating system and were outside the computations reflected in the reviewed instructions. BLS changed the documentation to make it consistent. KCI's re-test of the changes found them adequate. See Exception 83 for additional information on this issue. Exception 83 is closed. BLS has said it will introduce a mechanized process that will apply the exclusion to both CLEC and BLS records in the same manner.
Billing – Mean Time to Deliver Invoices			
PMR2-25-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration. However, the definition section does not provide a complete definition of the SQM. Specifically, it fails to define the SQM as an average duration to deliver invoices. Nevertheless, KCI considers the definition complete, and does not believe that this omission interferes with the understanding of the SQM.
PMR2-25-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure average duration to deliver invoices.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-25-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for the calculation of an average, as specified by the stated calculation. The numerator aggregates invoice delivery duration. The denominator counts the total number of invoices delivered. Each invoice delivery duration is automatically computed during creation of raw data. Although the description of this computation is consistent with the SQM documentation (difference between invoice transmission date and end of the billing cycle), the programming code was not tested. None of the exclusions listed in the SQM documentation is addressed in the computation instructions.
PMR2-25-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	KCI's initial evaluation revealed that the listed exclusions are not applied in the creation of raw data. As a result, KCI issued Exception 83. The exclusion is performed prior to the computations described in the computational instructions. BLS changed the July SQM document to make it consistent. KCI's re-test found the change adequate. See Exception 83 for additional information on this issue. Exception 83 is closed. The listed exclusion does not call for the exclusion of records or data, but instead clarifies the definition of the SQM. BLS has said it will revise the SQM documentation.
Billing – Usage Data Delivery Accuracy			
PMR2-26-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage of data delivered accurately.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-26-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	Since all retransmissions of usage data packs are performed the same day, subtracting usage data packs re-transmitted from usage data packs sent in the numerator results in usage data packs sent error-free, which is logical.
PMR2-26-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for a percentage measurement and subtracting pack failures from packs sent to obtain packs sent error-free in the numerator. Pack failures are manually tracked and aggregated as they occur. The total number of packs sent is automatically calculated in BLS systems. The programming code was not tested. Instructions do not call for exclusion of records, which is consistent with the SQM documentation.
PMR2-26-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation does not list any exclusion for this SQM.
Billing – Usage Data Delivery Completeness			
PMR2-27-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as measuring data delivery completeness.
PMR2-27-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the stated calculation of the SQM only measures timeliness of usage data delivery and not completeness. As a result, KCI issued Exception 93. The definition of the metric is consistent with the national standard for the metric. KCI's re-test resulted in the closure of the issue in this exception. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-27-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The calculations in the computation instructions are consistent with the calculations in the stated calculation. Instructions do not call for exclusion of records, which is consistent with the SQM documentation.
PMR2-27-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation does not list any exclusion for this SQM.
Billing – Usage Data Delivery Timeliness			
PMR2-28-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as measuring data delivery timeliness.
PMR2-28-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator (number of usage data delivered within six days) is a subset of the denominator (total number of usage data delivered), which is logical. Initially, the stated calculation did not specify that the measurement is based on usage data from the current reporting month. BLS addressed this issue in subsequent versions of the SQM documentation.
PMR2-28-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The calculations in the computation instructions are consistent with the stated calculation. Instructions do not call for exclusion of records, which is consistent with the SQM documentation.
PMR2-28-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation does not list any exclusion for this SQM.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Billing – Mean Time to Deliver Usage			
PMR2-29-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-29-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	KCI's initial evaluation revealed that the numerator of the SQM is calculated based on estimated, instead of actual, number of days to deliver. As a result, KCI issued Exception 93. The estimation identified in the exception is solely related to messages received in less than a day. Since the metric is measured in days and is consistent with the industry standard, KCI closed the exception for this issue. See Exception 93 for additional information on this issue. KCI recommended closure of Exception 93 to the GPSC. The documentation of the denominator is imprecise and should be clearly stated as records delivered / sent during the reporting period. KCI identified this issue to BLS.
PMR2-29-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions prescribed that delivery duration for all usage records taking more than 30 days to deliver be estimated as 31.5 days, which is inconsistent with the SQM documentation. As a result, KCI issued Exception 84. KCI reviewed BLS's calculations of the number of usage records taking more than 30 days over a seven-month period and determined that the number was so small as to not affect the overall metric in a material way. The SQM was updated with a note indicating the rule being applied to usage records taking more than 30 days. KCI's re-test of the change found it adequate. See Exception 84 for additional information on this issue. Exception 84

Test Cross-Reference	Evaluation Criteria	Result	Comments
			is closed. Instructions do not call for exclusion of records, which is consistent with the SQM documentation.
PMR2-29-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation does not list any exclusion for this SQM.
Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll)			
PMR2-30-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-30-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure speed of answer. Initially, KCI found a reference irrelevant to this SQM in the Definition section of the SQM documentation. BLS removed this reference in subsequent versions of the SQM documentation.
PMR2-30-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions incorrectly called for including the time abandoned calls stay on hold in the numerator. As a result, KCI issued Exception 84. BLS modified the calculation to exclude time-abandoned calls and modified the SQM accordingly. KCI's re-test found the modifications adequate. See Exception 84 for additional information on this issue. Exception 84 is closed.
PMR2-30-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The exclusion listed in the stated calculation documents the handling of abandoned calls in the system that tracks calls in the queue and in the conversion tables used to determine the percent answered in "X" seconds, but does not require any exclusion of calls in the creation of raw data or calculation of

Test Cross-Reference	Evaluation Criteria	Result	Comments
			the SQM.
Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (Toll)			
PMR2-31-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percent of calls answered within a specific interval.
PMR2-31-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as involving the use of conversion tables that generate the percent of calls answered within a specific interval.
PMR2-31-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for the use of a third-party conversion system. This system's internal processes and programs are proprietary and were not tested.
PMR2-31-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The exclusion listed in the stated calculation documents the handling of abandoned calls in the system that tracks calls in the queue, and in the conversion tables used to determine the percent answered in "X" seconds, but does not require any exclusion of calls in the creation of raw data or calculation of the SQM.
Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA)			
PMR2-32-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-32-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure speed of answer. Initially, KCI found a reference irrelevant to this SQM in the Definition section of the SQM documentation. BLS removed this reference in subsequent versions of the SQM documentation.
PMR2-32-3	BLS's computation instructions agree with the stated calculation in the SQM	Satisfied	KCI's initial evaluation revealed that the computation instructions incorrectly called for including the time abandoned calls stay on hold in the numerator. As a

Test Cross-Reference	Evaluation Criteria	Result	Comments
	documentation.		result, KCI issued Exception 84. BLS modified the calculation to exclude time-abandoned calls and modified the SQM accordingly. KCI's re-test found the modifications adequate. See Exception 84 for additional information on this issue. Exception 84 is closed.
PMR2-32-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The exclusion listed in the stated calculation documents the handling of abandoned calls in the system that tracks calls in the queue and in the conversion tables used to determine the percent answered in "X" seconds, but does not require any exclusion of calls in the creation of raw data or calculation of the SQM.
Operator Services (Toll) and Directory Assistance – Percent Answered within "X" seconds (DA)			
PMR2-33-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percent of calls answered within a specific interval.
PMR2-33-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as involving the use of conversion tables that generate the percent of calls answered within a specific interval.
PMR2-33-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions properly call for the use of a third-party conversion system. This system's internal processes and programs are proprietary and were not tested.
PMR2-33-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The exclusion listed in the stated calculation documents the handling of abandoned calls in the system that tracks calls in the queue and in the conversion tables used to determine the percent answered in "X" seconds, but does not require any exclusion of calls in the creation of raw data or calculation of the SQM.

Test Cross-Reference	Evaluation Criteria	Result	Comments
E911 – Timeliness			
PMR2-34-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage measuring E911 data processed in a timely fashion.
PMR2-34-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, E911 data processed in a timely fashion, is a subset of the denominator, total E911 data processed, which is logical.
PMR2-34-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The calculations in the computation instructions are consistent with the calculations in the stated calculation. None of the exclusions listed in the SQM documentation are addressed in the computation instructions. See PMR2-34-4 for additional information.
PMR2-34-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The exclusions listed in the SQM documentation refer to handling of E911 calls in the third party (SCC Communications) system that handles E911 calls, but do not require any exclusion of calls in the creation of raw data or calculation of the SQM. This system's internal processes and programs are proprietary and were not tested.
E911 – Accuracy			
PMR2-35-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as measuring E911 data processed without errors. Initially, the definition was not expressed as a percentage. BLS addressed this issue in subsequent versions of the SQM documentation.
PMR2-35-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, E911 data processed without errors, is a subset of the denominator, total E911 data processed, which is logical.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-35-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The calculations in the computation instructions are consistent with the stated calculation. None of the exclusions listed in the SQM documentation is addressed in the computation instructions. See PMR2-35-4 for additional information.
PMR2-35-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The exclusions listed in the SQM documentation refer to handling of E911 calls in the third party (SCC Communications) system that handles E911 calls, but do not require any exclusion of calls in the creation of raw data or calculation of the SQM. This system's internal processes and programs are proprietary and were not tested.
E911 – Mean Interval			
PMR2-36-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-36-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure processing duration.
PMR2-36-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The calculations in the computation instructions are consistent with the calculations in the stated calculation. None of the exclusions listed in the SQM documentation is addressed in the computation instructions. See PMR2-36-4 for additional information.
PMR2-36-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The exclusions listed in the SQM documentation refer to handling of E911 calls in the third party (SCC Communications) system that handles E911 calls, but do not require any exclusion of calls in the creation of raw data or calculation of the SQM. This system's internal processes and programs are proprietary and were not tested.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Trunk Group Performance – Trunk Group Service Report			
PMR2-37-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as measuring performance failure.
PMR2-37-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, number of blocked calls, is a subset of the denominator, number of attempted calls, which is logical.
PMR2-37-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions call for the calculation of a percentage, as specified by the stated calculation. However, none of the exclusions listed in the SQM documentation is addressed in the computation instructions. See PMR2-37-4 for additional information.
PMR2-37-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The listed exclusions are applied in the creation of the raw data files.
Trunk Group Performance – Trunk Group Service Detail			
PMR2-38-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as measuring performance failure.
PMR2-38-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, number of blocked calls, is a subset of the denominator, number of attempted calls, which is logical.
PMR2-38-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions call for the calculation of a percentage, as specified by the stated calculation. None of the exclusions listed in the SQM documentation is addressed in the computation instructions. See PMR2-38-4 for additional information.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-38-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The listed exclusions are applied in the creation of the raw data files.
Trunk Group Performance – Trunk Group Performance – Aggregate			
PMR2-39-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as reporting aggregate blocking information on trunk groups. However, the Definition section does not provide a detailed definition of the SQM. Nevertheless, KCI considers the definition provided through the entire SQM documentation (Calculation, Business Rules, etc.) for this SQM complete, and does not believe that this omission interferes with the understanding of the SQM.
PMR2-39-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a weighted average.
PMR2-39-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions call for the calculation of a weighted average, as specified by the stated calculation. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-39-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Trunk Group Performance – Trunk Group Performance – CLEC Specific			
PMR2-40-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as reporting blocking information on CLEC specific trunk groups. However, the Definition section does not provide a detailed definition of the SQM. Nevertheless, KCI considers the definition provided through the entire SQM documentation (Calculation, Business Rules, etc.) for this SQM complete, and does not believe that this omission interferes with the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			understanding of the SQM.
PMR2-40-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a weighted average.
PMR2-40-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions call for the calculation of a weighted average, as specified by the stated calculation. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-40-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	Exclusions listed in the SQM documentation are included in BLS's computation instructions.
Collocation – Average Response Time			
PMR2-41-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-41-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure response duration.
PMR2-41-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions call for the calculation of an average duration, as specified by the stated calculation. The exclusions listed in the SQM documentation are all addressed in the computation instructions.
PMR2-41-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation prescribes exclusion of records for requests to augment previously completed arrangements. A field used to implement this exclusion is populated manually during raw data creation based on a review of existing applications.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Collocation – Average Arrangement Time			
PMR2-42-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as an average duration.
PMR2-42-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as an average. The numerator uses appropriate time stamps to measure arrangement duration.
PMR2-42-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	KCI's initial evaluation revealed that the computation instructions called for the calculation of average arrangement duration in calendar days, inconsistent with SQM documentation. As a result, KCI issued Exception 84. The July SQM was changed to state that are based on calendar days calculations. KCI's re-test of the change found it adequate. See Exception 84 for additional information on this issue. Exception 84 is closed. The exclusions listed in the SQM documentation are all addressed in the computation instructions except for "Time required for BLS to obtain permits." See PMR2-42-4 for additional information.
PMR2-42-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation prescribes the exclusion of the time required for BLS to obtain permits from this SQM. The implementation of this exclusion is performed manually during raw data creation by subtracting the number of days stored in the "Number of Permit Days" field from the calculated arrangement time.
Collocation – Percent of Due Dates Missed			
PMR2-43-1	The definition is complete and agrees with the name of the SQM.	Satisfied	The SQM is properly defined as a percentage.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR2-43-2	The stated calculation is complete, logical, and consistent with the definition.	Satisfied	The calculation is properly stated as a percentage. The numerator, number of orders completed passed the committed date, is a subset of the denominator, total orders completed, which is logical.
PMR2-43-3	BLS's computation instructions agree with the stated calculation in the SQM documentation.	Satisfied	The computation instructions call for the calculation of a percentage, as specified by the stated calculation. The exclusions listed in the SQM documentation are all addressed in the computation instructions except for "Time required for BLS to obtain permits." See PMR2-43-4 for additional information.
PMR2-43-4	Listed exclusions are applied to raw data creation if not included in BLS's computation instructions.	Satisfied	The SQM documentation prescribes the exclusion of the time required for BLS to obtain permits from this SQM. The implementation of this exclusion is performed manually during raw data creation by subtracting the number of days stored in the "Number of Permit Days" field from the calculated arrangement time.

C. Test Results: Metrics Change Management Verification and Validation Review (PMR3)

1.0 Description

The objective of the Metrics Change Management Verification and Validation Review (PMR3) was to evaluate BellSouth's management of changes related to the production of its Service Quality Measurements (SQMs), including changes in the various legacy / source systems used to provide data for SQM calculations.

2.0 Methodology

This section summarizes the test methodology.

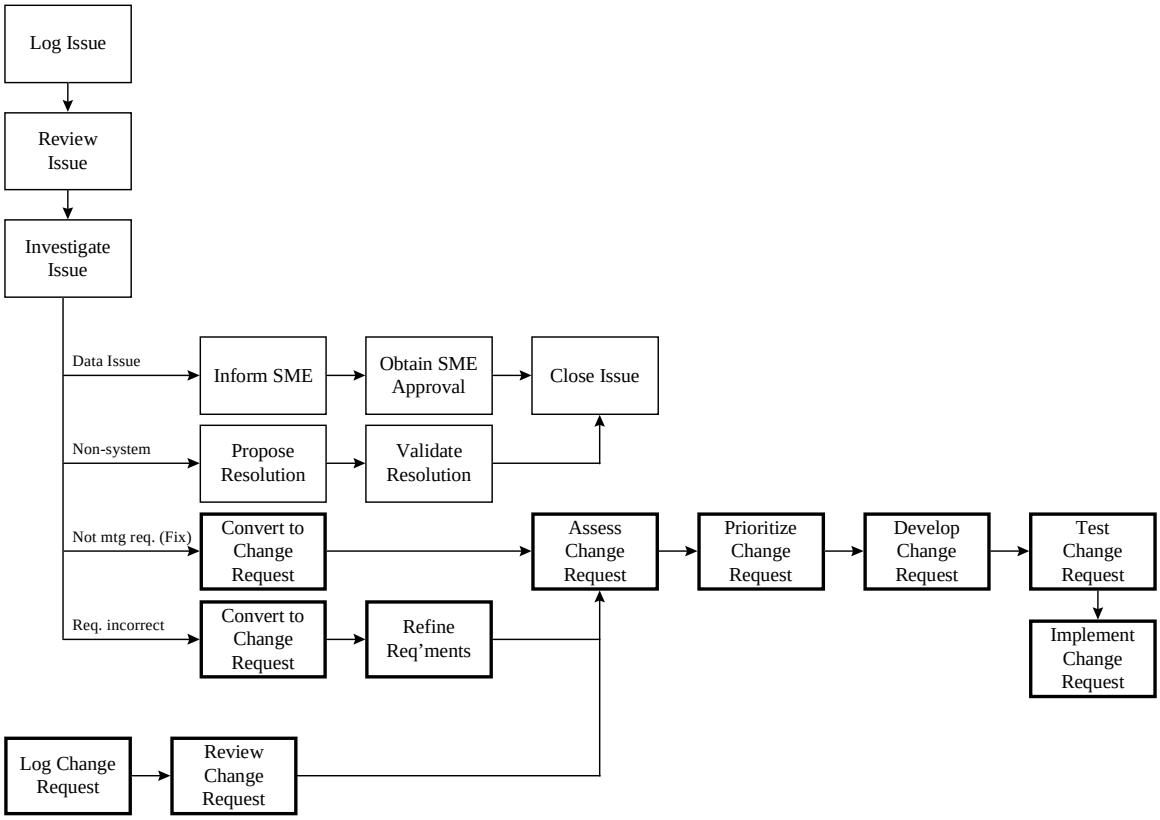
2.1 Business Process Description

BellSouth's change management process for the production of performance measures is applicable to changes in the production and reporting of SQMs. Figure VIII-3.1 illustrates the procedures followed by BellSouth to consider changes to existing SQMs, and to address related production issues that may arise. Change requests arise from regulatory mandates as well as evolving internal and external business practices. Initially, requests are referred to the appropriate BellSouth Subject Matter Experts (SMEs), based upon the SQM(s) in question. When a change involves modifications to the Performance Measurement and Analysis Platform (PMAP) or other systems, the respective system managers and database administrators become involved in the change management process. Change requests are discussed during Change Control Board Meetings and other meetings concerned with the SQM production cycle.

The process also considers other issues that are related to the production of SQMs. These issues are classified into four categories: Data Issue, Non-System, Not Meeting Requirements, or Requirements Incorrect. These issues may be raised by any member of the PMAP production team, by SMEs, or by other BellSouth personnel. Issues falling in the last two categories are immediately converted into change requests and handled according to change request procedures.

All change requests and logged issues are entered into a database that BellSouth calls *Issue Tracker*. All SMEs and members of the PMAP production team have access to this database, and are expected to use it to log change requests or issues for consideration by the Change Control Board. Entries include a description of the issue or the required change, the date on which it was opened, the originator of the issue, the individual to whom it should be assigned, and fields for how and when the issue or change request is resolved. *Issue Tracker* assigns a number to each entry for tracking purposes.

Figure VIII-3.1: BellSouth Change Control and Issues Management Process Map



Source: BellSouth, *Issue Management and Change Control Process*, December 21, 1999, p. 5.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The target of this test was the change management process employed by BellSouth in the production of performance measures. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross Reference" indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

Table VIII-3.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Change Management	Development of change proposals	Completeness and consistency of the change development process	PMR-3-1-1

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Evaluation of change proposals	Completeness and consistency of the change evaluation process	PMR-3-1-2
	Implementation of changes	Completeness and consistency of the change implementation process	PMR-3-1-3
	Determination of change intervals	Reasonableness of the change interval	PMR-3-1-4
	Updating of documentation	Timeliness of documentation updates	PMR-3-1-5
	Tracking of change proposals	Adequacy and completeness of the change management tracking process	PMR-3-1-6

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VIII-3.2: Data Sources for Metrics Change Management Verification and Validation Review

Document	File Name	Location in Work Papers	Source
KCI Request for Documents 121799	Request for Documents 121799.doc	PMR-3-A-1	KCI
BLS Raw Data Validation Procedures	RWDATVAL.doc	PMR-3-A-1	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response to Question 1B of KCI Memo	QUES1B.doc	PMR-3-A-1	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS Response to Question 1D of KCI Memo	QUES1D.doc	PMR-3-A-1	BLS Interconnection Operations – CLEC Performance Measurements
KCI Request for Documents 010700	Request for Documents 0107.doc	PMR-3-A-2	KCI
BLS Response to January 7, 2000 Request for Documentation memo	PROCES~1.doc	PMR-3-A-2	BLS Interconnection Operations – CLEC Performance Measurements
Georgia Public Service Commission Docket No. 7892-U	7892_ORDER.TIF	PMR-3-A-2	BLS Interconnection Operations – CLEC Performance Measurements
KCI Request for Completed Run Books	PMR1012500DocRqstAlford.doc	PMR-3-A-3	KCI
KCI Request for Updated Issue Tracker	PMR3030300DocRqstAlford.doc	PMR-3-A-4	KCI
BLS Interview Report of the January 13, 2000 interview with Bill Sellers	PMR1_000113_IntReport Alford.doc	PMR-3-A-5	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of February 2, 2000 interview with Stephanie Ford and Richard Bray	PMR2_000202_IntReport Moulin.doc	PMR-3-A-6	KCI
KCI Interview Report of the February 8, 2000 interview regarding Legacy Source systems.	PMR1_000208_IntReport Alford.doc	PMR-3-A-7	KCI
BLS Response to 2/8 Meeting Action Items	KPMG 02152000 Audit Response.doc	PMR-3-A-7	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS Storage Manager Overview	KPMG Audit Attach #3.XLS	PMR-3-A-7	BLS Interconnection Operations – CLEC Performance Measurements
BLS LCSC Order Tracker Release Management Process	KPMG Audit Attach #5.vsd	PMR-3-A-7	BLS Interconnection Operations – CLEC Performance Measurements
BLS Audit Attachment #1	KPMG Audit Attach #1.doc	PMR-3-A-7	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 21, 2000 interview with Ray Lee	PMR1_000221_IntReport Alford.doc	PMR-3-A-8	KCI
BLS Completed Interview Guide from Ray Lee	IGLEE2.DOC	PMR-3-A-8	BLS Interconnection Operations – CLEC Performance Measurements
BLS Responses on Interview Summary from February 21, 2000 interview with Ray Lee	RAYSUM.DOC	PMR-3-A-8	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the February 29, 2000 and March 1, 2000 meetings with various SMEs	PMR1_000229_IntReport AlfordSMEs.doc	PMR-3-A-9	KCI
BLS Response on Interview Summary from the February 29, 2000 interview with Terri Ferrara	KPMG-I~1.DOC	PMR-3-A-9	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS Response on Interview Summary from the March 1, 2000 interview with Treva Garner	TGSMEI~1.DOC	PMR-3-A-9	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the February 29, 2000 interview with Linda Gilley	GILLEY.DOC	PMR-3-A-9	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the March 1, 2000 interview with Steve Elliott	KPMGNTV1.DOC	PMR-3-A-9	BLS Interconnection Operations – CLEC Performance Measurements
BLS Response on Interview Summary from the March 1, 2000 interview with Ted McDonald	No Electronic Copy	PMR-3-A-9	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the March 7, 2000 interview with Phil Porter	PMR1_000307_IntRptAlfordPorter.doc	PMR-3-A-10	KCI
BLS Confirmation of the Interview Summary sent by KCI regarding the March 7, 2000 interview with Phil Porter	No Electronic Copy	PMR-3-A-10	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the March 15, 2000 interview with Richard Bray	PMR1_031500_IntReportAlfordBray.doc	PMR-3-A-11	KCI
BLS Response to the Interview Summary of the March 15, 2000 interview with Richard Bray	No Electronic Copy	PMR-3-A-11	BLS Interconnection Operations – CLEC Performance Measurements
KCI Interview Report of the various meetings of the Change Control Board	PMR3_IntReportAlford_ChangeControlMeetings.doc	PMR-3-A-12	KCI

Document	File Name	Location in Work Papers	Source
BLS Pre-production notes sent from Bill Sellers	WES0007.DOC	PMR-3-A-12	BLS Interconnection Operations – CLEC Performance Measurements
BLS Post Mortem notes for the February production run	No Electronic Copy	PMR-3-A-12	BLS Interconnection Operations – CLEC Performance Measurements
BLS Service Quality Measurements Functional Organization	MOOREORG.PPT	PMR-3-A-13	BLS Interconnection Operations – CLEC Performance Measurements
BLS flow chart of the flow of information from Source Systems, through Staging, NODS, and DDS	PAGE4.DOC	PMR-3-A-14	BLS Interconnection Operations – CLEC Performance Measurements
BLS Issues Management and Change Control Process Guide, Version 2.1. —BLS Proprietary	CHANGER3.DOC	PMR-3-A-15	BLS Interconnection Operations – CLEC Performance Measurements
BLS PMAP Run Book, Draft 11/02/99—BLS Proprietary	RUNBOO~1.DOC	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements
KCI request for documentation resulting from interview with Bill Sellers	WES0006.DOC	PMR-3-A-16	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS Performance Measurement and Analysis Platform (PMAP) Backup & Disaster Recovery Overview—BLS Proprietary	Backrec.doc	PMR-3-A-16	BLS Interconnection Operations – CLEC Performance Measurements
BLS Periodic Activities of an Oracle DBA—BLS Proprietary	DBAHBV3.doc	PMR-3-A-16	BLS Interconnection Operations – CLEC Performance Measurements
BLS Audit and Control Doc. for KCI—BLS Proprietary	Audit and Control Points2.doc	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements
BLS *Issue Tracker*, issues #5000 - #5543—BLS Proprietary	No Electronic Copy	PMR-3-A-16	BLS Interconnection Operations – CLEC Performance Measurements
BLS *Issue Tracker*, issues #5536 - #5686—BLS Proprietary	No Electronic Copy	PMR-3-A-16	BLS Interconnection Operations – CLEC Performance Measurements
BLS "Binder4.zip / Binder5.zip" Zip Disk—BLS Proprietary	Binder4.zip and Binder5.zip	PMR-3-A-16	BLS Interconnection Operations – CLEC Performance Measurements
BLS Spreadsheet comparing number of records in various files used as a control to ensure proper transfer of files in PMAP—BLS Proprietary	No Electronic Copy	PMR-3-A-17	BLS Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
BLS PMAP Run Book "December Run" —BLS Proprietary	No Electronic Copy	PMR-3-A-17	BLS Interconnection Operations – CLEC Performance Measurements
BLS PMAP Run Book "Jan 2000 Run Book" —BLS Proprietary	No Electronic Copy	PMR-3-A-17	BLS Interconnection Operations – CLEC Performance Measurements
BLS Implementation Manual—BLS Proprietary	No Electronic Copy	PMR-3-A-17	BLS Interconnection Operations – CLEC Performance Measurements
BLS Audit documentation request for ICAIS Parity Reporting System—BLS Proprietary	Smith – Audit113099.doc	CD: PMR1-CD1	BLS Interconnection Operations – CLEC Performance Measurements

2.4.1 Data Generation/Volumes

This test relied on examination of BellSouth documentation and interviews with BellSouth personnel.

2.5 Evaluation Methods

KCI evaluated BellSouth's change management process in two stages. In the first stage, KCI reviewed BellSouth documentation related to the change management process for metrics production. In the second stage, KCI developed a series of questions for BellSouth personnel involved with this process, conducted interviews, and observed the regular meetings related to this process.

2.6 Analysis Methods

The Metrics Change Management Verification and Validation Review included a checklist of evaluation criteria developed by KCI during the initial phase of the BellSouth-Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the Metrics Change Management Verification and Validation Review Test.

The data collected were analyzed employing the evaluation criteria referenced above.

3.0 Results Summary

This section identifies discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VIII-3.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-3-1-1	BLS has a complete and consistent change development process.	Satisfied	BLS procedures for the change management process related to the production of SQMs by PMAP are documented in the publication, *Issue Management and Change Control Process Guide* ("the Guide"). BLS considers all issues and proposed changes during meetings of the Change Control Board. Issues that relate to SQM production are considered in pre-production and post-production meetings as well. Interviews with BLS personnel indicated that this policy is also followed for manual SQMs. KCI found several issues and changes in *Issue Tracker* relating to manual SQMs. Initially, the Guide did not explicitly include the manual SQMs. However, it was updated to cover the manual SQMs as well as the PMAP SQMs. Additionally, BLS had no formal mechanism by which changes in the legacy / source systems were conveyed to the PMAP change management process. On several occasions, systems changes have hindered the production of accurate, complete reports for the Trunking SQMs and the Average Response Time and Response Interval SQM. See Exception 70 for additional information on this issue. In the period since this exception was issued, BLS has developed a mechanism whereby legacy / source system owners

Test Cross-Reference	Evaluation Criteria	Result	Comments
			and PMAP personnel discuss any changes to the legacy systems to ensure that the changes do not hinder accurate and complete report production. These new procedures were communicated to relevant personnel by BLS senior management. Exception 70 is closed. The change development process would be improved by involving CLECs in meetings of the Change Control Board and other meetings related to change management. Initially, BLS did not have an adequate change control procedure for revising its *PMAP Raw Data User Manual*. This document does not always reflect all types of changes. Additionally, changes among different versions of the manual that may affect a CLEC's ability to replicate an SQM report were not always clearly and completely documented in the manual's version change log. See Exception 88 for additional information on this issue. BLS responded to the issues identified in Exception 88 by developing a new procedure to ensure that the *Raw Data Users Manual* is synchronized with changes in SQMs. KCI reviewed change requests that affect SQM report validation programs, and confirmed that any code changes that would require an update to the Raw Data User Manual were accurately reflected. Exception 88 is closed.
PMR-3-1-2	The methods and approaches used by BLS to evaluate change proposals are complete and consistent.	Satisfied	The methods used to evaluate change proposals are consistent. BLS created the Change Control Board to consider all proposed and pending changes. One method used is to categorize changes according to standards defined in the Guide. Regarding completeness, KCI found that BLS does not actively seek comments from CLECs regarding change requests, but relies entirely on mandates from the GPSC.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			While KCI believes including a mechanism for incorporating CLEC comments would enhance the completeness of the process, the absence of this component does not significantly impede BLS' ability to evaluate change proposals.
PMR-3-1-3	BLS' implementation of changes is complete and consistent.	Satisfied	Change implementation procedures are described in the Guide. All changes must be approved by the appropriate Subject Matter Expert (SME). BLS tests all programming changes with prior month's data. These tests must be approved by the relevant SME and by the PMAP Production Manager before being migrated into the production code.
PMR-3-1-4	BLS evaluates its change proposals within a reasonable time frame.	Satisfied	KCI's analysis of the *Issue Tracker* sample provided revealed that the median time to resolve change requests or database changes is 38 calendar days. This figure is based on those entries that indicate the closure date. *Issue Tracker* also includes other similar requests that have been closed for which no closure date is indicated in *Issue Tracker*. BLS has revised its procedures for *Issue Tracker* and KCI is satisfied with the changes.
PMR-3-1-5	BLS updates its documentation in a timely manner.	Satisfied	BLS publishes two basic documents that need to reflect changes in a timely manner. BLS updates the SQM document (which describes the metrics, their definitions, exclusions employed, and calculations) monthly for internal purposes. Updated versions are provided to CLECs on a quarterly basis via the PMAP Web site. BLS also produces *the PMAP Raw Data Users Manual* that allows CLECs to validate the performance measures specific to their business, and to develop their own measures for management purposes. This manual should be kept up-to-date by reflecting all changes within PMAP. Initially, KCI found two errors in the October 1999 manual. One was corrected

Test Cross-Reference	Evaluation Criteria	Result	Comments
			in the December 1999 version. The other was not corrected until the February 2000 version. See Exception 88 for additional information. BLS responded by developing a new procedure to ensure that the *Raw Data Users Manual* is synchronized with changes in SQMs. KCI reviewed change requests that affect SQM report validation programs, and confirmed that any code changes that would require an update to the Raw Data User Manual were accurately reflected in the manual. Exception 88 is closed. BLS uses e-mail to communicate changes to CLECs in the current month's reported SQM values in a timely manner. BLS uses the PMAP Web site to communicate changes to prior month's reports.
PMR-3-1-6	BLS' process for tracking changes is adequate and complete.	Satisfied	BLS uses *Issue Tracker* to keep track of outstanding SQM-related issues and change requests. This database is accessible to all BLS personnel who are involved with the change management process. BLS also uses the various meetings of the Change Control Board and meetings related to the production cycle, to update the status of critical issues or change requests, and to discuss these issues' resolution. Based on initial observations, KCI concluded that the process for tracking changes could be improved in two ways. First, as indicated in PMR-3-1-4, the date of closure for issues and changes must be recorded faithfully in *Issue Tracker*.[1] Second, *Issue Tracker* should be made available to non-BLS personnel. BLS does not automatically provide information on any proposal to those outside the company. BLS has upgraded its Issue Tracker to ensure that the closure date is recorded. BLS currently provides two versions of

[1]Twenty-one entries included the date they were closed. Sixty-two reported "Yes" as the date closed, and 16 had no entry for resolution, but have been closed. One resolution entry referred to another issue. All should have reported the date that they were closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			the SQM document—one in which the changes from the previous version are presented in "legislative format," and another version that does not highlight the changes. In the future, BLS intends to provide the revised version along with a version change log. KCI maintains that it would be preferable to provide all three documents: the revised version, a version change log, and a version in "legislative" format. However, providing only the revised version and a version change log does not significantly impede the review of changes to the document. See Exception 19 for additional information on this issue. Exception 19 is closed.

D. Test Results: Metrics Data Integrity Verification and Validation Review (PMR4)

1.0 Description

The objective of the Metrics Data Integrity Verification and Validation Review (PMR4) was to evaluate the accuracy and completeness of the Service Quality Measurement (SQM) raw data produced by BellSouth during recent months. The evaluation also assessed the adequacy and completeness of the related data transfer processes and the internal controls on those processes.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

On a monthly basis, BellSouth calculates and reports SQM values. BellSouth also publishes the "raw data" used to calculate those SQMs, which are calculated entirely within the Performance Measurement and Analysis Platform (PMAP).

Although BellSouth does not routinely publish raw data for the other SQMs ("manual SQMs," i.e., SQMs that are wholly or primarily calculated outside of PMAP), KCI obtained and evaluated the raw data for those SQMs as well.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target for Metrics Data Integrity Verification and Validation Review was the raw data published or provided by BellSouth for several recent months. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

Table VIII-4.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Pre-Ordering	Average OSS Response Time and Response Interval	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-1-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-1-2
	OSS Interface Availability	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-2-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-2-2
Ordering	Percent Rejected Service Requests	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-3-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-3-2
	Reject Interval	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-4-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-4-2
	Firm Order Confirmation Timeliness	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-5-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-5-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Speed of Answer in Ordering Centers	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-6-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-6-2
	Mean Held Order Interval & Distribution Intervals	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-7-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-7-2
	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-8-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-8-2
	Percent Missed Installation Appointments	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-9-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-9-2
	Average Completion Interval / Order Completion Interval Distribution	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-10-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-10-2
	Average Completion Notice Interval	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-11-1

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Cogmplete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-11-2
	Coordinated Customer Conversions	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-12-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-12-2
	Percent Provisioning Troubles within 30 days of Service Order Activity	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-13-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-13-2
	Total Service Order Cycle Time	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-14-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-14-2
	Service Order Accuracy	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-15-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-15-2
Maintenance & Repair	Missed Repair Appointments	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-16-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-16-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Customer Trouble Report Rate	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-17-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-17-2
	Maintenance Average Duration	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-18-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-18-2
	Percent Repeat Troubles within 30 days	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-19-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-19-2
	Out of Service > 24 hours	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-20-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-20-2
	OSS Interface Availability	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-21-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-21-2
	OSS Response Interval & Percentages	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-22-1

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-22-2
	Average Answer Time – Repair Centers	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-23-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-23-2
Billing	Invoice Accuracy	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-24-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-24-2
	Mean Time to Deliver Invoices	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-25-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-25-2
	Usage Data Delivery Accuracy	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-26-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-26-2
	Usage Data Delivery Completeness	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-27-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-27-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Usage Data Delivery Timeliness	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-28-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-28-2
	Mean Time to Deliver Usage	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-29-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-29-2
Operator Service (Toll) and Directory Assistance	Average Speed to Answer (Toll)	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-30-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-30-2
	Percent Answered within "X" Seconds (Toll)	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-31-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-31-2
	Average Speed to Answer (DA)	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-32-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-32-2
	Percent Answered within "X" Seconds (DA)	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-33-1

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-33-2
E911	Timeliness	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-34-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-34-2
	Accuracy	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-35-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-35-2
	Mean Interval	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-36-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-36-2
Trunk Group Performance	Trunk Group Performance - Aggregate	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-37-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-37-2
	Trunk Group Service Report	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-38-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-38-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Trunk Group Service Detail	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-39-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-39-2
Collocation	Average Response Time	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-40-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-40-2
	Average Arrangement Time	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-41-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-41-2
	% of Due Dates Missed	Accurate transformation of the earlier stage data into raw data i.e., no differences in data values	PMR-4-42-1
		Complete transformation of the earlier stage data into raw data i.e., no inappropriate omissions of earlier stage data	PMR-4-42-2
Data Transfer Policies	Data transfer policies and procedures for CLEC and retail data	Adequacy and completeness of data transfer policies	PMR-4-43-1
Internal Control	Internal controls on data transfer for CLEC and retail data	Adequacy and completeness of internal control process	PMR-4-44-1

2.4 Data Sources

The data collected for the Metrics Data Integrity Verification and Validation Review are summarized in the table below.

Table VIII-4.2: Data Sources for Metrics Data Integrity Verification and Validation Review (PMR4)

Document	File Name	Location in Work Papers	Source
10/22/99 Georgia SQM documentation	No Electronic Copy	PMR-A-7	BLS (PMAP Web site)
PMAP Raw Data User Manual – Version 2.0 – October 15, 1999	Raw Data Documentation v2_0 - (September).doc	PMR-A-1	BLS (PMAP Web site)
PMAP Raw Data User Manual – Version 2.0 – December 15, 1999	Raw Data Documentation v2_0 – December 15.doc	PMR-A-2	BLS (PMAP Web site)
Pre-Ordering OSS Response Interval October 1999 Raw Data – BLS and CLEC Proprietary	Response data for October 1999.xls	PRE-2-A-3 (MTP)	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering – OSS Response Interval January 2000 Raw Data – BLS and CLEC Proprietary	Response Data For January 2000.xls	PMR-4-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering – OSS Response Interval August 2000 Raw Data – BLS and CLEC Proprietary	Response Data for August 2000.xls	PMR-4-A-2	BLS - Interconnection Operations – CLEC Performance Measurements
Pre-Ordering – OSS Response Interval August 2000 Raw Data – BLS and CLEC Proprietary	Response Data For August 2000 - RNS & ROS.xls	PMR-4-A-2	BLS - Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
December 1999 OSS Interface Availability raw data – BLS and CLEC Proprietary	KPMG1_18.xls	PRE-2-A-10 (MTP)	BLS – Interconnection Operations – CLEC Performance Measurements
Mapping of Components to Applications – BLS Proprietary	AVRP1099.xls	PRE-2–A-9 (MTP)	BLS – Interconnection Operations – CLEC Performance Measurements
Mapping of Components to Applications – BLS Proprietary	AVRP109R.xls	PRE-2–A-9 (MTP)	BLS – Interconnection Operations – CLEC Performance Measurements
Data Dictionaries for October 1999 PMAP Raw Data Files – BLS and CLEC Proprietary	README.txt	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Percent Rejected Service Requests CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_OR_REJ_TMP .dmpaaa REJECT.SQL	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Percent Rejected Service Requests CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_OR_LSR_TM P.Dataaa LSR.SQL	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Percent Rejected Service Requests CLEC Aggregate October 2000 Raw Data – BLS and CLEC Proprietary	GARejectInterval1000.tx t.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Ordering – Percent Rejected Service Requests CLEC Aggregate October 2000 Raw Data – BLS and CLEC Proprietary	GALSR1000.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - Firm Order Confirmation (FOC) Timeliness (Non-Trunks) CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_OR_FOC_TMP.Dataaa	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - Firm Order Confirmation (FOC) Timeliness (Non-Trunks) CLEC Aggregate October 2000 Raw Data – BLS and CLEC Proprietary	GAFOCnontrunk1000.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - FOC Timeliness (Trunks) CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_OR_FOC_TRK_TMP.Dataaa	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - FOC Timeliness (Trunks) CLEC Aggregate October 2000 Raw Data – BLS and CLEC Proprietary	GAFOCTrunk1000.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - Speed of Answer in Ordering Center BLS Retail Business October 1999 Raw Data – BLS and CLEC Proprietary	REGOCT99.xls	PMR-5-A-31	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Mean Held Order Interval & Distribution Intervals (Non-Trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_HLD_ORD_TMP.Dataaa NODS_V_PR_HLD_ORD_TMP.Dataab	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning - Mean Held Order Interval & Distribution Intervals (Non-Trunks) BLS Retail and CLEC Aggregate September 2000 Raw Data – BLS and CLEC Proprietary	GAHeldOrder0900.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Mean Held Order Interval & Distribution Intervals (Trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_HLD_ORD_TRK_TMP.Dataaa	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices BLS Retail and CLEC Aggregate November 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_JEOPARDY_TMP.Dataaa NODS_V_PR_JEOPARDY_TMP.Dataab NODS_V_PR_JEOPARDY_TMP.SQL	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Missed Installation Appointments (Non-trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_PMI_TMP.Dataaa	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Missed Installation Appointments (Non-trunks) BLS Retail and CLEC Aggregate September 2000 Raw Data – BLS and CLEC Proprietary	GAPMI0900.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning - Percent Missed Installation Appointments (Trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_PMI_TRK _TMP.Dataaa	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Missed Installation Appointments (Trunks) BLS Retail and CLEC Aggregate September 2000 Raw Data – BLS and CLEC Proprietary	PMITrunk0900.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Average Completion Interval / Order Completion Interval Distribution (OCI) (Non-trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_OCI_TMP .Dataaa NODS_V_PR_OCI_TMP .Dataab NODS_V_PR_OCI_TMP .Dataac NODS_V_PR_OCI_TMP .Dataad NODS_V_PR_OCI_TMP .Dataae NODS_V_PR_OCI_TMP .Dataaf NODS_V_PR_OCI_TMP .Dataag	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Average Completion Interval / Order Completion Interval Distribution (OCI) (Non-trunks) BLS Retail and CLEC Aggregate September 2000 Raw Data – BLS and CLEC Proprietary	GAOCI0900.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - OCI (Trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_OCI_TRK _TMP.Dataaa OCI.SQL	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning - OCI (Trunks) BLS Retail and CLEC Aggregate September 2000 Raw Data – BLS and CLEC Proprietary	OCITrunks0900.txt.Z	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Average Completion Notice Interval BLS Retail and CLEC Aggregate November 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_ACNI_TMP.Dataaa NODS_V_PR_ACNI_TMP.SQL	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Coordinated Customer Conversions CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	GAOCTCCC.XLS	PMR-5-B-80	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Coordinated Customer Conversions CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	CCCMAY00.xls	PMR-4-I-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity (Non-trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_TRBL_WN_30_TMP.Dataaa	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity (Trunks) BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_TRBL_30_TRK_TMP.Dataaa	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning - Total Service Order Cycle Time BLS Retail and CLEC Aggregate November 1999 Raw Data – BLS and CLEC Proprietary	Nods_v_pr_tsoct_tmp	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Missed Repair Appointments BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_MISSED_RPR_TMP.Dataaa NODS_V_MR_MISSED_RPR_TMP.Dataab NODS_V_MR_MISSED_RPR_TMP.Dataac NODS_V_MR_MISSED_RPR_TMP.Dataad MISSED.SQL	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Customer Trouble Report Rate BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_TRBL_RPT_RATE_TMP.Dataaa NODS_V_MR_TRBL_RPT_RATE_TMP.Dataab NODS_V_MR_TRBL_RPT_RATE_TMP.Dataac NODS_V_MR_TRBL_RPT_RATE_TMP.Dataad	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Customer Trouble Report Rate BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_LINE_CNT_TMP.DMPaaa NODS_V_MR_LINE_CNT_TMP.DMPaab NODS_V_MR_LINE_CNT_TMP.DMPaac NODS_V_MR_LINE_CNT_TMP.DMPaad NODS_V_MR_LINE_CNT_TMP.DMPaae NODS_V_MR_LINE_CNT_TMP.DMPaaf	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Maintenance Average Duration BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_MNT_AVG_DUR_TMP.dataaa NODS_V_MR_MNT_AVG_DUR_TMP.dataab NODS_V_MR_MNT_AVG_DUR_TMP.dataac NODS_V_MR_MNT_AVG_DUR_TMP.dataad	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Maintenance and Repair - Percent Repeat Troubles within 30 Days BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_RPT_TRBL_30_TMP.Dataaa NODS_V_MR_RPT_TRBL_30_TMP.Dataab NODS_V_MR_RPT_TRBL_30_TMP.Dataac NODS_V_MR_RPT_TRBL_30_TMP.Dataad	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Out of Service > 24 hours BLS Retail and CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_OOS_24_TMP.DATaaa NODS_V_MR_OOS_24_TMP.DATaab NODS_V_MR_OOS_24_TMP.DATaac NODS_V_MR_OOS_24_TMP.DATaad	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - August 1999 Raw Data – BLS and CLEC Proprietary	E&YAUG~1.xls	PMR-4-D-45	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - October 1999 Raw Data – BLS and CLEC Proprietary	E&YOCT~1.xls	PMR-5-D-3	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - January 2000 Raw Data – BLS and CLEC Proprietary	E&Y01-~1.XLS	BLG-4-A-17 (MTP)	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - March 2000 Raw Data – BLS and CLEC Proprietary	E&Y03-~1.XLS	BLG-4-A-31 (MTP)	BLS – Interconnection Operations – CLEC Performance Measurements
Operator Services (Toll) and Directory Assistance – November 1999 Raw Data – BLS and CLEC Proprietary	Nov_da.xls	PMR-5-D-17	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Operator Services (Toll) and Directory Assistance – November 1999 Raw Data – BLS and CLEC Proprietary	Nov_toll.xls	PMR-5-D-17	BLS – Interconnection Operations – CLEC Performance Measurements
Operator Services (Toll) and Directory Assistance – November 1999 Raw Data – BLS and CLEC Proprietary	KPMG_e~1.xls	PMR-5-D-17	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Service Report and Detail September 1999 Raw Data – BLS and CLEC Proprietary	RSTEWART.txt sujanctt.txt SUJANLOC.txt	PMR-5-D-38	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Service Report and Detail January 2001 Raw Data – BLS and CLEC Proprietary	rstewart1.xls sujanctt1.xls sujanloc1.xls	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Performance Aggregate September 1999 Raw Data – CLEC Proprietary	blk099ga.zip blk099ga.dct ct089ag.txt ct089fl.txt ct089klm.txt ct089nst.txt	PMR-5-D-31	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation – CLEC Aggregate October 1999 Raw Data – BLS and CLEC Proprietary	GA1099RS.xls	PMR-5-D-10	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance- Trunk Group Service Report and Detail January 2000 Raw Data – BLS and CLEC Proprietary	Rstewart.xls Sujanctt.xls Sujanloc.xls	PMR-4-I-4	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Trunk Group Performance - Trunk Group Performance Aggregate September 1999 Raw Data – CLEC Proprietary	JAN01_07.TXT JAN08_14.TXT JAN15_21.TXT JAN22_28.TXT JAN29_31.TXT	PMR-4-I-4	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering – OSS Response Interval Daily TAG and LENS Data Files for January 24, 2000 through January 30, 2000 – BLS and CLEC Proprietary	WeekRawData.zip	PMR-4-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering – OSS Response Interval Data Dictionary for Daily TAG and LENS Data Files – BLS and CLEC Proprietary	Action Items Responses.doc	PMR-4-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering – OSS Response Interval Procedures Used to Create Raw Data – BLS and CLEC Proprietary	Massage_perl.doc Load_data source.doc	PMR-4-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Pre-Ordering – OSS Interface Availability List of All Trouble Tickets in December 1999 – BLS and CLEC Proprietary	OUTAGE~1.xls	PMR-4-A-7	EDS
Pre-Ordering – OSS Interface Availability List of All Trouble Tickets in March 2000 and Raw Data for March 2000 – BLS and CLEC Proprietary	JUNE_3~1.XLS JUNE_3~2.XLS	PMR-4-I-17	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Description of Derivation of Ordering PMAP Variables – BLS and CLEC Proprietary	ORFILE2.doc DATARE~1.doc	PMR-4-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Response from BellSouth Regarding Selected PMAP Raw Data Fields – BLS and CLEC Proprietary	SQMANS~1.doc	PMR-4-A-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Ordering – Data from the LON System for Selected Service Requests – BLS and CLEC Proprietary	KPMG Non-Trunks LON Data Version 1.xls	PMR-4-A-10	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Screen Printouts from the LEO System for Selected Service Orders – BLS and CLEC Proprietary	LEOOSS~1.doc	PMR-4-A-10	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Additional information from LEO for Selected Service Requests – BLS and CLEC Proprietary	LEOSYS~1.txt	PMR-4-A-10	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – LON information for seven Local Service Requests – BLS and CLEC Proprietary	PON Extraction 07132000.xls	PMR-4-I-7	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Clarification regarding two LSRs – BLS and CLEC Proprietary	10751.xls	PMR-4-I-7	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Screen Printouts from EXACT System for Selected Service Requests – BLS and CLEC Proprietary	KPMG_D~1.doc	PMR-4-A-10	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Block of Data from the LON System (10/15/99) – BLS and CLEC Proprietary	KPMG 329200 LON Request.xls	PMR-4-A-13	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Ordering – Block of Data from the LEO System (10/15/99) – BLS and CLEC Proprietary	KPMGRE~1.txt	PMR-4-A-13	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Block of Data from the EXACT System (10/15/99) – BLS and CLEC Proprietary	KPMG_A~1.doc	PMR-4-A-13	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Early-stage data from Exact for January 2001 – BLS and CLEC Proprietary	exact_seg1_1000.txt	PMR-B-9	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Interview Report Regarding Speed of Answer in Ordering Centers (LCSC) –CLEC Proprietary	PMR4_000202IntReport ASALCSCWong.doc	PMR-4-B-15	KCI
Ordering – Interview Report Regarding Speed of Answer in Ordering Centers (Business) – BLS and CLEC Proprietary	PMR4_000203IntReport ASABusinessWong.doc	PMR-4-B-15	KCI
Ordering - Paper Reports from Automatic Call Distributor for Average Speed of Answer in Business Ordering Centers – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-B-16	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Description of Derivation of Provisioning PMAP Variables – BLS and CLEC Proprietary	KPMDOC01.doc	PMR-4-C-17	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning – Unique Keys for Provisioning PMAP Raw Data Tables – BLS and CLEC Proprietary	KPMGRD1.doc	PMR-4-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – SOCS Data for Selected Service Orders from ICAIS (October 1999) – BLS and CLEC Proprietary	RAWDAT~1.dat SOCS.sql	PMR-4-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – LMOS Data for Selected Service Orders (October 1999) – BLS and CLEC Proprietary	TROUBL~1.ZIP	PMR-4-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - SOCS Data for Average Completion Notice Interval, Jeopardy Interval and Total Service Order Cycle Time (November 1999) – BLS and CLEC Proprietary	ACNIJE~1.doc ACNIJE~1.xls	PMR-4-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Block of SOCS Data (10/15/99) – BLS and CLEC Proprietary	1ST50s~1.xls	PMR-4-C-19	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Block of SOCS Data (11/8/99) – BLS and CLEC Proprietary	1ST301~1.xls	PMR-4-C-19	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning – Coordinated Customer Conversions WFA-C Screen Printouts for Selected Service Orders (October 1999) – BLS and CLEC Proprietary	TABLE1~1.DOC CO0DH3K3.DOC CO11M357.DOC CO2HD4G7.DOC CO3YT2N5.DOC CO78KVH6.DOC COB66866.DOC NO7R2B93.DOC NO8W4136.DOC NOD46FP4.DOC NOG2L5C4.DOC	PMR-4-C-22	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Coordinated Customer Conversions WFA-C Screen Printouts of Service Orders Completed on 10/15/99 – BLS and CLEC Proprietary	CCC101~1.XLS CO05D252.DOC CO0PX8N2.DOC CO141383.DOC CO1J7P63.DOC CO1Y28B5.DOC CO29PFD7.DOC CO2MN975.DOC CO2NYL44.DOC CO3BD7Q4.DOC CO480G55.DOC CO5LP642.DOC CO6M3QB0.DOC CO7KJR34.DOC CO7PQXB9.DOC CO84YTX9.DOC CO8X67M7.DOC CO9MWLP3.DOC COB6F4L7.DOC COB7L7X3.DOC COBPT6K2.DOC COD0TT95.DOC COFR9DN5.DOC COFV8M27.DOC COWBY075.DOC NOC8VBK7.DOC	PMR-4-C-25	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Coordinated Customer Conversion Screen Printouts of Selected Service Orders (May 2000) – BLS and CLEC Proprietary	De107.7.1.doc	PMR-4-I-9	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning – Coordinated Customer Conversion SQM report for May 2000 – BLS and CLEC Proprietary	CCMAY00.XLS	PMR-4-I-9	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Service Order Accuracy Code Lists – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-C-27	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Service Order Accuracy Resale Order and UNE Order Guidelines – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-C-27	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Service Order Accuracy Document Describing Sampling Process – BLS and CLEC Proprietary	SAMPLE.doc	PMR-4-C-27	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Service Order Accuracy Selected Local Service Requests with Accompanying Service Orders – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-C-28	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair – Description of Derivation of Provisioning PMAP Variables – BLS and CLEC Proprietary	M&RAUD~1.xls	PMR-4-D-30	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair – Additional Information About Derivation of Provisioning PMAP Variables – BLS and CLEC Proprietary	PMAPFI~1.doc	PMR-4-D-30	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Maintenance and Repair - Data from LMOS System for Selected Trouble Tickets (October 1999) – BLS and CLEC Proprietary	DEFS_M~1.doc KMPG1.txt KPMG2.txt	PMR-4-D-31	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair – Screen Printouts from the WFA System for Selected Trouble Tickets (October 1999) – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-D-31	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Block of Data from LMOS System (10/15/99) – BLS and CLEC Proprietary	GA_OCT15.txt	PMR-4-D-33	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair – Block of Data from WFA System (10/15/99) – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-D-33	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair – Interview Report Regarding OSS Response Interval – BLS and CLEC Proprietary	PMR4_000223IntReport M&ROSSResponseInterValWong.doc	PMR-4-D-35	KCI
Maintenance and Repair – Interview Report Regarding Average Answer Delay in Repair Centers (UNE and BRMC) – BLS and CLEC Proprietary	PMR4_000203IntReport AvgAnswerDelayUNE_ BRMCWong.doc	PMR-4-D-36	KCI
Maintenance and Repair – Interview Report Regarding Average Answer Delay in Repair Centers (Business) – BLS and CLEC Proprietary	PMR4_000214IntReport AvgDelayBusinessWon g.doc	PMR-4-D-36	KCI
Maintenance and Repair - Data from Automatic Call Distributor for Average Answer Time in Business Repair Centers – BLS and CLEC Proprietary	BRC_ASA.ZIP	PMR-4-D-37	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing - Flow Charts of Data Flows – BLS and CLEC Proprietary	DOCUME~1.doc	PMR-4-D-39	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – CABS - CLEC Invoice Accuracy SQL Code – BLS and CLEC Proprietary	SQLQUE~1.doc	PMR-4-D-39	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – CABS – BellSouth Adjustments SQL Code – BLS and CLEC Proprietary	QBSTADJW.doc	PMR-4-D-39	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Requirements Document for CRIS Invoice Accuracy for CLECs and BellSouth Aggregate – BLS and CLEC Proprietary	INVOIC~1.doc	PMR-4-D-39	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – CABS Invoice Accuracy Data for Selected CLECs for October 1999 for the state of Georgia – BLS and CLEC Proprietary	MQ5557TB.xls TJRNL.xls TUSOC.xls TVOUCHR.xls	PMR-4-D-40	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – CRIS Invoice Accuracy Data for Selected CLECs for October 1999 for the state of Georgia – BLS and CLEC Proprietary	KPMG#3.xls	PMR-4-D-40	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – CRIS Invoice Accuracy Data for Selected CLECs for March 2000 for the state of Georgia – BLS and CLEC Proprietary	KPMGVERI.xls GA770Q85.xls	PMR-4-I-12	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing – BellSouth Revenue Data from MAREV Database for October 1999 for the state of Georgia (with Data Dictionary) – BLS and CLEC Proprietary	GAOCT1999.db1.mdb MAREVSDA.doc	PMR-4-D-40	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – BellSouth CABS Adjustments Data for October 1999 for the state of Georgia – BLS and CLEC Proprietary	GAADJS.xls	PMR-4-D-40	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – BellSouth CRIS Adjustments Data for October 1999 for the state of Georgia (with Data Dictionary) – BLS and CLEC Proprietary	Gabst.txt AUDITBST.doc	PMR-4-D-40	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - CLEC Invoice Timeliness Reporting, Procedures - CLEC – CLEC Proprietary	PROCED~1.doc	PMR-4-D-42	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - CLEC Invoice Timeliness Reporting, Procedures – Aggregate – CLEC Proprietary	PROCED~2.doc	PMR-4-D-42	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - CLEC Invoice Timeliness Reporting, Procedures – Queries – CLEC Proprietary	PROCED~3.doc	PMR-4-D-42	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Data Regarding BellSouth Aggregate Bills for October 1999 – CLEC Proprietary	1099BD~1.XLS 1999BI~1.XLS CLUBSO~1.XLS CABSOC~1.XLS GRANDT~1.XLS	PMR-4-D-42	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing – List of CLEC accounts, January 2000 – CLEC Proprietary	JANBDC.xls JAN_BDC.xls	PMR-4-D-42	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - Paper Reports Indicating Transmission Dates of CRIS and CABS Bills for January 2000 for Selected CLECs – CLEC Proprietary	No Electronic Copy	PMR-4-E-50	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - Additional Paper Reports Indicating Dates when CABS Bills are Mailed or Electronically Transmitted for Selected CLECs (January 2000) – CLEC Proprietary	No Electronic Copy	PMR-4-I-13	BLS – Interconnection Operations – CLEC Performance
Billing - BellCore Data Listing BellSouth Pack Failures in October 1999 – BLS and CLEC Proprietary	PKFL1099.doc	PMR-4-D-45	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - Record Layout of Header and Trailer Record of an ODUF file – BLS and CLEC Proprietary	ODUFPA~1.doc	PMR-4-D-45	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - ODUF file for a Selected CLEC for the month of August 1999 – BLS and CLEC Proprietary	AUG.zip	PMR-4-D-45	BLS – Interconnection Operations – CLEC Performance Measurements
Billing - CMDS file for BellSouth for the month of October 1999 – BLS and CLEC Proprietary	KPMGIN~1.txt	PMR-4-D-45	BLS – Interconnection Operations – CLEC Performance Measurements
Operator Services (Toll) and Directory Assistance - January 2000 Capture Files	CGTL02~1.TXT GADA02~1.TXT CGTL0101.TXT	PMR-4-F-2	BLS – Interconnection Operations –

Document	File Name	Location in Work Papers	Source
for Operator Services – BLS and CLEC Proprietary	CGTL0102.TXT CGTL0103.TXT CGTL0104.TXT CGTL0105.TXT CGTL0106.TXT CGTL0107.TXT CGTL0108.TXT CGTL0109.TXT CGTL0110.TXT CGTL0111.TXT CGTL0112.TXT CGTL0113.TXT CGTL0114.TXT CGTL0115.TXT CGTL0116.TXT CGTL0117.TXT CGTL0118.TXT CGTL0119.TXT CGTL0120.TXT CGTL0121.TXT CGTL0122.TXT CGTL0123.TXT CGTL0124.TXT CGTL0125.TXT CGTL0126.TXT CGTL0127.TXT CGTL0128.TXT CGTL0129.TXT CGTL0130.TXT CGTL0131.TXT ECA0101.TXT ECA0102.TXT ECA0103.TXT ECA0104.TXT ECA0105.TXT ECA0106.TXT ECA0107.TXT ECA0108.TXT ECA0109.TXT ECA0110.TXT ECA0111.TXT ECA0112.TXT ECA0113.TXT ECA0114.TXT ECA0115.TXT ECA0116.TXT ECA0117.TXT ECA0118.TXT		CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
	ECA0119.TXT ECA0120.TXT ECA0121.TXT ECA0122.TXT ECA0123.TXT ECA0124.TXT ECA0125.TXT ECA0126.TXT ECA0127.TXT ECA0128.TXT ECA0129.TXT ECA0130.TXT ECA0131.TXT		
Operator Services (Toll) and Directory Assistance - January 2000 Capture Files for Directory Assistance – BLS and CLEC Proprietary	GADA0101.TXT GADA0102.TXT GADA0103.TXT GADA0104.TXT GADA0105.TXT GADA0106.TXT GADA0107.TXT GADA0108.TXT GADA0109.TXT GADA0110.TXT GADA0111.TXT GADA0112.TXT GADA0113.TXT GADA0114.TXT GADA0115.TXT GADA0116.TXT GADA0117.TXT GADA0118.TXT GADA0119.TXT GADA0120.TXT GADA0121.TXT GADA0122.TXT GADA0123.TXT GADA0124.TXT GADA0125.TXT GADA0126.TXT GADA0127.TXT GADA0128.TXT GADA0129.TXT GADA0130.TXT GADA0131.TXT	PMR-4-F-2	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
E911- Interview Report Regarding Data Used to Calculate E911 SQMs – BLS and CLEC Proprietary	PMR4_000217IntReport E911Wong.doc	PMR-4-F-3	KCI
Trunk Group Performance – FOCEXEC Code Used to Create Raw Data Files – BLS and CLEC Proprietary	BSTBLKG.DOC BSTICRPT.DOC CHECKLST.DOC ALL2.DOC BSTMAKE1.DOC BSTSTATE.DOC OPT2.DOC CO-RPT~1.FOC ICDATF~1.FOC SUJANC~1.FOC	PMR-4-F-6	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Response to KCI's Information Requests – BLS and CLEC Proprietary	PMR4INT.DOC PMR4DATA.DOC	PMR-4-F-6	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – January 2001 Early-Stage Data – BLS and CLEC Proprietary	jansamp.zip	PMR-4-F-6	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation – Interview Report of Interview Held on 4/10/00 with Collocations SMEs – BLS and CLEC Proprietary	PMR4_000410IntReport CollocationMangla.doc	PMR-4-F-7	KCI
Collocation - Summary Material for Selected Physical and Virutal Collocations – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-G	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation - Material for Selected Physical Collocations – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-G	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Collocation - Material for Selected Virtual Collocations – BLS and CLEC Proprietary	No Electronic Copy	PMR-4-H	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation - June 2000 Collocation raw data spreadsheet – BLS and CLEC Proprietary	GA0600.xls	PMR-4-H	BLS – Interconnection Operations – CLEC Performance Measurements
Request for Documents 121799.doc – BLS and CLEC Proprietary	Request for Documents 121799.doc	PMR-1-A-1	KCI
Raw Data Validation Procedures – BLS and CLEC Proprietary	RWDATVAL.doc	PMR-1-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Response to Question 1B of KCI Memo	QUES1B.doc	PMR-1-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Response to Question 1D of KCI Memo	QUES1D.doc	PMR-1-A-1	BLS – Interconnection Operations – CLEC Performance Measurements
Request for Documents 0107.doc	Request for Documents 0107.doc	PMR-1-A-2	KCI
Response to January 7, 2000 Request for Documentation memo	PROCES~1.doc	PMR-1-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Audit documentation request for ICAIS Parity Reporting System	Smith – Audit113099.doc	CD: PMR1-CD1	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Georgia Public Service Commission Docket No. 7892-U	7892_ORDER.TIF	PMR-1-A-2	BLS – Interconnection Operations – CLEC Performance Measurements
Request for Completed Run Books	PMR1012500DocRqstAlford.doc	PMR-1-A-3	KCI
PMAP Run Books "December Run" "Jan 2000 Run Book" – BLS Proprietary	No Electronic Copy	PMR-1-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
Request for Documents on Preparation of Service Order Accuracy	PMR124030300DocRqst Alford	PMR-1-A-6	KCI
Interview Report of the January 13, 2000 interview with Bill Sellers	PMR1_000113_IntReport Alford.doc	PMR-1-A-7	BLS – Interconnection Operations – CLEC Performance Measurements
PMAP Run Book, Draft 11/02/99 – BLS Proprietary	RUNBOO~1.DOC	CD: PMR1-CD1	BLS – Interconnection Operations – CLEC Performance Measurements
Request for documentation resulting from interview with Bill Sellers	WES0006.DOC	PMR-1-A-7	BLS – Interconnection Operations – CLEC Performance Measurements
Performance Measurement and Analysis Platform (PMAP) Backup & Disaster Recovery Overview – BLS Proprietary	Backrec.doc	PMR-1-A-7	BLS – Interconnection Operations – CLEC Performance Measurements
Periodic Activities of an Oracle DBA –CLEC Proprietary	DBAHBV3.doc	PMR-1-A-7	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Audit and Control Document – BLS Proprietary	Audit and Control Points2.doc	PMR1-CD1	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report of February 2, 2000 interview with Stephanie Ford and Richard Bray	PMR2_000202_IntReport Moulin.doc	PMR-1-A-8	KCI
Spreadsheet comparing number of records in various filed – BLS and CLEC Proprietary	No Electronic Copy	PMR-1-A-8	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report of the February 8, 2000 interview regarding Legacy Source systems	PMR1_000208_IntReport Alford.doc	PMR-1-A-9	KCI
Response to 2/8/00 Meeting Action Items	KPMG 02152000 Audit Response.doc	PMR-1-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
Storage Manager Overview – BLS and CLEC Proprietary	KPMG Audit Attach #3.XLS	PMR-1-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
LCSC Order Tracker Release Management Process – BLS and CLEC Proprietary	KPMG Audit Attach #5.vsd	PMR-1-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
Audit Attachment #1	KPMG Audit Attach #1.doc	PMR-1-A-9	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report of the February 21, 2000 interview with Ray Lee	PMR1_000221_IntReport Alford.doc	PMR-1-A-11	KCI

Document	File Name	Location in Work Papers	Source
Completed Interview Guide from Ray Lee	IGLEE2.DOC	PMR-1-A-11	BLS – Interconnection Operations – CLEC Performance Measurements
Responses on Interview Summary from February 21, 2000 interview with Ray Lee	RAYSUM.DOC	PMR-1-A-11	BLS – Interconnection Operations – CLEC Performance Measurements
List of participants in February 28, 2000 interview and walkthrough	02282000 Interview_Walkthrough Participants - Backup Process.doc	PMR-1-B-12	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report for the February 28, 2000 walkthrough of the Regional Data Center	PMR1_022800_WalkThroughRptAlford.doc	PMR-1-B-13	KCI
Response on Interview Summary from February 28, 2000 walkthrough	KPMG walkthrough feedback.doc	PMR-1-B-13	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report of the February 29, 2000 and March 1, 2000 meetings with various SMEs	PMR1_000229_IntReportAlfordSMEs.doc	PMR-1-B-14	KCI
Response on Interview Summary from the February 29, 2000 interview with Terri Ferrara	KPMG-I~1.DOC	PMR-1-B-14	BLS – Interconnection Operations – CLEC Performance Measurements
Response on Interview Summary from the March 1, 2000 interview with Treva Gardner	TGSMEI~1.DOC	PMR-1-B-14	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Response on Interview Summary from the February 29, 2000 interview with Linda Gilley	GILLEY.DOC	PMR-1-B-14	BLS – Interconnection Operations – CLEC Performance Measurements
Response on Interview Summary from the March 1, 2000 interview with Steve Elliott	KPMGNTV1.DOC	PMR-1-B-14	BLS – Interconnection Operations – CLEC Performance Measurements
Response on Interview Summary from the March 1, 2000 interview with Ted McDonald	No Electronic Copy	PMR-1-B-14	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report for the March 6, 2000 walkthrough of the PMAP Production Facilities	PMR1_030600_WalkthroughRptAlford.doc	PMR-1-B-16	KCI
PMAP 2.0 March Production Runs – BLS Proprietary	No Electronic Copy	PMR-1-B-16	BLS – Interconnection Operations – CLEC Performance Measurements
E-mail provided to SMEs of Run Jobs – BLS Proprietary	No Electronic Copy	PMR-1-B-16	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report of the March 7, 2000 interview regarding the OS/DA metric and data collection by QMIS	PMR1_000307_IntReportAlfordQMIS.doc	PMR-1-B-17	KCI
Georgia DA Data Input – BLS and CLEC Proprietary	No Electronic Copy	PMR-1-B-17	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Carolina / Georgia Toll Data Input – BLS and CLEC Proprietary	No Electronic Copy	PMR-1-B-17	BLS – Interconnection Operations – CLEC Performance Measurements
Corrections to OS / DA Diagram from Interview Summary	No Electronic Copy	PMR-1-B-17	BLS – Interconnection Operations – CLEC Performance Measurements
Interview Report of the March 7, 2000 interview with Phil Porter	PMR1_000307_IntRptAlfordPorter.doc	PMR-1-B-18	KCI
Confirmation of the Interview Summary sent by KCI regarding the March 7, 2000 interview with Phil Porter	No Electronic Copy	PMR-1-B-18	BLS – Interconnection Operations – CLEC Performance Measurements
Service Quality Measurements Functional Organization – BLS and CLEC Proprietary	MOOREORG.PPT	PMR-1-B-19	BLS – Interconnection Operations – CLEC Performance Measurements
Flow chart of the flow of information from Source Systems, through Staging, NODS, and DDS – BLS and CLEC Proprietary	PAGE4.DOC	PMR-1-B-21	BLS – Interconnection Operations – CLEC Performance Measurements
Procedures used to calculate Coordinated Customer Conversions	CCCREP~1.DOC	PMR-1-B-22	BLS – Interconnection Operations – CLEC Performance Measurements
Procedures used to gather data for OSS Response Interval	No Electronic Copy	PMR-1-B-23	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Sample e-mail notifying the SMEs of validation results	No Electronic Copy	PMR-1-B-24	BLS – Interconnection Operations – CLEC Performance Measurements
Flow charts describing how E911 data is used in / by different systems	No Electronic Copy	PMR-1-B-25	BLS – Interconnection Operations – CLEC Performance Measurements
Information regarding Average Answer Time in Repair Centers (Business)	No Electronic Copy	PMR-1-B-26	BLS – Interconnection Operations – CLEC Performance Measurements
Response from Dan Baxter regarding for February 28, 2000 interview regarding OSS Interface Availability and REM	FW:	PMR-1-B-27	BLS – Interconnection Operations – CLEC Performance Measurements
PMAP Run Book "December Run" – BLS Proprietary	No Electronic Copy	PMR-1-D-34	BLS – Interconnection Operations – CLEC Performance Measurements
PMAP Run Book "Jan 2000 Run Book" – BLS Proprietary	No Electronic Copy	PMR-1-D-34	BLS – Interconnection Operations – CLEC Performance Measurements
Implementation Manual – BLS Proprietary	No Electronic Copy	PMR-1-D-35	BLS – Interconnection Operations – CLEC Performance Measurements

2.4.1 Data Generation/Volumes

This test relied on review of data files and supporting documentation, as well as interviews with BellSouth personnel.

2.5 Evaluation Methods

KCI evaluated the *accuracy* of the raw data by executing the three steps below, both for the CLEC aggregate and, where applicable, BellSouth retail data. The month examined varied, depending on data availability[1].

1. KCI first identified the "key fields"[2] in the raw data for the SQMs in each service domain, and then determined which early-stage data sources contained the same fields. In selecting early-stage data sources, KCI focused on the earliest stages of data processing for which BellSouth records were available. If the raw data fields contained derived values (i.e., values that were calculated from earlier data), KCI determined all the early-stage variables that were needed to calculate those values, and included the corresponding early-stage data sources in its selection.
2. KCI drew a random sample of values for each key field in the raw data and asked BellSouth for all related early-stage records. BellSouth extracted the data electronically or via printouts. When necessary, KCI obtained instructions from BellSouth to calculate derived values from early-stage records.
3. KCI compared the values in the raw data sample to the corresponding values in the early-stage records or to the values it derived from those records. If the values matched, KCI concluded that the respective raw data were accurate.

KCI evaluated the *completeness* of the raw data by following a two–step procedure.

1. KCI extracted a large block of consecutive records from each set of early-stage data provided by BellSouth in step two above.
2. For each block, KCI determined whether all of the records were accounted for in the raw data records. If every early-stage record was accounted for, KCI concluded that the respective raw data were complete.

2.6 Analysis Methods

The Metrics Data Integrity Verification and Validation Review included a checklist of evaluation criteria developed by KCI during the initial phase of the

[1] In some instances BellSouth did not retain the early-stage data as far back as October 1999. In such instances, KCI performed the integrity testing on the earliest month for which BellSouth could provide the data.

[2] A raw data field was considered to be a "key field" if it was either a critical element in a particular SQM calculation or it was common to most of the SQMs in a particular domain.

BellSouth-Georgia OSS Evaluation. These evaluation criteria provided the framework of norms, standards, and guidelines for the test.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VIII-4.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Pre-Ordering – Average OSS Response Time and Response Interval			
PMR4-1-1	The selected raw data and the corresponding early-stage data agree.	Not Complete	KCI found that the selected raw data values and the corresponding early-stage data for the CLEC aggregate in January 2000 did not agree. KCI derived the following raw data fields from early-stage data (LENS & TAG servers, January 24 to January 30): total number of accesses, total access time in milliseconds, number of accesses that took less than 2.3 seconds, and number of accesses that took more than six seconds. The derived values did not match the corresponding raw data values. See Exception 89 for additional information on this issue. BLS is currently working on resolving this issue. KCI will be retesting both CLEC aggregate and BLS Retail data once BLS has resolved this issue.
PMR4-1-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	Initially, KCI found that certain records in the earlier-stage data (TAG server, October 1999 and January 2000) were missing from the raw data. BLS explained that KCI-identified records in the earlier-stage data were missing from the raw data due to server capacity problems. BLS stated that it increased the TAG server

Test Cross-Reference	Evaluation Criteria	Result	Comments
			capacity to four gigabytes of free space. See Exception 92 for additional information on this issue. KCI re-tested by reviewing the completeness of the August 2000 data. All of the selected early-stage data for August were accounted for in the August raw data. Exception 92 is closed. For the BLS retail data, KCI found that all the early-stage data were accounted for in the raw data in August 2000. KCI tested the RNS and ROS servers for BLS retail.
Pre-Ordering – OSS Interface Availability			
PMR4-2-1	The selected raw data and the corresponding early-stage data agree.	Satisfied[3]	KCI found that the selected raw data values and their corresponding early-stage counterparts for the CLEC aggregate and BLS retail agreed for December 1999.
PMR4-2-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied[3]	Initially, KCI found that certain full outages for one component were missing from the raw data for the CLEC aggregate and BLS retail (December 1999). Additionally, the raw data listed the component under a different model/version than the early-stage data. BLS indicated that the raw data for this component was missing from the reports between September 1999 through February 2000. KCI retested this criterion using March 2000 data and found that all of the selected early-stage data were accounted for in the raw data. See Exception 92 for additional information on this issue. Exception 92 is closed.

[3] KCI compared the raw data and early-stage data based upon the processes that were in place in December 1999. Recently, BellSouth has indicated that it will be updating the processes used to create the data sets in question. See PMR 2-2-3 and PMR 2-2-4 for additional information.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Ordering – Percent Rejected Service Requests			
PMR4-3-1	The selected raw data and the corresponding early-stage data agree.	Not Complete	Initially, KCI found that the selected raw data values and the corresponding early-stage data from LEO did not agree for the CLEC aggregate in October 1999. KCI derived REJECT_DURATION from LEO and LON data and could not match the raw data value for one LEO service request (OCN / PON / VER).[4] Additionally, KCI found that the raw data classified one service request as partially mechanized, whereas the early-stage LEO data identified it as a mechanized order. See Exception 89 for additonal information on this issue. BLS provided explanations for each of the discrepancies found. The issues in Exception 89 that relate to this criterion are resolved. BLS made changes in its calculations of the reject duration, and KCI restested using October 2000 data. KCI could not match the calculation for one LEO and one LON record. See Exception 131 for additional information on this issue.
PMR4-3-2	All of the selected early-stage data were accounted for in the raw data.	Not Complete	KCI found that some service requests in the LON database were missing from the corresponding raw data for October 1999. KCI tested a sample of early-stage records from the LEO and LON systems for October 15, 1999. BLS explained that the selected early-stage data were missing from the raw data because they failed to meet certain selection criteria. See Exception 92 for additional

[4] OCN is Operating Company Number, PON is Purchase Order Number, and VER is Version Number.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			information on this issue. Exception 92 is closed. BLS made changes in its calculations of the reject duration, and KCI retested using October 2000 data. KCI found that 18 records from a sample of 25 early-stage LON records did not appear in any of the three ordereing raw data files for non-trunks. See Exception 131 for additional information on this issue.
Ordering – Reject Interval			
PMR4-4-1	The selected raw data and the corresponding early-stage data agree.	Not Complete[5]	Initially, KCI found that the selected raw data values and their early-stage LEO counterparts did not agree for CLEC aggregate in October 1999. KCI derived REJECT_DURATION from LEO and LON data, and could not match the raw data value for one LEO service request. Additionally, KCI found that the raw data classified one service request as partially mechanized, whereas the early-stage LEO data element identified it as a mechanized order. See Exception 89 for additonal information on this issue. BLS provided explanations for each of the discrepancies found. The issues in Exception 89 that relate to this criterion are resolved. BLS made changes in its calculations of the reject duration, and KCI restested using October 2000 data. KCI could not match the calculation for one LEO and one LON record. See Exception 131 for additional information on this issue.

[5] KCI compared the raw data and early-stage data based upon the processes that were in place in October 1999 and October 2000. Recently BellSouth has indicated that it will be using different time stamps for calculation purposes. See PMR 2-4-2 and PMR 2-4-3 for additional information.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-4-2	All of the selected early-stage data were accounted for in the raw data.	Not Complete[5]	Initially, KCI found that some service requests in the LON database were missing from the corresponding raw data for October 1999. KCI tested a sample of early-stage records from the LEO and LON systems for October 15, 1999. BLS explained that the selected early-stage data were missing from the raw data because they failed to meet certain selection criteria. See Exception 92 for additional information on this issue. Exception 92 is closed. BLS made changes in its calculations of the reject duration, and KCI retested usingOctober 2000 data. KCI found that 18 records from a sample of 25 early-stage LON records did not appear in any of the three ordering raw data files for non-trunks. See Exception 131 for additional information on this issue.
Ordering – Firm Order Confirmation Timeliness			
PMR4-5-1	The selected raw data and the corresponding early-stage data agree.	Not Complete[6]	Initially, KCI found that the selected raw data values and their early-stage EXACT counterparts did not agree for the CLEC aggregate in October 1999. KCI found EXACT records where the same ASR[7] was associated with more than one ACNA, PON and VER, and therefore could not validate the accuracy of the raw data values in the selected sample. Upon investigation, BLS identified an error in the raw data creation process of the Firm Order Confirmation

[6] KCI compared the raw data and early-stage data based upon the processes that were in place in October 1999 and October 2000. Recently BellSouth has indicated that it will be using different time stamps for calculation purposes. See PMR 2-5-2 and PMR 2-5-3 for additional information.

[7] ASR is Access Service Request, and ACNA is Access Customer Name Abbreviation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			Timeliness raw data file for Trunks. The impact of this error is that the PMAP raw data contain both the local trunks and access trunks from the EXACT system whereas only local trunks should have been captured. See Exception 89 for additional information on this issue. BLS stated that it has addressed the problem effective with the June 2000 data. KCI retested data accuracy by reviewing the data for the month of June 2000. The selected June raw data and the corresponding early-stage data agree. The issues in Exception 89 that relate to this criterion are resolved. BLS made changes in its calculations of the FOC duration, and KCI retested usingOctober 2000 data. KCI found no discrepancies in the calculation of the FOC duration in the trunk sample selected. However, KCI found that for three LON (non-trunk) orders, the KCI-calculated FOC duration did not match the corresponding BLS -reported value in the raw data files. See Exception 131 for additional information on this issue.
PMR4-5-2	All of the selected early-stage data were accounted for in the raw data.	Not Complete[8]	KCI found that certain records in the LON database were missing from the corresponding raw data for October 1999. None of the selected early-stage records from the EXACT system could be found in the October 1999 raw data for trunks. KCI found that the same ASR in the early-stage EXACT data and the raw

[8] KCI compared the raw data and early-stage data based upon the processes that were in place in October 1999 and October 2000. Recently BellSouth has indicated that it will be using different time stamps for calculation purposes. See PMR 2-5-2 and PMR 2-5-3 for additional information.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			data was associated with a different ACNA, PON, and VER. KCI tested a sample of earlier-stage records from the LEO, LON and EXACT systems for October 15, 1999. See Exception 89 for additional information on this issue. BLS explained that the selected early-stage data from LON were missing from the raw data because they failed to meet certain selection criteria. Upon investigation, BLS identified an error in the raw data creation process of the Firm Order Confirmation Timeliness raw data file for Trunks. The impact of this error is that the PMAP raw data contain both the local trunks and access trunks from the EXACT system whereas only local trunks should have been captured. BLS stated that they have fixed the problem starting with June 2000 data. KCI retested the completeness of the raw data by reviewing these June 2000 data. All of the selected early-stage data were accounted for in the raw data. The issues in Exception 89 that relate to this criterion are resolved. BLS made changes in its calculations of the FOC duration, and KCI retested this SQM using October 2000 data. KCI found that 18 early-stage records could not be located in the BLS raw data files. See Exception 131 for additional information on this issue.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Ordering –Speed of Answer in Ordering Centers			
PMR4-6-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found that the selected raw data values and the corresponding early-stage data did not agree for Retail Small Business in October 1999. KCI found two instances where Number of Calls Handled in the raw data did not match the number of calls handled in the early-stage data. BLS explained that the difference in the early-stage data and raw data was a result of human error. BLS proposed certain measures to reduce human errors to a minimum. BLS stated that it will eliminate the manual process entirely and begin tracking alternate options data separately on a region-wide basis. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved. KCI found that the selected raw data values agreed with the corresponding early-stage data for the CLEC aggregate for October 1999. In this case the raw data used for the calculation of the SQM were the same as the early-stage data. The raw data used for the calculation of the SQM for BLS Residence Centers were obtained from a switch; therefore, no data integrity test was performed on these raw data.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-6-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	For CLEC aggregate and BLS Business Centers, KCI found that the raw data were complete for all of October 1999. The raw data used for the calculation of the SQM for BLS Residence Centers were obtained from a switch; therefore no data integrity test was performed on these raw data.
Provisioning - Mean Held Order Interval and Distribution Intervals			
PMR4-7-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found that the selected CLEC aggregate and BLS retail raw data values and their early-stage ICAIS counterparts did not agree in October 1999. KCI could not match the values for the field "so_missed_cmtt_cd" for five service orders, and for the field "status" for fourteen service orders in the sample selected. See Exception 89 for additional information on this issue. In response to this exception, BLS stated that they do not have the queries used to extract the original data. KCI is currently retesting this criterion using September 2000 data. KCI retested using September 2000 data and found no discrepancies between the early-stage data values and the raw data values.
PMR4-7-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the ICAIS system were missing from the October 1999 raw data.[9] KCI tested a sample of service orders issued on October 15, 1999 from the early-stage ICAIS system. BLS explained that the selected

[9] KCI reviewed the data transfer procedures from SOCS to the ICAIS system and found them appropriate.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			records from the early-stage data were missing from the raw data because they failed to meet specific business requirements. See Exception 92 for additional information on this issue. Exception 92 is closed.
Provisioning – Average Jeopardy Notice Interval and Percent of Orders Given Jeopardy Notices			
PMR4-8-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their early-stage ICAIS counterparts agreed for the CLEC aggregate and BLS retail for November 1999.
PMR4-8-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found the raw data for the calculation of the SQM to be complete for the CLEC aggregate and BLS retail for November 1999. KCI tested a sample of early-stage records from the ICAIS system, all issued on November 8, 1999.
Provisioning - Percent Missed Installation Appointments			
PMR4-9-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their early-stage ICAIS counterparts agreed for the CLEC aggregate and BLS retail for October 1999. During the process of resolving the provisioning issues in Exception 89, BLS explained that they had provided KCI with the early-stage data from the ICAIS live database, instead of the snapshot database. Therefore, KCI retested this criterion using September 2000 data, and found no discrepancies between the early-stage data values and the corresponding raw data values.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-9-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the ICAIS system were missing from the October 1999 raw data. KCI tested a sample of service orders issued on October 15, 1999 from the early-stage ICAIS system. BLS explained that the selected records from the early-stage data were missing from the raw data because they failed to meet specific business requirements. See Exception 92 for additional information on this issue. Exception 92 is closed.
Provisioning - Average Completion Interval / Order Completion Interval Distribution			
PMR4-10-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found that the selected CLEC aggregate and BLS retail raw data values and their early-stage ICAIS counterparts did not agree for October 1999. KCI could not match the the values for the field "status" for three service orders in the sample selected. See Exception 89 for additional information on this issue. In response to this exception, BLS has stated that they do not have the queries used to extract the original data. KCI retested this criterion using September 2000 data, and found that the selected raw data matched the corresponding early-stage data.
PMR4-10-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the ICAIS system were missing from the October 1999 raw data. KCI tested a sample of service orders issued on October 15, 1999 from the early-stage ICAIS system. BLS explained that the selected records from the early-stage data

Test Cross-Reference	Evaluation Criteria	Result	Comments
			were missing from the raw data because they failed to meet specific business requirements. See Exception 92 for additional information on this issue. Exception 92 is closed.
Provisioning - Average Completion Notice Interval			
PMR4-11-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected CLEC aggregate and BLS retail raw data values and their early-stage ICAIS counterparts agreed for November 1999.
PMR4-11-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found the raw data for the calculation of the SQM to be complete for the CLEC aggregate and BLS retail for November 1999. KCI tested a sample of early-stage records from the ICAIS system, all issued on November 8, 1999.
Provisioning - Coordinated Customer Conversions			
PMR4-12-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found that the selected raw data values did not agree with their early-stage WFA counterparts for October 1999. KCI found an instance in the raw data where two records were associated with the same ORDER number but with different DUE DATE COMPLETE values. KCI could validate only one of the DUE DATE COMPLETE value against the early-stage data. BLS explained that the error was due to human error. Given that BLS has a new system CCSS[10] in place for tracking the data, KCI retested this criterion using May 2000 data, and found that the raw data and the corresponding early-stage data

[10] CCSS is the Coordinated Cut Scheduling System.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			matched. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved.
PMR4-12-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that all of the selected records from the WFA system were included from the October 1999 raw data, as appropriate. KCI tested a sample of early-stage service orders that were completed on October 15, 1999 from the WFA system.
Provisioning – Percent Provisioning Troubles within 30 days of Service Order Activity			
PMR4-13-1	The selected raw data and the corresponding early-stage data agree.	Not Complete	KCI found that the selected CLEC aggregate and BLS retail raw data values and their early-stage ICAIS counterparts did not agree for October 1999. KCI could not match the values for the field "trouble date" for six non-trunk service orders in the sample selected. BLS explained that the early-stage data did not correspond to the raw data for the selected records because of an error in the procedure that derived the values for the field "trouble date" in the raw data. BLS fixed the error starting in November 1999. KCI retested for the month of December 1999 and found that the early-stage data values correspond to the raw data values. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved. During the process of resolving the provisioning issues in Exception 89, BLS explained that they had provided KCI with the early-stage data from the ICAIS live database, instead of the snapshot database. Therefore, KCI needs to retest this criterion using another month. As a

Test Cross-Reference	Evaluation Criteria	Result	Comments
			result of the issues identified by KCI during the replication testing of this SQM (See PMR-5-11-2), BLS is currently making certain code changes that impact the creation of the raw data files. KCI will commence retesting when these changes have been successfully implemented.
PMR4-13-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the ICAIS system were missing from the October 1999 raw data. KCI tested a sample of service orders issued on October 15, 1999 from the early-stage ICAIS system. BLS explained that the selected records from the early-stage data were missing from the raw data because they failed to meet specific business requirements. See Exception 92 for additional information on this issue. Exception 92 is closed.
Provisioning – Total Service Order Cycle Time			
PMR4-14-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected CLEC aggregate and BLS retail raw data values and their early-stage ICAIS counterparts agreed for November 1999.
PMR4-14-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found the raw data for the calculation of the SQM to be complete for the CLEC aggregate and BLS retail for November 1999. KCI tested a sample of early-stage records from the ICAIS system, all issued on November 8, 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Provisioning – Service Order Accuracy			
PMR4-15-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found no disagreement between the selected raw data values and the corresponding early-stage data, based on a comparison of information from the selected local service requests and their associated service orders for September 1999.
PMR4-15-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found no inappropriate deletions from the population of service orders before drawing the sample of service orders used for the SQM calculation.
Maintenance and Repair - Missed Repair Appointments			
PMR4-16-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and the corresponding early-stage data from the LMOS and WFA systems agreed for the CLEC aggregate and BLS retail for October 1999.
PMR4-16-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the LMOS and WFA system were missing from the October 1999 raw data. KCI tested a sample of trouble tickets opened on October 15, 1999 from the early-stage LMOS and WFA systems. BLS explained that the selected early-stage records were missing from the raw data because each of these records failed to meet certain selection criteria. See Exception 92 for additional information on this issue. Exception 92 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Maintenance and Repair - Customer Trouble Report Rate			
PMR4-17-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and the corresponding early-stage data from the LMOS and WFA systems agreed for the CLEC aggregate and BLS retail for October 1999. The raw data file "Lines in Service" was not tested, as the information that this file comprises does not contain a unique key. There is no way to determine a unique identifer (for individual raw data records), which could then be used to identify a corresponding record in the early-stage data. Therefore, it is not possible to select raw data records and determine whether they are included in the early-stage data.
PMR4-17-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the LMOS and WFA system were missing from the October 1999 raw data. KCI tested a sample of trouble tickets opened on October 15, 1999 from the early-stage LMOS and WFA systems. BLS explained that the selected early-stage records were missing from the raw data because each of these records failed to meet certain selection criteria. See Exception 92 for additional information on this issue. Exception 92 is closed.
Maintenance and Repair - Maintenance Average Duration			
PMR4-18-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and the corresponding early-stage data from LMOS and WFA systems agreed for the CLEC aggregate and BLS retail for October 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-18-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the LMOS and WFA system were missing from the October 1999 raw data. KCI tested a sample of trouble tickets opened on October 15, 1999 from the early-stage LMOS and WFA systems. BLS explained that the selected early-stage records were missing from the raw data because each of these records failed to meet certain selection criteria. See Exception 92 for additional information on this issue. Exception 92 is closed.
Maintenance and Repair - Percent Repeat Troubles within 30 days			
PMR4-19-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and the corresponding early-stage data from the LMOS and WFA systems agreed for the CLEC aggregate and BLS retail for October 1999.
PMR4-19-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the LMOS and WFA system were missing from the October 1999 raw data. KCI tested a sample of trouble tickets opened on October 15, 1999 from the early-stage LMOS and WFA systems. BLS explained that the selected early-stage records were missing from the raw data because each of these records failed to meet certain selection criteria. See Exception 92 for additional information on this issue. Exception 92 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Maintenance and Repair - Out of Service > 24 hours			
PMR4-20-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and the corresponding early-stage data from the LMOS and WFA systems agreed for the CLEC aggregate and BLS retail for October 1999.
PMR4-20-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that certain records from the LMOS and WFA system were missing from the October 1999 raw data. KCI tested a sample of trouble tickets opened on October 15, 1999 from the early-stage LMOS and WFA systems. BLS explained that the selected early-stage records were missing from the raw data because each of these records failed to meet certain selection criteria. See Exception 92 for additional information on this issue. Exception 92 is closed.
Maintenance & Repair – OSS Interface Availability			
PMR4-21-1	The selected raw data and the corresponding early-stage data agree.	Satisfied[11]	KCI found that the selected raw data values and the corresponding early-stage data agreed for the CLEC aggregate and BLS retail for December 1999.

[11] KCI compared the raw data and early-stage data based upon the processes that were in place in December 1999. Recently BellSouth has indicated that it will be updating the processes used to create the data sets in question. See PMR 2-21-3 and PMR 2-21-4 for additional information.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-21-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied[12]	KCI found that one component with full outage in the early-stage data was missing from the raw data for the CLEC aggregate and BLS retail for December 1999. BLS explained that the component identified in the early-stage data is redundant to another component. These two components contain the same data. Due to this arrangement the two components are not on line at the same time. See Exception 92 for additional information on this issue. Exception 92 is closed.
Maintenance & Repair – OSS Response Interval & Percentages			
PMR4-22-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found no disagreement between the selected CLEC aggregate and BLS retail raw data values and the corresponding early-stage data for October 1999. In this case, the raw data used for the calculation of the SQM were, in fact, the early-stage data.
PMR4-22-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that no records were inappropriately deleted from the October 1999 raw data. In this case, the raw data used for the calculation of the SQM were, in fact, the early-stage data.

[12] KCI compared the raw data and early-stage data based upon the processes that were in place in December 1999. Recently BellSouth has indicated that it will be updating the processes used to create the data sets in question. See PMR 2-21-3 and PMR 2-21-4 for additional information.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Maintenance & Repair – Average Answer Time for Repair Centers			
PMR4-23-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found no disagreement between the raw data values and the corresponding early-stage data for the CLEC aggregate for October 1999. In this case, the raw data used for the calculation of the SQM were, in fact, the early-stage data. For BLS Business Centers, KCI compared the raw data values against the early-stage data for the month of January 2000 and found no disagreement. The raw data used for the SQM calculation for BLS Residence Centers were obtained from a switch; therefore, no data integrity test was performed on the raw data.
PMR4-23-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the October 1999 raw data used for CLEC aggregate and the January 2000 raw data used for BLS Business Centers were complete. The raw data used for the SQM calculation for BLS Residence Centers were obtained from a switch; therefore, no data integrity test was performed on the raw data.
Billing – Invoice Accuracy			
PMR4-24-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found that the raw data values did not agree with the corresponding early-stage data for the selected CLECs from the CRIS Financial Database for October 1999. KCI found that BLS incorrectly included certain record types in the total billed revenue calculations for the selected CLECs. KCI reviewed CRIS and CABS data for representative OCNs and ACNAs and BLS retail for October 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			BLS explained that there was a coding error that has been fixed starting March 2000. KCI tested for March 2000 and found that the raw data agreed with the corresponding early-stage data. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved.
PMR4-24-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the early-stage data were accounted for in the raw data for the selected CLECs for March 2000. KCI reviewed CRIS and CABS data for representative OCNs and ACNAs and BLS retail data for March 2000.
Billing – Mean Time to Deliver Invoices			
PMR4-25-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found disagreement between the raw data values and their early-stage CABS counterparts for selected CLECs for January 2000. KCI found that for one billing account, the number of calendar days in the raw data was inconsistent with the CSR Verification Reports. KCI reviewed a representative sample of CRIS and CABS invoices for January 2000. For BLS retail, KCI reviewed October 1999 invoice data. BLS provided KCI with additional supporting documentation for the entire sample of CABS invoices and given this additional material, KCI found that the raw data agreed with the early-stage counterparts for January 2000. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-25-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found instances where electronically transmitted CABS bills for selected CLECs were missing from the raw data for January 2000. KCI also found a discrepancy of 23 retail bills between the early-stage data and the raw data for October 1999. BLS agreed that thirteen CABS CLEC invoices were missing from the early-stage data. Twelve bills were excluded because of a special billing arrangement with the customer. One bill was excluded from the raw data due to an error. BLS enhanced their quality assurance procedures to avoid such errors in the future. KCI retested this criterion using July 2000 data, and found that one account in the early-stage data was not accounted for in the raw data. KCI retested this criterion again using September 2000 data and found that the early-stage data were appropriately accounted for in the raw data. BLS explained that there is an inconsistency in the early-stage data for BLS retail bills due to human error. KCI retested for the month of December 1999, and found that early-stage retail bill data were correctly reflected in the raw data. See Exception 92 for additional information on this issue. Exception 92 is closed.
Billing – Usage Data Delivery Accuracy			

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-26-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the raw data agreed with the early-stage ODUF counterparts for a representative CLEC for August 1999. KCI also found that the total number of packs sent and re-transmitted for BLS retail agreed with the early-stage counterparts for October 1999.
PMR4-26-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that no packs from the early-stage ODUF data were missing from the raw data for a selected CLEC for August 1999. KCI also found that no packs from the early-stage data were missing from the raw data for BLS retail for October 1999.
Billing – Usage Data Delivery Completeness			
PMR4-27-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the raw data agreed with the early-stage ODUF counterparts for a representative CLEC for August 1999. KCI performed a similar comparison of the early-stage CMDS data to the raw data for BLS retail for October 2000 and found no discrepancy between the early-stage data and the corresponding raw data.
PMR4-27-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that no records from the early-stage ODUF data were missing from the raw data for a selected CLEC for August 1999. KCI also found that no records from the early-stage CMDS data were missing from the raw data for BLS retail in October 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Billing – Usage Data Delivery Timeliness			
PMR4-28-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the raw data agreed with the early-stage ODUF counterparts for a representative CLEC for August 1999. KCI performed a similar comparison of the early-stage CMDS data to the raw data for BLS retail for October 2000 and found no discrepancies between the two data sources
PMR4-28-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that no records from the early-stage ODUF data were missing from the raw data for a selected CLEC for August 1999. KCI also found that no records from the early-stage CMDS data were missing from the raw data for BLS retail in October 1999.
Billing – Mean Time to Deliver Usage			
PMR4-29-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the raw data agreed with the early-stage ODUF counterparts for a representative CLEC for August 1999. KCI performed a similar comparison of the early-stage CMDS data to the raw data for BLS retail for October 2000 and found no discrepancies between the two data sources.
PMR4-29-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that no records from the early-stage ODUF data were missing from the raw data for a selected CLEC for August 1999. KCI also found that no records from the early-stage CMDS data were missing from the raw data for BLS retail in October 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll)			
PMR4-30-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their early-stage counterparts agreed for the CLEC aggregate and BLS retail for January 2000. KCI reviewed the capture files to see if there were any manual entries in the database for January 2000, and found that there were none.
PMR4-30-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found the raw data to be complete for the CLEC aggregate and BLS retail for November 1999.
Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (Toll)			
PMR4-31-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their early-stage counterparts agreed for the CLEC aggregate and BLS retail for January 2000. KCI reviewed the capture files to see if there were any manual entries in the database for January 2000, and found that there were none.
PMR4-31-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found the raw data to be complete for the CLEC aggregate and BLS retail for November 1999.
Operator Services (Toll) and Directory Assistance – Average Speed to Answer (DA)			
PMR4-32-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their early-stage counterparts agreed for the CLEC aggregate and BLS retail for January 2000. KCI reviewed the capture files to see if there were any manual entries in the database for January 2000, and found that there were none.
PMR4-32-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found the raw data to be complete for the CLEC aggregate and BLS retail for November 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (DA)			
PMR4-33-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their early-stage counterparts agreed for the CLEC aggregate and BLS retail for January 2000. KCI reviewed the capture files to see if there were any manual entries in the database for January 2000, and found that there were none.
PMR4-33-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found the raw data to be complete for the CLEC aggregate and BLS retail for November 1999.
E911 – Timeliness			
PMR4-34-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected CLEC aggregate and BLS retail raw data values and the corresponding early-stage data agreed for October 1999. In this case, the raw data used for the calculation of the SQM were, in fact, the early-stage data.
PMR4-34-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the raw data for the calculation of the SQM for the CLEC aggregate and BLS retail were complete for October 1999.
E911 – Accuracy			
PMR4-35-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected CLEC aggregate and BLS retail raw data values and the corresponding early-stage data agreed in October 1999. In this case, the raw data used for the calculation of the SQM were, in fact, the early-stage data.
PMR4-35-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the raw data for the calculation of the SQM for the CLEC aggregate and BLS retail were complete for October 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
E911 – Mean Interval			
PMR4-36-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected CLEC aggregate and BLS retail raw data values and the corresponding early-stage data agreed for October 1999. In this case, the raw data used for the calculation of the SQM were, in fact, the early-stage data.
PMR4-36-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the raw data for the calculation of the SQM for the CLEC aggregate and BLS retail were complete for October 1999.
Trunk Group Performance – Trunk Group Performance: Aggregate			
PMR4-37-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected CLEC aggregate and BLS retail raw data values and the corresponding early-stage data agreed for September 1999. In this case, the raw data used for the calculation of the SQM were, in fact, the early-stage data.
PMR4-37-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the raw data for the calculation of the SQM for the CLEC aggregate and BLS retail were complete for September 1999.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Trunk Group Performance – Trunk Group Service Report			
PMR4-38-1	The selected raw data and the corresponding early-stage data agree.	Not Complete	KCI found that the selected raw data values did not agree with the corresponding early-stage data for 17 Trunk Group Serial Numbers. KCI calculated the OBSVD_BLKG (percentage of trunks blocked over one month period) for the CLEC aggregate and BLS retail for September 1999 and found TSGNs for which the KCI-calculated value did not match the raw data value. BLS investigated and found that the early-stage data for September was inaccurate. Further, they stated that they had a new system for trunk group performance starting January 2000. KCI retested this criterion using January 2000 data, and found that some of the data were missing from the early-stage data. KCI retested this criterion using March 2000 data, and found one TGSN where the KCI-calculated busy hour did not match the BLS-calculated busy hour. BLS agreed with the KCI calculations. KCI attempted to retest this criterion using October 2000 data. However, BLS could not provide the early-stage data. KCI retested this criterion using November 2000 data. KCI found instances where the KCI calculated BUSY HOUR for some of the selected TGSNs did not match BLS calculations. BLS explained that this may be due to the cluster anlaysis corresponding to a group of TGSNs. Since BLS does not retain historical cluster information, it is not possible for KCI to retest this criterion for this SQM using November 2000 data. BLS made changes to the calculation codes eliminating cluster analysis.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			KCI is therefore currently retesting for January 2001. See Exception 89 for additional information on this issue.
PMR4-38-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that no records were inappropriately deleted from the raw data in September 1999.
Trunk Group Performance – Trunk Group Service Detail			
PMR4-39-1	The selected raw data and the corresponding early-stage data agree.	Not Complete	KCI found that the selected raw data values did not agree with the corresponding early-stage data for 17 Trunk Group Serial Numbers. KCI calculated the OBSVD_BLKG (percentage of trunks blocked over one month period) for the CLEC aggregate and BLS retail for September 1999 and found TSGNs for which the KCI calculated value did not match the raw data value. BLS investigated and found that the early-stage data for September was inaccurate. Further, they stated that they had a new system for trunk group performance starting January 2000. KCI retested this criterion using January 2000 data, and found that some of the data were missing from the early-stage data. KCI retested this criterion using March 2000 data, and found one TGSN where the KCI-calculated busy hour did not match the BLS-calculated busy hour. BLS agreed with the KCI calculations. KCI attempted to retest this criterion using October 2000 data. However, BLS could not provide the early-stage data, because they were not retrievable. KCI attempted to retest this criterion using November 2000 data. KCI found instances where the KCI calculated BUSY HOUR for some of the selected TGSNs did not match

Test Cross-Reference	Evaluation Criteria	Result	Comments
			BLS calculations. BLS explained that this may be due to the cluster anlaysis corresponding to a group of TGSNs. Since BLS does not retain historical cluster information, it is not possible for KCI to retest this criterion for this metric using November 2000 data. BLS made changes to the calculation codes eliminating cluster analysis. KCI is therefore currently retesting using January 2001 data. See Exception 89 for additional information on this issue.
PMR4-39-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that no records were inappropriately deleted from the raw data in September 1999.
Collocation – Average Response Time			
PMR4-40-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found that the selected raw data values did not agree with the corresponding early-stage data for the CLEC aggregate for October 1999. KCI found an instance where the bona fide application receipt date disagreed with the early-stage data. BLS explained that the identified discrepancies were due to typographical errors and documentation errors. They indicated that they have implemented quality control checks in order to minimize the human errors involved. KCI retested using June 2000 data, and found that the selected raw data and the corresponding early-stage data agree. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR4-40-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the raw data used for the SQM calculation contained all records.
Collocation – Average Arrangement Time			
PMR4-41-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values and their corresponding early-stage counterparts agreed. Initially, KCI found that the selected raw data values did not agree with the corresponding early-stage data for the CLEC aggregate for October 1999. KCI found three instances where the firm order received date in the selected raw data did not agree with the early-stage data for Virtual and Physical collocations. KCI also found one instance where the space available to 'CLEC date' in the selected raw data did not agree with the early-stage counterpart. BLS explained that the identified discrepancies were due to typographical errors and documentation errors. They indicated that they have implemented quality control checks in order to minimize the human errors involved. KCI retested this criterion using June 2000 data, and found that the selected raw data and the corresponding early-stage data agree. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved.
PMR4-41-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the raw data used for the SQM calculation contained all the records.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Collocation – % of Due Dates Missed			
PMR4-42-1	The selected raw data and the corresponding early-stage data agree.	Satisfied	KCI found that the selected raw data values agreed with the corresponding early-stage data for the CLEC aggregate for October 1999. KCI found one record in Physical Collocation that was incorrectly included in the SQM calculation. BLS explained that the identified discrepancies were due to typographical errors and documentation errors. They indicated that they have implemented quality control checks in order to minimize the human errors involved. KCI retested this criterion using June 2000 data, and found that the selected raw data and the corresponding early-stage data agree. See Exception 89 for additional information on this issue. The issues in Exception 89 that relate to this criterion are resolved.
PMR4-42-2	All of the selected early-stage data were accounted for in the raw data.	Satisfied	KCI found that the raw data used for the SQM calculation contained all the records.
Data Transfer Policies			
PMR4-43-1	BLS's data transfer processes are adequate and complete.	Satisfied	Most data for mechanized SQMs, are transferred electronically over internal networks. Within PMAP, data are transferred using Ardent jobs. For manual SQMs, most data are transferred electronically within spreadsheets. KCI found two data sources that require manual re-entry when received. Data for the Speed of Answer in the Ordering Center and for M&R OSS Response Interval may need to be reentered manually, as the data are provided by email or

Test Cross-Reference	Evaluation Criteria	Result	Comments
			fax. However, only summarized data are input into PMAP for these measures. The Provisioning SQM Customer Coordinated Conversion sends its data directly to Barney. Overall, these procedures appear to be adequate and complete.
Internal Control			
PMR4-44-1	The internal controls on data transfer processes are adequate and complete.	Satisfied	BLS demonstrated sufficient controls for transfers of collected data across systems, whether manual or mechanized. Data are transferred electronically and are loaded directly into the receiving systems. Within PMAP, BLS employs record counts to ensure that all records and fields are transferred correctly and has documented how data are transferred from fields in one system to those in another. BLS has also mapped all batch jobs used to produce SQMs to determine dependencies on other batches; this determines the order in which batches should be run and, in the event of problems, which need to be rerun. For manually accessed files, there are documented methods to ensure that files are read correctly. Invoice Accuracy in Billing, for example, has detailed instructions for how data are transferred across files and what actions should be performed on the data. Many of these files are also sent to PMAP, where they are loaded directly into Staging or NODS, depending on the level of the data. These locations are pre-determined.

3.2 Results & Analysis

The following table provides detail on the discrepancies identified.

Table VIII-4.4: Test Results (Accuracy)

Test #	CLEC Aggregate / BLS Retail	Raw Data Field	Raw Data Value	Early-Stage Data Value	Month or Day
PreOrdering – Average Response Time and Response Interval					
PMR4-1-1	CLEC aggregate	Total number of accesses*	17,608	17,621**	01/26/00
PMR4-1-1	CLEC aggregate	Total number of accesses*	22,446	22,448**	01/27/00
PMR4-1-1	CLEC aggregate	Total number of accesses*	46,059	46,060**	01/28/00
PMR4-1-1	CLEC aggregate	Total number of accesses*	27,178	27,186**	01/29/00
PMR4-1-1	CLEC aggregate	Total number of accesses*	4,830	4,831**	01/30/00
PMR4-1-1	CLEC aggregate	Total access time in milliseconds*	123,425,722	123,489,827**	01/26/00
PMR4-1-1	CLEC aggregate	Total access time in milliseconds*	172,345,481	172,354,311**	01/27/00
PMR4-1-1	CLEC aggregate	Total access time in milliseconds*	470,800,540	470,806,049**	01/28/00
PMR4-1-1	CLEC aggregate	Total access time in milliseconds*	304,112,319	304,602,647**	01/29/00
PMR4-1-1	CLEC aggregate	Total access time in milliseconds*	49,348,092	49,453,702**	01/30/00
PMR4-1-1	CLEC aggregate	Total number of accesses that took more than 6 seconds*	7,072	7,077**	01/26/00
PMR4-1-1	CLEC aggregate	Total number of accesses that took more than 6 seconds*	11,993	12,001**	01/29/00
PMR4-1-1	CLEC aggregate	Total number of accesses that took more than 6 seconds*	1,653	1,654**	01/30/00
Ordering – Percent Rejected Service Requests					
PMR4-3-1	CLEC aggregate	Reject Duration	The early-stage data from LEO show that a Firm Order Confirmation was sent out for a particular PON, however BLS raw data reports a Reject Duration for the same PON.		October 2000
PMR4-3-1	CLEC aggregate	Reject Duration, FOC Duration	The raw data for a particular PON report a Reject Duration, however, early-stage data from LON also shows a Firm Order Confirmation Date.		October 2000

*These discrepancies were found for HALCRIS system on the LENS server.
**These values were derived using BLS-provided instructions.

Test #	CLEC Aggregate / BLS Retail	Raw Data Field	Raw Data Value	Early-Stage Data Value	Month or Day
Ordering – Reject Interval					
PMR4-4-1	CLEC aggregate	Reject Duration	The early-stage data from LEO show that a Firm Order Confirmation was sent out for a particular PON, however BLS raw data reports a Reject Duration for the same PON.		October 2000
PMR4-4-1	CLEC aggregate	FOC Duration, Reject Duration	The raw data for a particular PON report a Reject Duration, however, early-stage data from LON also show a Firm Order Confirmation Date.		October 2000
Ordering – Firm Order Confirmation Timeliness					
PMR4-5-1	CLEC aggregate	FOC Duration (Hrs) ***	None	3.30**	October 2000
PMR4-5-1	CLEC aggregate	FOC Duration (Hrs)****	32.18	31.70*	October 2000
PMR4-5-1	CLEC aggregate	FOC Duration (Hrs) ****	24.05	23.65**	October 2000
PMR4-5-1	CLEC aggregate	FOC Duration (Hrs) ****	233.68	239.45**	October 2000
Trunk Group Performance – Trunk Group Service Report					
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	9.55%	23.31%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	20.04%	21.49%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	6.11%	7.21%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.00%	1.25%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.53%	0.65%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	3.94%	3.95%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.01%	0.04%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.02%	0.06%	September 1999

** These values were derived using BLS-provided instructions.
*** This discrepancy was found for the LEO system.
**** These discrepancies were found for the LON system.

Test #	CLEC Aggregate / BLS Retail	Raw Data Field	Raw Data Value	Early-Stage Data Value	Month or Day
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.19%	0.33%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	2.23%	2.30%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.00%	0.02%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.01%	0.06%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	40.21%	46.21%	September 1999
PMR4-38-1	CLEC aggregate	Percent of Trunks blocked over one month period	0.18%	0.24%	September 1999
PMR4-38-1	BLS retail	Percent of Trunks blocked over one month period	0.00%	0.08%	September 1999
PMR4-38-1	BLS retail	Percent of Trunks blocked over one month period	0.00%	0.01%	September 1999
PMR4-38-1	BLS retail	Percent of Trunks blocked over one month period	11.36%	7.83%	September 1999

E. Test Results: Metrics Calculation and Reporting Verification and Validation Review (PMR5)

1.0 Description

The objective of the Calculation and Reporting Verification and Validation Review (PMR5) was to evaluate the accuracy of the information produced by BellSouth's Service Quality Measurements (SQM) report production processes. In this evaluation, KCI determined whether BellSouth's SQM calculations were accurately reported for all Competitive Local Exchange Carriers (CLECs) combined ("the CLEC aggregate") and for BellSouth retail in October 1999.[1] KCI based its evaluations on the raw data and computation instructions provided by BellSouth.[2]

This evaluation complements the related Performance Measures Evaluation conducted under the *Master Test Plan*, which focused on the SQMs reported for the KCI test CLEC for all months of the transactions testing period.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

The procedures supporting metrics reporting at BellSouth are described in Section VIII, "Performance Metrics Review Overview."

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target for the Calculation and Reporting Verification and Validation was the set of values reported by BellSouth for the various SQMs. Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in Section 3.1 "Results & Analysis."

[1] For certain SQMs, BellSouth could not provide October data, in which case September or November data were provided instead.

[2] BellSouth uses the term "raw data" to describe the performance measurement data at the stage where they enter the SQM calculations. KCI uses that nomenclature in this report.

Table VIII-5.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Ordering	Percent Rejected Service Requests	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-1-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-1-2
	Reject Interval	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-2-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-2-2
	Firm Order Confirmation Timeliness	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-3-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-3-2
	Speed of Answer in Ordering Center	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-4-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-4-2
Provisioning	Mean Held Order Interval & Distribution Intervals	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-5-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-5-2
	Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-6-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-6-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Percent Missed Installation Appointments	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-7-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-7-2
	Average Completion Interval and Order Completion Interval Distribution	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-8-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-8-2
	Average Completion Notice Interval	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-9-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-9-2
	Coordinated Customer Conversions	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-10-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-10-2
	Percent Provisioning Troubles within 30 Days of Service Order Activity	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-11-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-11-2
	Total Service Order Cycle Time	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-12-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-12-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Maintenance & Repair	Missed Repair Appointments	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-13-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-13-2
	Customer Trouble Report Rate	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-14-1
		KCI-calculated SQM values agree with BLS-reported SQM values	PMR-5-14-2
	Maintenance Average Duration	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-15-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-15-2
	Percent Repeat Troubles within 30 Days	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-16-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-16-2
	Out of Service > 24 Hours	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-17-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-17-2
Billing	Invoice Accuracy	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-18-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-18-2
	Mean Time to Deliver Invoices	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-19-1

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-19-2
	Usage Data Delivery Accuracy	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-20-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-20-2
	Usage Data Delivery Completeness	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-21-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-21-2
	Usage Data Delivery Timeliness	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-22-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-22-2
	Mean Time to Deliver Usage	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-23-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-23-2
Operator Services (Toll) and Directory Assistance	Average Speed to Answer – Toll	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-24-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-24-2
	Percent Answered within "X" Seconds – Toll	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-25-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-25-2

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
	Average Speed to Answer – Directory Assistance	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-26-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-26-2
	Percent Answered within "X" Seconds – Directory Assistance	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-27-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-27-2
E911	Timeliness	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-28-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-28-2
	Accuracy	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-29-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-29-2
	Mean Interval	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-30-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-30-2
Trunk Group Performance	Trunk Group Performance – Aggregate	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-31-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-31-2
	Trunk Group Service Report	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-32-1

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-32-2
	Trunk Group Service Detail	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-33-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-33-2
Collocation	Average Response Time	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-34-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-34-2
	Average Arrangement Time	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-35-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-35-2
	Percent of Due Dates Missed	Accuracy and completeness of reported performance measure disaggregation levels	PMR-5-36-1
		Agreement between KCI-calculated and BLS–reported SQM values	PMR-5-36-2

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VIII-5.2: Data Sources for Metrics Calculation and Reporting Verification and Validation Review

Document	File Name	Location in Work Papers	Source
Ordering – Reject Interval CLEC aggregate October 1999 Raw Data – CLEC Proprietary	NODS_V_OR_REJ_TMP.dmpaaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Percent Rejected Service Requests CLEC aggregate October 1999 Raw Data – CLEC Proprietary	NODS_V_OR_REJ_TMP.dmpaaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Percent Rejected Service Requests CLEC aggregate October 1999 Raw Data – CLEC Proprietary	NODS_V_OR_LSR_TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Percent Rejected Service Requests CLEC aggregate June 2000 Raw Data – CLEC Proprietary	GAReject0600.txt	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Percent Rejected Service Requests CLEC aggregate June 2000 Raw Data – CLEC Proprietary	GARejectInterval0600.txt	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - Firm Order Confirmation (FOC) Timeliness (Non-Trunks) CLEC aggregate October 1999 Raw Data – CLEC Proprietary	NODS_V_OR_FOC_TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Ordering - Firm Order Confirmation (FOC) Timeliness (Non-Trunks) CLEC aggregate July 2000 Raw Data – CLEC Proprietary	GAFOCnontrunk0700.txt	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - FOC Timeliness (Trunks) CLEC aggregate October 1999 Raw Data – CLEC Proprietary	NODS_V_OR_FOC_TRK_TMP.Dataaa"	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - Speed of Answer in Ordering Center BLS Retail Residence October 1999 Raw Data – BLS Proprietary	No Electronic Copy	PMR-5-A-31	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering - Speed of Answer in Ordering Center BLS Retail Business October 1999 Raw Data – BLS Proprietary	REGOCT99.xls	PMR-5-A-31	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Mean Held Order Interval & Distribution Intervals (Non-Trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_HLD_ORD_TMP.Dataaa NODS_V_PR_HLD_ORD_TMP.Dataab	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Mean Held Order Interval & Distribution Intervals (Non-Trunks) BLS Retail and CLEC aggregate July 2000 Raw Data – BLS and CLEC Proprietary	GAHeldOrder0700.txt	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning - Mean Held Order Interval & Distribution Intervals (Trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_HLD_ORD_TRK_TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices BLS Retail and CLEC aggregate November 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_JEOPARDY_TMP.Dataaa NODS_V_PR_JEOPARDY_TMP.Dataab	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Missed Installation Appointments (Non-trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_PMI_TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Missed Installation Appointments (Non-trunks) BLS Retail and CLEC aggregate June 2000 Raw Data – BLS and CLEC Proprietary	GAPMI0600.txt	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Missed Installation Appointments (Trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_PMI_TRK_TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning - Average Completion Interval / Order Completion Interval Distribution (OCI) (Non-trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_OCI_TMP .Dataaa NODS_V_PR_OCI_TMP .Dataab NODS_V_PR_OCI_TMP .Dataac NODS_V_PR_OCI_TMP .Dataad NODS_V_PR_OCI_TMP .Dataae NODS_V_PR_OCI_TMP .Dataaf NODS_V_PR_OCI_TMP .Dataag	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Average Completion Interval / Order Completion Interval Distribution (OCI) (Non-trunks) BLS Retail and CLEC aggregate June 2000 Raw Data – BLS and CLEC Proprietary	GAOCI0600.txt	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - OCI (Trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_OCI_TRK _TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Average Completion Notice Interval BLS Retail and CLEC aggregate November 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_ACNI_T MP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Coordinated Customer Conversions CLEC aggregate October 1999 Raw Data – CLEC Proprietary	GAOCTCCC.XLS	PMR-5-B-80	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity (Non-trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_TRBL_WN_30_TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity (Trunks) BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_PR_TRBL_30_TRK_TMP.Dataaa	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning - Total Service Order Cycle Time BLS Retail and CLEC aggregate November 1999 Raw Data – BLS and CLEC Proprietary	Nods_v_pr_tsoct_tmp	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Missed Repair Appointments BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_MISSED_RPR_TMP.Dataaa NODS_V_MR_MISSED_RPR_TMP.Dataab NODS_V_MR_MISSED_RPR_TMP.Dataac NODS_V_MR_MISSED_RPR_TMP.Dataad	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Customer Trouble Report Rate BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_TRBL_RPT_RATE_TMP.Dataaa NODS_V_MR_TRBL_RPT_RATE_TMP.Dataab NODS_V_MR_TRBL_RPT_RATE_TMP.Dataac NODS_V_MR_TRBL_RPT_RATE_TMP.Dataad	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Maintenance and Repair - Customer Trouble Report Rate BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_LINE_CNT_TMP.DMPaaa NODS_V_MR_LINE_CNT_TMP.DMPaab NODS_V_MR_LINE_CNT_TMP.DMPaac NODS_V_MR_LINE_CNT_TMP.DMPaad NODS_V_MR_LINE_CNT_TMP.DMPaae NODS_V_MR_LINE_CNT_TMP.DMPaaf	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Customer Trouble Report Rate BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	LineCount.txt CTTR1099.txt	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Maintenance Average Duration BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_MNT_AVG_DUR_TMP.dataaa NODS_V_MR_MNT_AVG_DUR_TMP.dataab NODS_V_MR_MNT_AVG_DUR_TMP.dataac NODS_V_MR_MNT_AVG_DUR_TMP.dataad	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Percent Repeat Troubles within 30 Days BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_RPT_TRBL_30_TMP.Dataaa NODS_V_MR_RPT_TRBL_30_TMP.Dataab NODS_V_MR_RPT_TRBL_30_TMP.Dataac NODS_V_MR_RPT_TRBL_30_TMP.Dataad	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance and Repair - Out of Service > 24 hours BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	NODS_V_MR_OOS_24_TMP.DATaaa NODS_V_MR_OOS_24_TMP.DATaab NODS_V_MR_OOS_24_TMP.DATaac NODS_V_MR_OOS_24_TMP.DATaad	PMR-B-2	BLS – Interconnection Operations – CLEC Performance Measurements
Billing- BLS Retail and CLEC aggregate October 1999 Raw Data – BLS and CLEC Proprietary	E&YOCT~1.xls	PMR-5-D-3	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing- BLS Retail and CLEC aggregate June 2000 Raw Data – BLS and CLEC Proprietary	EY060~1.xls	PMR-5-D-3	BLS – Interconnection Operations – CLEC Performance Measurements
Billing- BLS Retail and CLEC aggregate August 2000 Raw Data – BLS and CLEC Proprietary	EY080~1.xls	PMR-5-D-3	BLS – Interconnection Operations – CLEC Performance Measurements
Operator Services (Toll) and Directory Assistance – November 1999 Raw Data – BLS and CLEC Proprietary	Nov_da.xls	PMR-5-D-17	BLS – Interconnection Operations – CLEC Performance Measurements
Operator Services (Toll) and Directory Assistance – November 1999 Raw Data – BLS and CLEC Proprietary	Nov_toll.xls	PMR-5-D-17	BLS – Interconnection Operations – CLEC Performance Measurements
Operator Services (Toll) and Directory Assistance – November 1999 Raw Data – BLS and CLEC Proprietary	KPMG_e~1.xls	PMR-5-D-17	BLS – Interconnection Operations – CLEC Performance Measurements
E911 – October 1999 Raw Data – BLS and CLEC Proprietary	fsoi1099	PMR-5-D-22	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Performance Aggregate September 1999 Raw Data – CLEC Proprietary	blk099ga.zip blk099ga.dct ct089ag.txt ct089fl.txt ct089klm.txt ct089nst.txt	PMR-5-D-31	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Service Report and Detail September 1999 Raw Data – BLS and CLEC Proprietary	RSTEWART.txt sujanctt.txt SUJANLOC.txt	PMR-5-D-38	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation – CLEC aggregate October 1999 Raw Data – CLEC Proprietary	GA1099RS.xls	PMR-5-D-10	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Ordering – Percent Reject Service Requests (Total Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	%Reject Svc Request Total Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)
Ordering – Percent Rejected Service Requests (Partially Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	%Reject Svc Request Partly Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)
Ordering – Percent Rejected Service Requests (Fully Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	%Reject Svc Request Fully Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)
Ordering – Percent Rejected Service Requests (Non-Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	%Reject Svc Request Non-Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)
Ordering – Percent Reject Service Requests (Total Mechanized) CLEC aggregate June 2000 Report – CLEC Proprietary	%Reject Svc Request Total Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)
Ordering – Percent Rejected Service Requests (Partially Mechanized) CLEC aggregate June 2000 Report – CLEC Proprietary	%Reject Svc Request Partly Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)
Ordering – Percent Rejected Service Requests (Fully Mechanized) CLEC aggregate June 2000 Report – CLEC Proprietary	%Reject Svc Request Fully Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Ordering – Percent Rejected Service Requests (Non-Mechanized) CLEC aggregate June 2000 Report – CLEC Proprietary	%Reject Svc Request Non-Mech SQM.txt	PMR-5-A-1	BLS (PMAP Web site)
Ordering – Reject Interval (Total Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	Reject Interval Total Mech SQM.txt	PMR-5-A-8	BLS (PMAP Web site)
Ordering – Reject Interval (Partially Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	Reject Interval Partially Mech SQM.txt	PMR-5-A-8	BLS (PMAP Web site)
Ordering – Reject Interval (Fully Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	Reject Interval Fully Mech SQM.txt	PMR-5-A-8	BLS (PMAP Web site)
Ordering – Reject Interval (Non-Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	Reject Interval Non-Mech SQM.txt	PMR-5-A-8	BLS (PMAP Web site)
Ordering – FOC Timeliness (Total Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	FOC Timeliness Total Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)
Ordering – FOC Timeliness (Partially Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	FOC Timeliness Partially Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Ordering – FOC Timeliness (Fully Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	FOC Timeliness Fully Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)
Ordering – FOC Timeliness (Non-Mechanized) CLEC aggregate October 1999 Report – CLEC Proprietary	FOC Timeliness Non-Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)
Ordering – FOC Timeliness (Total Mechanized) CLEC aggregate July 2000 Report – CLEC Proprietary	FOC Timeliness Total Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)
Ordering – FOC Timeliness (Partially Mechanized) CLEC aggregate July 2000 Report – CLEC Proprietary	FOC Timeliness Partially Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)
Ordering – FOC Timeliness (Fully Mechanized) CLEC aggregate July 2000 Report – CLEC Proprietary	FOC Timeliness Fully Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)
Ordering – FOC Timeliness (Non-Mechanized) CLEC aggregate July 2000 Report – CLEC Proprietary	FOC Timeliness Non-Mech SQM.txt	PMR-5-A-15	BLS (PMAP Web site)
Ordering – FOC Timeliness (Trunks) CLEC aggregate October 1999 Report – CLEC Proprietary	FOC Timeliness Trunks (Total) SQM.txt	PMR-5-A-22	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Ordering – FOC Timeliness (Trunks) CLEC aggregate October 1999 Report – CLEC Proprietary	FOC Timeliness Trunks (% to Total) SQM.txt	PMR-5-A-22	BLS (PMAP Web site)
Ordering - Speed of Answer in Ordering Center BST Retail and CLEC aggregate October 1999 Report – BLS and CLEC Proprietary	Speed of Answer in Ordering Center SQM.txt	PMR-5-A-29	BLS (PMAP Web site)
Provisioning – Mean Held Order Interval & Distribution Intervals (Non-trunks) BLS Retail and CLEC aggregate October 1999 Report – BLS and CLEC Proprietary	Held Order Intvl & Mean SQM.txt	PMR-5-B-1	BLS (PMAP Web site)
Provisioning – Mean Held Order Interval & Distribution Intervals (Non-trunks) BLS Retail and CLEC aggregate July 2000 Report – BLS and CLEC Proprietary	Held Order Intvl & Mean SQM.txt	PMR-5-B-1	BLS (PMAP Web site)
Provisioning – Mean Held Order Interval & Distribution Intervals (Trunks) BLS Retail and CLEC aggregate October 1999 Report – BLS and CLEC Proprietary	Held Order Intvl & Mean Trunks SQM.txt	PMR-5-B-8	BLS (PMAP Web site)
Provisioning - Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices BLS Retail and CLEC aggregate November 1999 Report– BLS and CLEC Proprietary	Jeopardy Interval & % Jeopardy SQM.txt	PMR-5-B-64	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Provisioning - Percent Missed Installation Appointments (Non-trunks) BLS Retail and CLEC aggregate October 1999 Report – BLS and CLEC Proprietary	% Missed Installation Appmts SQM.txt	PMR-5-B-43	BLS (PMAP Web site)
Provisioning - Percent Missed Installation Appointments (Non-trunks) BLS Retail and CLEC aggregate June 2000 Report – BLS and CLEC Proprietary	% Missed Installation Appmts SQM.txt	PMR-5-B-43	BLS (PMAP Web site)
Provisioning - Percent Missed Installation Appointments (Trunks) BLS Retail and CLEC aggregate October 1999 Report – BLS and CLEC Proprietary	% Missed Installation Appmts Trunks SQM.txt	PMR-5-B-50	BLS (PMAP Web site)
Provisioning – Average Completion Interval / Order Completion Interval Distribution (OCI) – Plain Old Telephone Service (POTS) Dispatch BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	OCI POTS Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI POTS Non-Dispatch BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	OCI POTS Non-Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI Unbundled Network Element (UNE) Dispatch BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	OCI UNE Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Provisioning – OCI UNE Non-Dispatch BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	OCI UNE Non-Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI Non-UNE Design Dispatch BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	OCI Non-UNE Design - Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI Non-UNE Design Non-Dispatch BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	OCI Non-UNE Design - Non-Dspch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – Average Completion Interval / Order Completion Interval Distribution (OCI) – Plain Old Telephone Service (POTS) Dispatch BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	OCI POTS Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI POTS Non-Dispatch BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	OCI POTS Non-Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI Unbundled Network Element (UNE) Dispatch BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	OCI UNE Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Provisioning – OCI UNE Non-Dispatch BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	OCI UNE Non-Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI Non-UNE Design Dispatch BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	OCI Non-UNE Design - Dispatch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI Non-UNE Design Non-Dispatch BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	OCI Non-UNE Design - Non-Dspch SQM.txt	PMR-5-B-15	BLS (PMAP Web site)
Provisioning – OCI Trunks BLS Retail and CLEC aggregate October 1999 Report – BLS and CLEC Proprietary	OCI Local Interconnection Trunks SQM.txt	PMR-5-B-22	BLS (PMAP Web site)
Provisioning - Average Completion Notice Interval BLS Retail and CLEC aggregate November 1999 Report – BLS and CLEC Proprietary	Avg Completion Notice Intvl SQM.txt	PMR-5-B-71	BLS (PMAP Web site)
Provisioning - Coordinated Customer Conversions CLEC aggregate October 1999 Report – CLEC Proprietary	Coordinated_Customer_ Conversions_Aggregate _101999.xls	PMR-5-B-78	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity (Non-trunks) BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	% Prov. Trouble within 30 Days SQM.txt	PMR-5-B-29	BLS (PMAP Web site)
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity (Non-trunks) BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	% Prov. Trouble with 30 Days POTS SQM.txt	PMR-5-B-29	BLS (PMAP Web site)
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity (Trunks) BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	% Prov. Trouble within 30 Days Trunk SQM.txt	PMR-5-B-36	BLS (PMAP Web site)
Provisioning - Total Service Order Cycle Time (Fully Mechanized) BLS Retail and CLEC aggregate November 1999 Report– BLS and CLEC Proprietary	TSOCT Fully Mech SQM.txt	PMR-5-B-57	BLS (PMAP Web site)
Provisioning - Total Service Order Cycle Time (Partially Mechanized) BLS Retail and CLEC aggregate November 1999 Report– BLS and CLEC Proprietary	TSOCT Partially Mech SQM.txt	PMR-5-B-57	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Provisioning - Total Service Order Cycle Time (Non-Mechanized) BLS Retail and CLEC aggregate November 1999 Report– BLS and CLEC Proprietary	TSOCT Non-Mech SQM.txt	PMR-5-B-57	BLS (PMAP Web site)
Maintenance and Repair - Missed Repair Appointments BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	101999~1.xls	PMR-5-C-1	BLS (PMAP Web site)
Maintenance and Repair - Customer Trouble Report Rate BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	101999~1.xls	PMR-5-C-8	BLS (PMAP Web site)
Maintenance and Repair - Maintenance Average Duration BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	101999~1.xls	PMR-5-C-15	BLS (PMAP Web site)
Maintenance and Repair - Percent Troubles within 30 days BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	101999~1.xls	PMR-5-C-22	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Maintenance and Repair - Out of Service > 24 hours BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	101999~1.xls	PMR-5-C-29	BLS (PMAP Web site)
Billing - Invoice Accuracy BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	Invoice Accuracy SQM (Region).xls	PMR-5-D-1	BLS (PMAP Web site)
Billing - Invoice Accuracy BLS Retail and CLEC aggregate August 2000 Report– BLS and CLEC Proprietary	Invoice Accuracy SQM (Region).xls	PMR-5-D-1	BLS (PMAP Web site)
Billing - Mean Time to Deliver Invoices BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	Mean Time to Deliver Invoices SQM (Reg).xls	PMR-5-D-1	BLS (PMAP Web site)
Billing - Mean Time to Deliver Invoices BLS Retail and CLEC aggregate August 2000 Report– BLS and CLEC Proprietary	Mean Time to Deliver Invoices SQM (Reg).xls	PMR-5-D-1	BLS (PMAP Web site)
Billing - Usage Data Delivery Accuracy BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	Usage Data Delivery Accuracy SQM.xls	PMR-5-D-1	BLS (PMAP Web site)
Billing - Usage Data Delivery Accuracy BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	Usage Data Delivery Accuracy SQM.xls	PMR-5-D-1	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Billing - Usage Data Delivery Completeness, Timeliness and Mean Time to Deliver Usage BLS Retail and CLEC aggregate October 1999 Report– BLS and CLEC Proprietary	Usage Timeliness & Completeness SQM.xls	PMR-5-D-1	BLS (PMAP Web site)
Billing - Usage Data Delivery Completeness, Timeliness and Mean Time to Deliver Usage BLS Retail and CLEC aggregate June 2000 Report– BLS and CLEC Proprietary	Usage Timeliness & Completeness SQM.xls	PMR-5-D-1	BLS (PMAP Web site)
Operator Services (Toll) and Directory Assistance - Average Speed to Answer (Toll) November 1999 Report– BLS and CLEC Proprietary	Speed to Answer Performance OS Toll SQM.txt	PMR-5-D-15	BLS (PMAP Web site)
Operator Services (Toll) and Directory Assistance - Average Speed to Answer (DA) November 1999 Report– BLS and CLEC Proprietary	Speed to Answer Performance OS DA SQM.txt	PMR-5-D-15	BLS (PMAP Web site)
E911 - Timeliness October 1999 Report– BLS and CLEC Proprietary	101999~2.xls	PMR-5-D-22	BLS (PMAP Web site)
E911 - Accuracy October 1999 Report– BLS and CLEC Proprietary	101999~2.xls	PMR-5-D-22	BLS (PMAP Web site)
E911 - Mean Interval October 1999 Report– BLS and CLEC Proprietary	101999~2.xls	PMR-5-D-22	BLS (PMAP Web site)

Document	File Name	Location in Work Papers	Source
Trunk Group Performance - Common Transport Trunk Group (CTTG) Report Summary September 1999 Report– BLS and CLEC Proprietary	All2.doc	PMR-5-D-36	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance - CLEC Trunk Group Service Report Summary September 1999 Report– BLS and CLEC Proprietary	Clecal9.doc	PMR-5-D-36	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance - Local Network Group Service Report Summary September 1999 Report– BLS and CLEC Proprietary	Local9.doc	PMR-5-D-36	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance - BellSouth CLEC Blocking Reports – Detailed Listing September 1999 Report– BLS and CLEC Proprietary	Clecgt9.doc	PMR-5-D-36	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance - BellSouth Local Network Blocking Reports – Detailed Listing September 1999 Report– BLS and CLEC Proprietary	Locgt9.doc	PMR-5-D-36	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance - Trunk Group Performance Aggregate September 1999 Report – CLEC Proprietary	Sept_tnkgp_Agg.xls	PMR-5-D-29	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation - Average Response Time CLEC aggregate October 1999 Report – CLEC Proprietary	AGGGA.xls	PMR-5-D-8	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Collocation - Average Arrangement Time CLEC aggregate October 1999 Report – CLEC Proprietary	AGGGA.xls	PMR-5-D-8	BLS – Interconnection Operations – CLEC Performance Measurements
Collocation - Percent of Due Dates Missed CLEC aggregate October 1999 Report– CLEC Proprietary	AGGGA.xls	PMR-5-D-8	BLS – Interconnection Operations – CLEC Performance Measurements
Operator Services (Toll) and Directory Assistance – computation instructions – BLS and CLEC Proprietary	KPMGin~1.doc	PMR-5-D-16	BLS – Interconnection Operations – CLEC Performance Measurements
Speed of Answer in Ordering Center – computation instructions – BLS and CLEC Proprietary	ASA.doc	O&P-7-A-30	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Process Flow Documentation – BLS Proprietary	BILLIN~1.doc	PMR-5-D-2	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Updated Process Flow Documentation – BLS Proprietary	BILLIN~1.doc	PMR-5-D-2	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mapping of OCNs / ACNAs to CLECs October 1999– BLS and CLEC Proprietary	RQ_COM~1.xls	PMR-5-D-2	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mapping of OCNs / ACNAs to CLECs June 2000– BLS and CLEC Proprietary	JUN_00.xls	PMR-5-D-3	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mapping of OCNs / ACNAs to CLECs August 2000– BLS and CLEC Proprietary	NODSRQ08.xls	PMR-5-D-3	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
E911 – computation instructions – BLS and CLEC Proprietary	E911_i~1.doc	PMR-5-D-23	BLS – Interconnection Operations – CLEC Performance Measurements
E911 – computation instructions – BLS and CLEC Proprietary	E911_i~3.doc	PMR-5-D-23	BLS – Interconnection Operations – CLEC Performance Measurements
E911 – Revised computation instructions – BLS and CLEC Proprietary	E911KPMG.DOC	PMR-5-D-23	BLS – Interconnection Operations – CLEC Performance Measurements
E911 – Revised computation instructions – BLS and CLEC Proprietary	DURATI~1.DOC	PMR-5-D-23	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Blocking Detail Report computation instructions – BLS and CLEC Proprietary	Trkgrpdt.doc	PMR-5-D-37	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Blocking Summary Report computation instructions – BLS and CLEC Proprietary	Trkgrpsm.doc	PMR-5-D-37	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Blocking Detail Report computation instructions – BLS and CLEC Proprietary	Trunkg~1.doc	PMR-5-D-37	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Blocking Summary Report computation instructions – BLS and CLEC Proprietary	Trunkg~2.doc	PMR-5-D-37	BLS – Interconnection Operations – CLEC Performance Measurements
Trunk Group Performance – Trunk Group Performance Aggregate Report Computation instructions – CLEC Proprietary	Data processing document for KPMG.doc	PMR-5-D-30	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Comments on existence of unique key for Provisioning SQMs – BLS and CLEC Proprietary	KPMGrd1.doc	PMR-4-C-17	BLS – Interconnection Operations – CLEC Performance Measurements
PMAP Raw Data User Manual – Version 2.0 – October 15, 1999	PMAP Raw Data Manual Oct 15 ver.doc	PMR-A-1	BLS (PMAP Web site)
PMAP Raw Data User Manual – Version 2.0 – December 15, 1999	Raw Data Documentation v2_0 - December 15.doc	PMR-A-2	BLS (PMAP Web site)
PMAP Raw Data User Manual – Version 2.0.4 – February 15, 1999	Raw Data Documentation v2.0.4 - Feb 15 2000.doc	PMR-A-3	BLS (PMAP Web site)
PMAP Raw Data User Manual – Version 2.0.7 – July 26, 2000 – BLS Proprietary	Raw Data Documentation v2.0.7 - July 26 2000.doc	PMR-A-6	BLS (PMAP Web site)
PMAP Raw Data User Manual – Version 2.0.8 – August 31, 2000 – BLS Proprietary	Raw Data Documentation v2.0.8 - Aug 31 2000.doc	PMR-A-7	BLS (PMAP Web site)
PMAP Raw Data User Manual – Version 2.0.10– October 11, 2000 – BLS Proprietary	Raw_Data_Documentation_v2.0.10 - Oct11 2000.doc	PMR-A-8	BLS (PMAP Web site)
10/22/99 SQM documentation	No Electronic Copy	PMR-A-9	BLS (PMAP Web site)
May 2000 SQM documentation	No Electronic Copy	PMR-A-11	BLS (PMAP Web site)
October 2000 SQM documentation	No Electronic Copy	PMR-A-13	BLS (PMAP Web site)
KCI Evaluation Criteria and Results Table	Table_V_5_3.doc	PMR-5-D-43	KCI
KCI Evaluation Criteria and Results Source Table	Table_V_5_3_source.doc	PMR-5-D-43	KCI
KCI Detailed Results Table	Table_V_5_4.doc	PMR-5-D-43	KCI
KCI Detailed Results Source Table	Table_V_5_4_source.doc	PMR-5-D-43	KCI

2.4.1 Data Generation/Volumes

The data for this test were the SQM values reported by BellSouth for the CLEC aggregate and BellSouth retail operations.

2.5 Evaluation Methods

The Evaluation Methods for the Performance Metrics Review tests are described in Section VIII, "Performance Measures Evaluation Overview."

2.6 Analysis Methods

The Metrics Calculation and Reporting Verification and Validation Review included a checklist of evaluation measures developed by KCI during the preparation of test activities. These evaluation measures provided the framework of norms, standards and guidelines for the review.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VIII-5.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
Ordering - Percent Rejected Service Requests			
PMR-5-1-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following level of disaggregation, as required in the 10/22/99 SQM documentation: Trunks. BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-5-1-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, BLS did not provide reported values for certain levels of disaggregation (see PMR-5-1-1 comments above). Additionally, KCI was initially unable to match the BLS-reported October 1999 values for the Non Mechanized disaggregation level. BLS asked KCI to analyze any month after May 2000, because of BLS coding issues. KCI chose to review the June 2000 reports. The KCI-calculated SQM values for June matched the BLS-reported SQM values, exactly. See Exceptions 52 and 61 for additional information on these issues. Exceptions 52 and 61 are closed.
Ordering - Reject Interval			
PMR-5-2-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following levels of disaggregation, as required in the 10/22/99 SQM document: Interconnection Trunks, Resale – Design, UNE Design, UNE Non-Design, and UNE Loop without Number Portability (NP). BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not[3]. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia

[3] BellSouth posted on the PMAP Web site an October manual that is specific for Georgia.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.
PMR-5-2-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-2-1 comments above) . See Exception 61 for additional information on this issue. Also, KCI was initially unable to match the BLS-reported SQM values for the Total, Partially and Non-Mechanized levels of dissagregation. BLS later informed KCI that the use of the computation instructions in the February 2000 Raw Data User Manual would be needed in order to match the reported values. The KCI re-calculated SQM values agreed with the BLS-reported SQM values, exactly. See Exception 52 for additional information on this issue. Exceptions 52 and 61 are closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Ordering - Firm Order Confirmation Timeliness			
PMR-5-3-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following levels of disaggregation, as required in the 10/22/99 SQM document: Interconnection Trunks, Resale Design, UNE Design, UNE Non-Design, and UNE Loop without NP. BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.
PMR-5-3-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-3-1 comments above). Additionally, KCI was initially unable to match the BLS-reported values for the following levels of disaggregation: Fully Mechanized, Partially Mechanized, Total Mechanized, and Non-Mechanized. In response, BLS asked KCI to analyze any month after June 2000, because of BLS coding issues. KCI chose to review the July 2000 reports. The KCI-calculated SQM values for July matched the BLS-reported SQM values, exactly.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			See Exceptions 52 and 61 for additional information on these issues. Exceptions 52 and 61 are closed.
Ordering - Speed of Answer in Ordering Center			
PMR-5-4-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported a single aggregated value for each center (Business Service Center and Residence Service Center). The May 2000 SQM documentation did not specify any required level of disaggregation.
PMR-5-4-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation. Initially, KCI was unable to match the BLS-reported values for the Residence Service Center. BLS later provided KCI with additional data and clarification regarding this issue. The KCI re-calculated values agreed with the BLS-reported SQM values, exactly. See Exception 23 for additional information on this issue. Exception 23 is closed.
Provisioning - Mean Held Order Interval and Distribution Intervals			
PMR-5-5-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-5-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation. Initially, KCI was unable to match any of the BLS-reported October SQM values for Held Order Duration for BLS Retail or CLEC aggregate in the non-trunks category. In response, BLS asked KCI to analyze any month after June 2000, because of BLS coding issues. KCI chose to review the July 2000 reports. All of the July KCI-calculated SQM values matched the corresponding BLS-reported SQM values, exactly. In the trunks category, KCI was able to match the Held Order Duration for the CLEC aggregate for October 1999, but not the number of circuits. BLS informed KCI

Test Cross-Reference	Evaluation Criteria	Result	Comments
			that trunk orders are very rarely held. As a result, there has not been any data on which KCI could perform a retest for trunks. Because of the apparent rare occurrence of held trunk orders, KCI has relied upon its analysis of the non-trunk category for this SQM. See Exception 52 for additional information on these issues. Exception 52 is closed.
Provisioning - Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices			
PMR-5-6-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report the appropriate level of disaggregation for the Interconnection Trunk SQM value, as required in the 10/22/99 SQM documentation. See Exception 61 for additional information on this issue. BLS informed KCI that the 10/22/99 SQM documentation is not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS did not report the interconnection trunks category, as indicated by this documentation. BLS updated the SQM documentation in October 2000 to indicate that trunk orders rarely experienced facility delays. KCI concluded that it would be unlikely to view SQM values for the interconnection trunks category for the Jeopardy SQMs. Exception 61 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-5-6-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM values calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-6-1 comments above). See Exception 61 for additional information on this issue. Exception 61 is closed.
Provisioning - Percent Missed Installation Appointments			
PMR-5-7-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-7-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation. Initially, KCI was unable to match several of the disaggregated SQM values for BLS Retail and CLEC aggregate in the non-trunks category for October 1999. BLS asked KCI to retest this criterion using June 2000 data and SQM reports. Additionally, BLS provided revised computation calculations. The KCI-calculated SQM values matched the BLS-reported SQM values for June, exactly. For the trunk category, all KCI-calculated values matched the corresponding BLS-reported values for October 1999. See Exception 86 for additional information on this issue. The issues in Exception 86 that relate to this criterion are resolved.
Provisioning - Average Completion Interval / Order Completion Interval Distribution			
PMR-5-8-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported an SQM value for every level of disaggregation specified in the October 2000 SQM documentation. KCI determined that BLS reported SQM values for the levels of disaggregation required in the 10/22/99 SQM document. BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000

Test Cross-Reference	Evaluation Criteria	Result	Comments
			SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS did not report the trunks category by number of circuits, as indicated by the May documentation. BLS updated the SQM documentation in October 2000, to indicate that this level of reporting was not required for the trunks category. See Exception 61 for additional information on this issue. Exception 61 is closed.
PMR-5-8-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation. Initially, KCI was unable to match the BLS-reported SQM values in the POTS, Design and UNE Design categories. BLS asked KCI to analyze any month after May 2000, because of BLS coding issues. KCI chose to review the June 2000 reports. All of the KCI-calculated SQM values for June matched the corresponding BLS-reported SQM values. See Exception 86 for additional information on this issue. The issues in Exception 86 that relate to this criterion are resolved.
Provisioning - Average Completion Notice Interval			
PMR-5-9-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following level of disaggregation, as required in the 10/22/99 SQM documentation: Interconnection Trunks. See Exception 61 for additional information on this issue. BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which

Test Cross-Reference	Evaluation Criteria	Result	Comments
			levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS did not report the trunks category, as indicated by this documentation. BLS updated the SQM documentation in October 2000, to indicate that these levels of reporting were not required. (As specified in the October 2000 SQM documentation, this SQM only applies to mechanized orders, whereas interconnection trunks are non-mechanized.) Exception 61 is closed.
PMR-5-9-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM values calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-9-1 comments above). See Exception 61 for additional information on this issue. Additionally, KCI was initially unable to match BLS-reported BLS Retail values for the Dispatch / Design disaggregation level. BLS later informed KCI that the use of the computation instructions in the February 2000 Raw Data User Manual would be needed in order to match the reported values. The KCI re-calculated SQM values agreed with the BLS-reported SQM values, exactly. See Exception 86 for additional information on this issue. Exception 61 is closed. The issues in Exception 86 that relate to this criterion are resolved.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Provisioning - Coordinated Customer Conversions			
PMR-5-10-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-10-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation. Initially, KCI was unable to match the BLS-reported SQM values for Conversions without Number Portability and Total Conversions. BLS later provided additional computation instructions. The KCI re-calculated SQM values agreed with the BLS-reported SQM values, exactly. See Exception 52 for additional informaton on this issue. Exception 52 is closed.
Provisioning - Percent Provisioning Troubles within 30 days of Service Order Activity			
PMR-5-11-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-11-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Not Complete	KCI was unable to match the BLS-reported SQM values for all levels of disaggregation for both CLEC aggregate and BLS Retail reporting. Details of the discrepancies are reported in Table V-5.4 below. BLS reported a value for the Percent Troubles within 30 days of Provisioning in the following categories for BLS Retail Design >= 10 Circuits and CLEC aggregate POTS (Business) >= 10 circuits. However, based upon the raw data provided by BellSouth, and the exclusions specified by the Raw Data User Manual, there were no data for these levels of disaggregation remaining from which SQM values could be calculated. See Exception 86 for additional information on this issue. BLS made several corrections to the processes by which the raw data and the BLS-reported values are generated. These corrections will affect raw data and SQM values beginning with those for February 2001. KCI will use these raw data and SQM values for its retest. Additionally,

Test Cross-Reference	Evaluation Criteria	Result	Comments
			BLS recalculated its January SQM values for this SQM, as if these corrections had already been in place. KCI matched these recalculations, using the December 2000 *Raw Data User Manual*.
Provisioning - Total Service Order Cycle Time			
PMR-5-12-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following level of disaggregation, as required in the 10/22/99 SQM documentation: Interconnection: Trunks. BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.
PMR-5-12-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-12-1 comments above). Additionally, KCI was initially unable to match the BLS-reported SQM values for each report (Fully Mechanized, Partially Mechanized and Non-Mechanized). However, upon receipt of revised instructions, as provided in the May *PMAP Raw Data User Manual*, KCI was

Test Cross-Reference	Evaluation Criteria	Result	Comments
			able to match all KCI-calculated values to the corresponding BLS-reported values, exactly. See Exceptions 61 and 86 for additional information on these issues. Exception 61 is closed. The issues in Exception 86 that relate to this criterion are resolved.
Maintenance and Repair - Missed Repair Appointments			
PMR-5-13-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following levels of disaggregation, as required by the 10/22/99 SQM documentation: PBX, CENTREX and ISDN; UNE 2 Wire Loop (Design and Non-Design); UNE Loop Other (Design and Non-Design); UNE Other (Design and Non-Design). BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-5-13-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-13-1 comments above). See Exception 61 for additional information on this issue. Exception 61 is closed.
Maintenance and Repair - Customer Trouble Report Rate			
PMR-5-14-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following levels of disaggregation, as required by the 10/22/99 SQM documentation: PBX, CENTREX and ISDN; UNE 2 Wire Loop (Design and Non-Design); UNE Loop Other (Design and Non-Design); UNE Other (Design and Non-Design). BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-5-14-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-14-1 comments above). See Exception 61 for additional information on this issue. Additionally, KCI was initially unable to match the BLS-reported SQM values for both CLEC aggregate and BLS Retail reporting. This was due to the fact that there were no records left in the denominator of the calculation after all of the exclusions were performed on the Lines in Service data file. BLS later provided KCI with additional data, which was appended to the original Lines in Service data file. KCI then re-analyzed the Customer Trouble Report Rate SQM, and the re-calculated SQM values agreed with the BLS-reported SQM values, exactly. See Exception 86 for additional information on this issue. Exception 61 is closed. The issues in Exception 86 that relate to this criterion are resolved.
Maintenance and Repair - Maintenance Average Duration			
PMR-5-15-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following levels of disaggregation, as required by the 10/22/99 SQM documentation: PBX, CENTREX and ISDN; UNE 2 Wire Loop (Design and Non-Design); UNE Loop Other (Design and Non-Design); UNE Other (Design and Non-Design). BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia

Test Cross-Reference	Evaluation Criteria	Result	Comments
			and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.
PMR-5-15-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-15-1 comments above) See Exception 61 for additional information on this issue. Exception 61 is closed.
Maintenance and Repair - Percent Repeat Troubles within 30 days			
PMR-5-16-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following levels of disaggregation, as required by the 10/22/99 SQM documentation: PBX, CENTREX and ISDN; UNE 2 Wire Loop (Design and Non-Design); UNE Loop Other (Design and Non-Design); UNE Other (Design and Non-Design). BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document

Test Cross-Reference	Evaluation Criteria	Result	Comments
			indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.
PMR-5-16-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-16-1 comments above). See Exception 61 for additional information on this issue. Exception 61 is closed.
Maintenance and Repair - Out of Service > 24 hours			
PMR-5-17-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS provides report values for every level of disaggregation, as required by the Georgia SQM documentation. Initially, KCI determined that BLS did not report SQM values for the following levels of disaggregation, as required by the 10/22/99 SQM documentation: PBX, CENTREX and ISDN; UNE 2 Wire Loop (Design and Non-Design); UNE Loop Other (Design and Non-Design); UNE Other (Design and Non-Design). BLS informed KCI that the 10/22/99 SQM documentation was not specific to Georgia – that is, it is a BLS region-wide document. BLS suggested that KCI use the May 2000 SQM documentation that specifies which levels of disaggregation apply to Georgia and which do not. KCI reviewed the May 2000 documentation, and determined that BLS reported all of the values at every required disaggregation level that the document indicated was appropriate for Georgia reporting. See Exception 61 for additional information on this issue. Exception 61 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR-5-17-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI determined that BLS did not report SQM values for certain levels of disaggregation (see PMR-5-17-1 comments above). See Exception 61 for additional information on this issue. Exception 61 is closed.
Billing – Invoice Accuracy			
PMR-5-18-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-18-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI was unable to match the BLS-reported CLEC aggregate SQM values. KCI then provided additional computation instructions and an updated list of CLECs to be included in the report (excluding BLS's own test accounts, and specific to the month being reported). KCI re-tested this criterion for the month of August 2000. The SQM values calculated by KCI matched the corresponding values reported by BLS exactly. See Exception 52 for additional information on this issue. Exception 52 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Billing – Mean Time to Deliver Invoices			
PMR-5-19-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reported an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-19-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	The SQM value calculated by KCI at each level of disaggregation matched exactly the corresponding value reported by BLS. Hence, KCI confirmed that BLS accurately calculated and reported these SQM values. Initially, KCI was unable to match the BLS-reported "Mean Time to Deliver CABS Bills" value for the Interconnection type service. KCI then provided an updated list of CLECs to be included in the report (excluding BLS's own test accounts, and specific to the month being reported). KCI re-tested this criterion for the month of August 2000. The SQM values calculated by KCI matched the corresponding values reported by BLS exactly. See Exception 52 for additional information on this issue. Exception 52 is closed.
Billing – Usage Data Delivery Accuracy			
PMR-5-20-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-20-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly. Initially, KCI was unable to match the BLS-reported "Total Data Packs Sent" value. BLS updated their report, and KCI was able to match its calculations to the updated BLS-reported values, exactly. KCI also was able to match its calculated values to BLS-reported values for the June 2000 SQM report. See Exception 52 for additional information on this issue. Exception 52 is closed.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Billing – Usage Data Delivery Completeness			
PMR-5-21-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-21-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly. Initially, KCI was unable to match the BLS-reported "Day > 30 Cumulative % Completeness Benchmark" value for the CLEC aggregate and BLS Retail. Then, BLS provided an updated report. KCI was able to match its calculated values to the BLS-reported values in this updated report, exactly. KCI also was able to match its calculated values to BLS-reported values for the June 2000 SQM report. See Exception 52 for additional information on this issue. Exception 52 is closed.
Billing – Usage Data Delivery Timeliness			
PMR-5-22-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-22-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly.
Billing – Mean Time to Deliver Usage			
PMR-5-23-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-23-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly. Initially, KCI was unable to match the BLS-reported SQM values for CLEC aggregate and BLS Retail reporting. Then, BLS provided an updated report. KCI was able to match its calculated values to the BLS-reported values in this updated report, exactly. KCI also was able to match its calculated values to BLS-reported values for the June 2000 SQM report. See Exception 52 for additional information on this issue. Exception 52 is

Test Cross-Reference	Evaluation Criteria	Result	Comments
			closed.
Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Toll)			
PMR-5-24-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-24-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly.
Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds– (Toll)			
PMR-5-25-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-25-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly.
Operator Services (Toll) and Directory Assistance – Average Speed to Answer (Directory Assistance)			
PMR-5-26-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-26-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly.
Operator Services (Toll) and Directory Assistance – Percent Answered within "X" Seconds (Directory Assistance)			
PMR-5-27-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-27-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly.
E911 – Timeliness			
PMR-5-28-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-28-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly. Initially, KCI was unable to match the BLS-reported SQM values for each category of Percent Answered within a range of hours. BLS later provided revised computation instructions. The KCI re-calculated SQM values agreed with the BLS-reported SQM values, exactly.

Test Cross-Reference	Evaluation Criteria	Result	Comments
			See Exception 52 for additional information on this issue. Exception 52 is closed.
E911 – Accuracy			
PMR-5-29-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-29-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly.
E911 – Mean Interval			
PMR-5-30-1	BLS reports are correctly disaggregated and complete.	Satisfied	No disaggregation is required by the SQM guidelines.
PMR-5-30-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values, exactly. Initially, KCI was unable to match the BLS-reported SQM value. BLS later provided revised computation instructions. The KCI re-calculated SQM values agreed with the BLS-reported SQM values, exactly. See Exception 52 for additional information on this issue. Exception 52 is closed.
Trunk Group Performance – Trunk Group Performance – Aggregate			
PMR-5-31-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for the level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-31-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation.
Trunk Group Performance – Trunk Group Service Report			
PMR-5-32-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for the level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-32-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation.

Test Cross-Reference	Evaluation Criteria	Result	Comments
Trunk Group Performance – Trunk Group Service Detail			
PMR-5-33-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for the level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-33-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at each level of disaggregation specified by the May 2000 SQM documentation.
Collocation – Average Response Time			
PMR-5-34-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-34-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at every level of disaggregation specified by the May 2000 SQM documentation.
Collocation – Average Arrangement Time			
PMR-5-35-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-35-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at every level of disaggregation specified by the May 2000 SQM documentation.
Collocation – Percent of Due Dates Missed			
PMR-5-36-1	BLS reports are correctly disaggregated and complete.	Satisfied	BLS reports an SQM value for every level of disaggregation specified in the May 2000 SQM documentation.
PMR-5-36-2	KCI-calculated SQM values agree with BLS-reported SQM values.	Satisfied	KCI was able to match the BLS-reported values at every level of disaggregation specified by the May 2000 SQM documentation.

Table VIII-5.4 below displays the instances where the KCI-calculated SQM values did not match the BellSouth-reported SQM values for averages, overall percentages, or total product aggregates. This table does not show the instances in which the values for disaggregated interval distributions did not match, nor does it show the instances in which the values did not match at highly disaggregated product levels.

Table VIII-5.4: Details of Results

Test Cross-Reference	Month	Level of Disaggregation	KCI-Calculated SQM Value	BLS-Reported SQM Value
PMR-5-11-2	October 1999	BLS Retail POTS-Residence Total Percent Troubles within 30 days for the < 10 Circuits category	15.18%	15.40%
PMR-5-11-2	October 1999	BLS Retail POTS-Residence Total Percent Troubles within 30 days for the >= 10 Circuits category	7.32%	7.59%
PMR-5-11-2	October 1999	BLS Retail POTS-Business Total Percent Troubles within 30 days for the < 10 Circuits category	12.32%	10.12%
PMR-5-11-2	October 1999	BLS Retail POTS-Business Total Percent Troubles within 30 days for the >= 10 Circuits category	11.90%	5.62%
PMR-5-11-2	October 1999	BLS Retail Design TotalPercent Troubles within 30 days for the < 10 Circuits category	2.27%	2.04%
PMR-5-11-2	October 1999	CLEC aggregate POTS-Residence Total Percent Troubles within 30 days for the < 10 Circuits category	16.73%	15.55%
PMR-5-11-2	October 1999	CLEC aggregate POTS-Business Total Percent Troubles within 30 days for the < 10 Circuits category	11.01%	14.06%
PMR-5-11-2	October 1999	CLEC aggregate Design Total Percent Troubles within 30 days for the < 10 Circuits category	0.69%	0.97%

Test Cross-Reference	Month	Level of Disaggregation	KCI-Calculated SQM Value	BLS-Reported SQM Value
PMR-5-11-2	October 1999	CLEC aggregate UNE Design Total Percent Troubles within 30 days for the < 10 Circuits category	0.57%	0.99%
PMR-5-11-2	October 1999	CLEC aggregate UNE Non-Design Total Percent Troubles within 30 days for the < 10 Circuits category	0.00%	0.08%
PMR-5-11-2	October 1999	BLS Retail Local Interconnection Trunks % Trouble	0.16%	0.04%
PMR-5-11-2	October 1999	CLEC aggregate Local Interconnection Trunks % Trouble	0.07%	0.60%

F. Test Results: Statistical Evaluation of Transactions Test Metrics (PMR6)

1.0 Description

This objective of this test was to evaluate BellSouth's service performance for the KCI test CLEC using statistical methods to make comparisons to parity and benchmark standards. The test relied on standard statistical methods deemed to be appropriate by KCI. Comparisons were not conducted for performance measures for which a retail analog or benchmark is not established.

2.0 Methodology

This section summarizes the test methodology.

2.1 Business Process Description

On a monthly basis, BellSouth generates and reports performance measurement statistics called Service Quality Measurements (SQMs). The SQM documentation for Georgia, which is published by BellSouth and updated periodically, contains definitions of the SQMs along with business rules, exclusions, calculation descriptions, and levels of disaggregation. SQMs have been established for every service domain and are calculated for both CLECs and BellSouth. Many of the SQMs are calculated on a CLEC-specific basis, as well as for the aggregate of the CLECs and for BellSouth. Others, however, are calculated for the CLEC aggregate only, or for the CLEC aggregate and BellSouth combined. Each month, BellSouth extracts and assembles data from various databases in its Operational Support Systems (OSS) to calculate SQM values.

BellSouth has developed a tool called the Performance Measurement and Analysis Platform (PMAP) to calculate many of the SQM values automatically. For the remaining SQMs, referred to as "manual SQMs," BellSouth employs a variety of smaller, special-purpose tools, sometimes in conjunction with PMAP.

The SQM values are reported each month on BellSouth's PMAP Web site (https://pmap.bellsouth.com). BellSouth provides the capability for CLECs to download their own SQM values from the Web site. A CLEC can also download the raw data that BellSouth uses to calculate PMAP SQMs specific to the particular CLEC, and it can refer to the *PMAP Raw Data Users Manual* for detailed computation instructions. CLEC aggregate and BellSouth retail SQM values are also posted on the Web site.

2.2 Scenarios

Scenarios were not applicable to this test.

2.3 Test Targets & Measures

The test target for the Statistical Evaluation of Transactions Test Metrics was the set of values reported by BellSouth for various SQMs for which there were appropriate test CLEC data, and standards specified by the Georgia Public Service Commission (GPSC). Processes, sub-processes, and evaluation measures are summarized in the following table. The last column "Test Cross-Reference" indicates where the particular measures are addressed in section 3.1 "Results & Analysis."

Table VIII-6.1: Test Target Cross-Reference

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Resale	Ordering	Calculate and compare test statistic to critical value, depending on metric.	PMR6-1-1
	Provisioning	Calculate and compare test statistic to critical value, depending on metric.	PMR6-1-2
	Maintenance & Repair	Calculate and compare test statistic to critical value, depending on metric.	PMR6-1-3
	Billing	Calculate and compare test statistic to critical value, depending on metric.	PMR6-1-4
UNE	Ordering	Calculate and compare test statistic to critical value, depending on metric.	PMR6-2-1
	Provisioning	Calculate and compare test statistic to critical value, depending on metric.	PMR6-2-2
	Maintenance & Repair	Calculate and compare test statistic to critical value, depending on metric.	PMR6-2-3
	Billing	Calculate and compare test statistic to critical value, depending on metric.	PMR6-2-4

Process	Sub-Process	Evaluation Measure	Test Cross-Reference
Other	Billing	Calculate and compare test statistic to critical value, depending on metric.	PMR6-3-1
	Flow-Through	Calculate and compare test statistic to critical value, depending on metric.	PMR6-3-2

2.4 Data Sources

The data collected for the test are summarized in the table below.

Table VIII-6.2: Data Sources for Statistical Evaluation of Transactions Test Metrics

Document	File Name	Location in Work Papers	Source
Ordering – Reject Interval CLEC aggregate December 1999 Raw Data – CLEC Proprietary	Reject1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Reject Interval CLEC aggregate February 2000 Raw Data – CLEC Proprietary	Reject0200.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Firm Order Confirmation Timeliness CLEC aggregate December 1999 Raw Data – CLEC Proprietary	FOC1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Ordering – Firm Order Confirmation Timeliness CLEC aggregate February 2000 Raw Data – CLEC Proprietary	FOC0200.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Order Completion Interval CLEC aggregate December 1999 Raw Data – CLEC Proprietary	OCI1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning – Order Completion Interval CLEC aggregate January 2000 Raw Data – CLEC Proprietary	OCI0100.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Order Completion Interval CLEC aggregate February 2000 Raw Data – CLEC Proprietary	OCI0200.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Held Order Interval CLEC aggregate December 1999 Raw Data – CLEC Proprietary	HldOrd1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Average Jeopardy Notice Interval CLEC aggregate December 1999 Raw Data – CLEC Proprietary	Jeopardy1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Average Jeopardy Notice Interval CLEC aggregate January 2000 Raw Data – CLEC Proprietary	Jeopardy0100.txt.gz	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Average Jeopardy Notice Interval CLEC aggregate February 2000 Raw Data – CLEC Proprietary	Jeopardy0200.txt.gz	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Percent Jeopardies CLEC aggregate December 1999 Raw Data – CLEC Proprietary	Jeopardy1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Percent Jeopardies CLEC aggregate January 2000 Raw Data – CLEC Proprietary	Jeopardy0100.txt.gz	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Provisioning – Percent Jeopardies CLEC aggregate February 2000 Raw Data – CLEC Proprietary	Jeopardy0200.txt.gz	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Percent Missed Installation Appointments CLEC aggregate December 1999 Raw Data – CLEC Proprietary	PMI1299.txt.gz	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Percent Missed Installation Appointments CLEC aggregate January 2000 Raw Data – CLEC Proprietary	PMI0100.txt.gz	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Provisioning – Percent Missed Installation Appointments CLEC aggregate February 2000 Raw Data – CLEC Proprietary	PMI0200.txt.gz	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Missed Repair Appointments CLEC aggregate December 1999 Raw Data – CLEC Proprietary	MissedRepair1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Missed Repair Appointments CLEC aggregate January 2000 Raw Data – CLEC Proprietary	MissedRepair0100.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Maintenance Average Duration CLEC aggregate December 1999 Raw Data – CLEC Proprietary	MaintAvgDur1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Maintenance & Repair – Maintenance Average Duration CLEC aggregate January 2000 Raw Data – CLEC Proprietary	MaintAvgDur0100.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Percent Troubles within 30 Days CLEC aggregate December 1999 Raw Data – CLEC Proprietary	RepeatTroubles301299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Percent Troubles within 30 Days CLEC aggregate January 2000 Raw Data – CLEC Proprietary	RepeatTroubles300100.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Line Count CLEC aggregate December 1999 Raw Data – CLEC Proprietary	LineCount1299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Line Count CLEC aggregate January 2000 Raw Data – CLEC Proprietary	LineCount0100.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Maintenance & Repair – Out of Service >24 Hours CLEC aggregate December 1999 Raw Data – CLEC Proprietary	OOS241299.txt.Z	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mean Time to Deliver Invoices CLEC aggregate December 1999 Raw Data – CLEC Proprietary	E&YDEC~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing – Mean Time to Deliver Invoices CLEC aggregate January 2000 Raw Data – CLEC Proprietary	E&Y01-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mean Time to Deliver Invoices CLEC aggregate February 2000 Raw Data – CLEC Proprietary	E&Y02-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Usage Data Delivery Completeness CLEC aggregate December 1999 Raw Data – CLEC Proprietary	E&YDEC~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Usage Data Delivery Completeness CLEC aggregate January 2000 Raw Data – CLEC Proprietary	E&Y01-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Usage Data Delivery Completeness CLEC aggregate February 2000 Raw Data – CLEC Proprietary	E&Y02-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Usage Data Delivery Timeliness CLEC aggregate December 1999 Raw Data – CLEC Proprietary	E&YDEC~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Usage Data Delivery Timeliness CLEC aggregate January 2000 Raw Data – CLEC Proprietary	E&Y01-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements

Document	File Name	Location in Work Papers	Source
Billing – Usage Data Delivery Timeliness CLEC aggregate February 2000 Raw Data – CLEC Proprietary	E&Y02-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mean Time to Deliver Usage CLEC aggregate December 1999 Raw Data – CLEC Proprietary	E&YDEC~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mean Time to Deliver Usage CLEC aggregate January 2000 Raw Data – CLEC Proprietary	E&Y01-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
Billing – Mean Time to Deliver Usage CLEC aggregate February 2000 Raw Data – CLEC Proprietary	E&Y02-~1.xls	PMR-6-A-4	BLS – Interconnection Operations – CLEC Performance Measurements
8354-U Order Adopting Standards and Benchmarks	No Electronic Copy	PMR-6-A-2	Georgia Public Service Commission
Product ID and Product Description Mapping Instructions	No Electronic Copy	PMR-6-A-3	BLS – Interconnection Operations – CLEC Performance Measurements
KCI – Statistical Evaluation of Transaction Test Metrics- Evaluation Criteria and Results Table – BLS Proprietary	PMR6-Table VIII-6.3.doc	PMR-6-A-1	KCI
KCI – Statistical Evaluation of Transaction Test Metrics- Evaluation Criteria and Results Table – Sources – BLS Proprietary	PMR6-Table VIII-6.3.wp.doc	PMR-6-A-1	KCI

2.4.1 Data Generation/Volumes

The data for this test are were the raw data used to calculate and validate SQM values reported by BellSouth for the KCI test CLEC and BellSouth retail operations.

2.5 Evaluation Methods

KCI conducted the Statistical Evaluation of Transaction Test in two steps. First, for the period under study (December 1999, January 2000 and February 2000), KCI calculated test CLEC SQMs (and BellSouth retail SQMs, if appropriate) using the raw data provided by BellSouth. Second, in accordance with the Standard and Benchmarks (the *Standards*) issued by the GPSC (Docket No. 8354-U, June 29, 2000), KCI calculated the appropriate test statistics.

Generally, the SQMs specify two types of standards. The first standard specifies that the test CLEC must be performing at least as well as Bell South retail for some analogous function. This standard is called a parity standard. The second standard specifies that the test CLEC must meet or exceed some fixed standard. This standard is called a benchmark standard.

2.6 Analysis Methods

The Statistical Evaluation of Transaction Test included a checklist of evaluation measures developed by KCI during the preparation of test activities for the BellSouth - Georgia OSS Evaluation. These evaluation measures provided the framework of norms, standards, and guidelines for the Statistical Evaluation of Transactions test. [1]

In particular, the statistical tests performed depended on the size of the data sets and an evaluation of statistical assumptions. For all tests, the null hypothesis was that the metric-defined standard is met. The alternative was one-sided and the Type I error level (α level) was set at five percent. The statistical tests used for two types of metrics (metrics that test averages and metrics that test proportions) are given below. If the test CLEC average or percentage met or exceeded the standard, there was no need for a statistical test, and thus the significance level, or p-value, was not reported.

2.6.1 Tests on Averages

A two-sample separate variance t-test was used to evaluate the data when the standard was parity and the test CLEC and BellSouth Retail count were at least 100 each.

[1] See "Statistical Methodology for OSS Testing" and Bellsouth - Georgia OSS Evaluation *Supplemental Test Plan* for details on specific statistical tests cited in this section.

KCI performed a permutation test for parity if either of the samples had fewer than 100 observations.

2.6.2 Tests on Proportions

Binomial tests were used to evaluate benchmark comparisons. Binomial tests calculate exact statistical significance levels (p-values) for the comparisons of a proportion to an absolute standard.

For parity comparisons involving two proportions, a hypergeometric test was used when both samples had fewer than 10,000 observations. As with the binomial tests, hypergeometric tests compute the exact p-value when comparing two proportions. As the sample size increases, Binomial tests approximate the hypergeometric tests. Therefore, when either one of the samples had 10,000 or more observations, KCI treated the proportion of the larger sample as fixed, and used a binomial test to compare the proportion of the smaller sample to the proportion of the larger sample.

3.0 Results Summary

This section identifies the discrete evaluation criteria and test results.

3.1 Results & Analysis

There are seven situations in which no statistical evaluations were performed. This section describes these conditions and the treatments of the metrics that fall under these categories:

1. No statistical tests were performed for SQMs with fewer than 11 observations in the smaller sample.
2. The *Standards* issued by the GPSC set forth the guidelines for the statistical tests. On the occasions for which the Standards prescribed *diagnostic* as a test standard, no corresponding statistical tests were available, and, hence, no evaluation was performed.
3. The *Standards* also specify the levels of disaggregation at which statistical evaluations were performed. However, not all prescribed levels of disaggregation were populated with transactions. For those levels of disaggregation without any transactions, no statistical evaluations were performed.[2]
4. For some SQMs, the prescribed product categories in the standards did not uniquely match product categories in the BellSouth databases. BellSouth provided supplementary information in an attempt to identify some of these product categories. No statistical evaluation was performed on those levels

[2] The Standards were issued after test execution had commenced.

of disaggregation involving product categories that were not adequately identified by the supplementary information.

5. The data in some SQMs were provided only as aggregated summary statistics. Statistical tests could not be performed without transaction level data.

6. As part of its functional testing, KCI purposely instituted troubles and repeat troubles to test BellSouth's response. Therefore, it is inappropriate to use test CLEC data for benchmark or parity evaluations for SQMs that evaluate the frequency of customer troubles. These SQMs include Percent Provisioning Troubles within 30 days, Customer Trouble Report Rate and Percent Repeat Troubles within 30 days, and include both Resale and UNE product measures.

7. In support of KCI's testing, BellSouth invoices KCI in a similar way to that in which it invoices other CLECs. However, KCI does not pay these invoices, as other CLECs do. Instead, BellSouth reduces the KCI invoices by an equivalent dollar amount (in the form of "Billing Adjustments"). Therefore, it is inappropriate to use test CLEC data for benchmark or parity evaluations for the Billing Invoice Accuracy SQM, since it evaluates Billing Adjustments in relation to Billing Revenues.

The results of this test are presented in the table below. Definitions of evaluation criteria, possible results, and exceptions are provided in Section II.

Table VIII-6.3: Evaluation Criteria and Results

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR6-1-1	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale ordering.	Satisfied	The test CLEC performance met or exceeded the standards for at least 90% of the disaggregation levels tested. For this SQM, 4 out of 4 (100%) of the statistical tests met the standards set forth in the June Standards.
PMR6-1-2	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale provisioning.	Not Satisfied	The test CLEC performance did not meet or exceed the standards for at least 90% of the disaggregation levels tested For this SQM, 14 out of 28 (50%) of the statistical tests met the

Test Cross-Reference	Evaluation Criteria	Result	Comments
			standards set forth in the June Standards.
PMR6-1-3	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale maintenance and repair.	Satisfied	The test CLEC performance met or exceeded the standards for at least 90% of the disaggregation levels tested. For this SQM, 8 out of 8 (100%) of the statistical tests met the standards set forth in the June Standards.
PMR6-1-4	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for resale billing.	Satisfied	The test CLEC performance met or exceeded the standards for at least 90% of the disaggregation levels tested. For this SQM, 3 out of 3 (100%) of the statistical tests met the standards set forth in the June Standards.
PMR6-2-1	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE ordering.	Not Satisfied	The test CLEC performance did not meet or exceed the standards for at least 90% of the disaggregation levels tested. For this SQM, 11 out of 21 (52%) of the statistical tests met the standards set forth in the June Standards.
PMR6-2-2	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE provisioning.	Not Satisfied	The test CLEC performance did not meet or exceed the standards for at least 90% of the disaggregation levels tested . For this SQM, 16 out of 40 (40%) of the statistical tests met the standard set forth in the June Standards.

Test Cross-Reference	Evaluation Criteria	Result	Comments
PMR6-2-3	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE maintenance and repair.	Satisfied	The test CLEC performance met or exceeded the standards for at least 90% of the disaggregation levels tested. For this SQM, 6 out of 6 (100%) of the statistical tests met the standards set forth in the June Standards.
PMR6-2-4	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for UNE billing.	Satisfied	The test CLEC performance met or exceeded the standards for at least 90% of the disaggregation levels tested. For this SQM, 3 out of 3 (100%) of the statistical tests met the standards set forth in the June Standards.
PMR6-3-1	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for "Other" billing.	Not Satisfied	The test CLEC performance did not meet or exceed the standards for at least 90% of the disaggregation levels tested. For this SQM, 3 out of 9 (33%) of the statistical tests met the standards set forth in the June Standards.
PMR6-3-2	The test CLEC performance met or exceeded the parity level or benchmark standard (or was statistically equivalent) for the levels of disaggregation tested for flow through.	Not Complete	KCI is awaiting the appropriate data sets from BLS to complete evaluation of this criterion.

The tables below provide KCI's findings in greater detail. As described above, KCI did not conduct statistical tests for every level of disaggregation prescribed by the GPSC. No statistical evaluation was performed when:

- There were fewer than 11 observations in the smaller sample;
- The Standards prescribed "Diagnostic" rather than a benchmark or parity as the standard;
- Prescribed product categories were not identifiable in the data provided;

- Data were reported on a CLEC aggregate level, but not on a transactional level;
- KCI's functional testing required BellSouth to take actions that would negate the value of comparing the test values to a standard (e.g., purposely instituting troubles).

Table VIII-6.4 below displays the detailed results of the statistical analysis for the Resale levels of disaggregation.

Table VIII-6.4: Detail of Results (Resale)

	Domain[3]	SQM[3]	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench-mark[4]	CLEC Out-come[5]	CLEC Count[5]	BLS Out-come[5]	BLS Count[5]	p-value[6]	Finding[7]
1.	Ordering	FOC	Business	Mechanized	Feb-00	N / A	N / A	95%	100%	22	N / A	N / A		At Standard
2.	Ordering	FOC	Business	Mechanized	Dec-99	N / A	N / A	95%	100%	18	N / A	N / A		At Standard
3.	Ordering	FOC	Residence	Mechanized	Feb-00	N / A	N / A	95%	100%	15	N / A	N / A		At Standard
4.	Ordering	FOC	Residence	Mechanized	Dec-99	N / A	N / A	95%	100%	32	N / A	N / A		At Standard
5.	Provisioning	Order Completion Interval	Business	N / A	Jan-00	Less than 10	Dispatch	N / A	5.75	110	11.82	12,284		At Standard
6.	Provisioning	Order Completion Interval	Business	N / A	Jan-00	Less than 10	Non-Dispatch	N / A	0.44	16	1.72	30,412		At Standard
7.	Provisioning	Order Completion Interval	Business	N / A	Feb-00	Less than 10	Non-Dispatch	N / A	2.23	40	1.92	36,655	0.2160	At Standard

[3] Domain and SQM identify the category and the metric, respectively. Levels of disaggregation include: Product Description, Mechanization, Month, Circuit Interval and Dispatch Identity. Since not all levels of disaggregation were applicable for each metric, N / A indicates inapplicability.

[4] Benchmark is the threshold of acceptance set forth in the Standards. Since a benchmark is not applicable for parity comparisons, an N / A was recorded in those cases.

[5] CLEC Counts and BLS Counts identify the number of transactions at the prescribed level of disaggregation for CLEC and BellSouth, respectively. For benchmark standards, CLEC Outcome and BLS Outcome respectively identify the percentage of CLEC and BellSouth transactions satisfying the criterion at the level of disaggregation. For interval tests, CLEC and BLS Outcomes are the mean values of the variable of interest for CLEC and BellSouth, respectively. To differentiate the two interpretations, rates are expressed in percentages, and mean values are expressed in decimals.

[6] The p-value is the standard statistical p value. In other words, it is the probability of observing an outcome at least as extreme as the CLEC outcome, given the null hypothesis that the standard is met. Depending on the metric, the p-value can either be the cumulative probability up to and including the test CLEC performance, or the cumulative probability that includes and exceeds the test CLEC performance. Standard is met when the CLEC data exceeded the benchmarks or out-performed the corresponding BellSouth transactions. No test was necessary in these cases, thus the p-value was left blank.

[7] Finding takes one of the possible two values: "At standard" or "Below Standard." When the test CLEC exceeded the benchmark or out-performed BellSouth, an "At Standard" was recorded. Metrics that required statistical tests and showed p-values less than five percent were given a Finding of "Below Standard". Metrics with p-values higher than five percent were given a Finding of "At Standard."

	Domain[3]	SQM[3]	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench-mark[4]	CLEC Out-come[5]	CLEC Count[5]	BLS Out-come[5]	BLS Count[5]	p-value[6]	Finding[7]
8.	Provisioning	Order Completion Interval	Business	N / A	Dec-99	Less than 10	Dispatch	N / A	9.05	76	11.69	10,574		At Standard
9.	Provisioning	Order Completion Interval	Residence	N / A	Jan-00	Less than 10	Dispatch	N / A	9.57	95	8.78	32,711	0.1511	At Standard
10.	Provisioning	Order Completion Interval	Residence	N / A	Jan-00	Less than 10	Non-Dispatch	N / A	2.91	11	1.23	462,863	0.0245	Below Standard
11.	Provisioning	Order Completion Interval	Residence	N / A	Feb-00	Less than 10	Non-Dispatch	N / A	3.83	30	0.70	467,543	0.0003	Below Standard
12.	Provisioning	Order Completion Interval	Residence	N / A	Dec-99	Less than 10	Dispatch	N / A	4.36	188	8.93	29,792		At Standard
13.	Provisioning	Order Completion Interval	Residence	N / A	Dec-99	Less than 10	Non-Dispatch	N / A	0.89	104	0.74	387,563	0.0271	Below Standard
14.	Provisioning	Held Orders	Residence	N / A	Dec-99	Equal to or more than 10	N / A	N / A	20.08	12	37.98	1984		At Standard
15.	Provisioning	Average Jeopardy Notice Interval	Business	N / A	Jan-00	N / A	N / A	95%	0%	178	N / A	N / A	0.0000	Below Standard
16.	Provisioning	Average Jeopardy Notice Interval	Business	N / A	Feb-00	N / A	N / A	95%	0%	117	N / A	N / A	0.0000	Below Standard
17.	Provisioning	Average Jeopardy Notice Interval	Business	N / A	Dec-99	N / A	N / A	95%	0%	137	N / A	N / A	0.0000	Below Standard
18.	Provisioning	Average Jeopardy Notice Interval	Residence	N / A	Jan-00	N / A	N / A	95%	0%	182	N / A	N / A	0.0000	Below Standard

	Domain[3]	SQM[3]	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench-mark[4]	CLEC Out-come[5]	CLEC Count[5]	BLS Out-come[5]	BLS Count[5]	p-value[6]	Finding[7]
19.	Provisioning	Average Jeopardy Notice Interval	Residence	N / A	Feb-00	N / A	N / A	95%	0%	75	N / A	N / A	0.0000	Below Standard
20.	Provisioning	Average Jeopardy Notice Interval	Residence	N / A	Dec-99	N / A	N / A	95%	0%	396	N / A	N / A	0.0000	Below Standard
21.	Provisioning	Percent Jeopardies	Business	N / A	Jan-00	N / A	N / A	N / A	7%	178	7%	61,467	0.5053	At Standard
22.	Provisioning	Percent Jeopardies	Business	N / A	Feb-00	N / A	N / A	N / A	1%	117	6%	68,499	0.0000	At Standard
23.	Provisioning	Percent Jeopardies	Business	N / A	Dec-99	N / A	N / A	N / A	6%	137	7%	55,483	0.7671	At Standard
24.	Provisioning	Percent Jeopardies	Residence	N / A	Jan-00	N / A	N / A	N / A	13%	182	2%	616,131	0.0000	Below Standard
25.	Provisioning	Percent Jeopardies	Residence	N / A	Feb-00	N / A	N / A	N / A	8%	75	2%	611,370	0.0038	Below Standard
26.	Provisioning	Percent Jeopardies	Residence	N / A	Dec-99	N / A	N / A	N / A	8%	396	2%	538,025	0.0000	Below Standard
27.	Provisioning	Percent Missed Installation Appointments	Business	N / A	Jan-00	Less than 10	Dispatch	N / A	12%	113	25%	12,345	0.8848	At Standard
28.	Provisioning	Percent Missed Installation Appointments	Business	N / A	Dec-99	Less than 10	Dispatch	N / A	5%	76	27%	10,609	0.9000	At Standard
29.	Provisioning	Percent Missed Installation Appointments	Residence	N / A	Jan-00	Less than 10	Dispatch	N / A	35%	96	20%	37,935	0.0004	Below Standard
30.	Provisioning	Percent Missed Installation Appointments	Residence	N / A	Jan-00	Less than 10	Non-Dispatch	N / A	7%	14	0%	477,458	0.0426	Below Standard
31.	Provisioning	Percent Missed Installation Appointments	Residence	N / A	Dec-99	Less than 10	Dispatch	N / A	5%	188	24%	36,141	1.0000	At Standard

	Domain[3]	SQM[3]	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench-mark[4]	CLEC Out-come[5]	CLEC Count[5]	BLS Out-come[5]	BLS Count[5]	p-value[6]	Finding[7]
32.	Provisioning	Percent Missed Installation Appointments	Residence	N / A	Dec-99	Less than 10	Non-Dispatch	N / A	1%	105	0%	403,918	0.3334	At Standard
33.	Maintenance & Repair	Missed Repair Appointments	Business	N / A	Jan-00	N / A	Non-Dispatch	N / A	0%	130	12%	11,730	1.0000	At Standard
34.	Maintenance & Repair	Missed Repair Appointments	Business	N / A	Dec-99	N / A	Non-Dispatch	N / A	3%	150	17%	10,090	1.0000	At Standard
35.	Maintenance & Repair	Missed Repair Appointments	Residence	N / A	Jan-00	N / A	Non-Dispatch	N / A	0%	101	7%	75,759	1.0000	At Standard
36.	Maintenance & Repair	Missed Repair Appointments	Residence	N / A	Dec-99	N / A	Non-Dispatch	N / A	0%	115	7%	52,434	1.0000	At Standard
37.	Maintenance & Repair	Maintenance Average Duration	Business	N / A	Jan-00	N / A	Non-Dispatch	N / A	1.00	130	10.60	11,704		At Standard
38.	Maintenance & Repair	Maintenance Average Duration	Business	N / A	Dec-99	N / A	Non-Dispatch	N / A	2.10	150	8.98	10,055		At Standard
39.	Maintenance & Repair	Maintenance Average Duration	Residence	N / A	Jan-00	N / A	Non-Dispatch	N / A	1.00	101	19.71	75,570		At Standard
40.	Maintenance & Repair	Maintenance Average Duration	Residence	N / A	Dec-99	N / A	Non-Dispatch	N / A	0.59	115	15.76	52,102		At Standard
41.	Billing[8]	Mean Time to Deliver Invoices CRIS	N / A	N / A	Dec-99	N / A	N / A	N / A	3.33	24	3.52	1		At Standard

[8]Given the sample sizes, the test plans specify permutation tests in this domain. However, these tests require transaction level data for both the test CLEC and BLS; for BLS only summary data were available. Therefore, to perform parity comparisons, KCI modified the interval tests for this SQM. As with any interval test, if the test CLEC sample mean is better than or equal to the BLS mean, no further test is necessary. If the CLEC mean is greater than the BLS mean, KCI conducted one sample t-tests for the null hypothesis that the test CLEC mean is less than or equal to the BLS mean.

	Domain[3]	SQM[3]	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench-mark[4]	CLEC Out-come[5]	CLEC Count[5]	BLS Out-come[5]	BLS Count[5]	p-value[6]	Finding[7]
42.	Billing[8]	Mean Time to Deliver Invoices CRIS	N / A	N / A	Jan-00	N / A	N / A	N / A	3.82	22	3.78	1	0.4178	At Standard
43.	Billing[8]	Mean Time to Deliver Invoices CRIS	N / A	N / A	Feb-00	N / A	N / A	N / A	3.33	24	3.31	1	0.4207	At Standard

Table VIII-6.5 below displays the detailed results of the statistical analysis for the UNE levels of disaggregation.

Table VIII-6.5: Detail Of Results (UNE)

	Domain	SQM	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench mark	CLEC Outcome	CLEC Count	BLS Outcome	BLS Count	p-value	Finding
1	Ordering	Reject Interval	2-W Analog Loop Design	Mechanized	Feb-00	N/A	N/A	97%	100%	57	N/A	N/A		At Standard
2	Ordering	Reject Interval	2-W Analog Loop Design	Partially Mechanized	Feb-00	N/A	N/A	85%	37%	68	N/A	N/A	0.0000	Below Standard
3	Ordering	Reject Interval	2-W Analog Loop Non-Design	Mechanized	Feb-00	N/A	N/A	97%	100%	57	N/A	N/A		At Standard
4	Ordering	Reject Interval	2-W Analog Loop Non-Design	Partially Mechanized	Feb-00	N/A	N/A	85%	37%	68	N/A	N/A	0.0000	Below Standard
5	Ordering	Reject Interval	Loop+Port Combination	Mechanized	Feb-00	N/A	N/A	97%	100%	15	N/A	N/A		At Standard
6	Ordering	Reject Interval	Loop+Port Combination	Partially Mechanized	Feb-00	N/A	N/A	85%	31%	36	N/A	N/A	0.0000	Below Standard
7	Ordering	Reject Interval	Switch Ports	Partially Mechanized	Feb-00	N/A	N/A	85%	33%	15	N/A	N/A	0.0000	Below Standard
8	Ordering	Reject Interval	2-W Analog Loop W/INP Design	Partially Mechanized	Feb-00	N/A	N/A	85%	55%	11	N/A	N/A	0.0159	Below Standard
9	Ordering	Reject Interval	2-W Analog Loop W/INP Non Design	Partially Mechanized	Feb-00	N/A	N/A	85%	55%	11	N/A	N/A	0.0159	Below Standard
10	Ordering	Reject Interval	2-W Analog Loop Design	Mechanized	Dec-99	N/A	N/A	97%	100%	21	N/A	N/A		At Standard
11	Ordering	Reject Interval	2-W Analog Loop Non-Design	Mechanized	Dec-99	N/A	N/A	97%	100%	21	N/A	N/A		At Standard
12	Ordering	FOC	2-W Analog Loop Design	Manual	Feb-00	N/A	N/A	85%	79%	19	N/A	N/A	0.3159	At Standard

	Domain	SQM	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench mark	CLEC Outcome	CLEC Count	BLS Outcome	BLS Count	p-value	Finding
13	Ordering	FOC	2-W Analog Loop Non-Design	Manual	Feb-00	N / A	N / A	85%	79%	19	N / A	N / A	0.3159	At Standard
14	Ordering	FOC	Loop+Port Combination	Manual	Feb-00	N / A	N / A	85%	79%	24	N / A	N / A	0.2866	At Standard
15	Ordering	FOC	Switch Ports	Manual	Feb-00	N / A	N / A	85%	72%	18	N / A	N / A	0.1206	At Standard
16	Ordering	FOC	2-W Analog Loop Design	Partially Mechanized	Feb-00	N / A	N / A	85%	61%	23	N / A	N / A	0.0042	Below Standard
17	Ordering	FOC	2-W Analog Loop Non-Design	Partially Mechanized	Feb-00	N / A	N / A	85%	61%	23	N / A	N / A	0.0042	Below Standard
18	Ordering	FOC	Loop+Port Combination	Mechanized	Feb-00	N / A	N / A	95%	100%	41	N / A	N / A		At Standard
19	Ordering	FOC	Loop+Port Combination	Partially Mechanized	Feb-00	N / A	N / A	85%	59%	27	N / A	N / A	0.0011	Below Standard
20	Ordering	FOC	Switch Ports	Mechanized	Feb-00	N / A	N / A	95%	92%	13	N / A	N / A	0.4867	At Standard
21	Ordering	FOC	Switch Ports	Partially Mechanized	Feb-00	N / A	N / A	85%	48%	25	N / A	N / A	0.0000	Below Standard
22	Provisioning	Order Completion Interval	Loop+Port Combination	N / A	Jan-00	Less than 10	Non-Dispatch	N / A	2.59	19	1.45	493,275	0.0336	Below Standard
23	Provisioning	Order Completion Interval	Loop+Port Combination	N / A	Feb-00	Less than 10	Non-Dispatch	N / A	6.31	13	0.97	504,198	0.0040	Below Standard
24	Provisioning	Order Completion Interval	Loop+Port Combination	N / A	Dec-99	Less than 10	Dispatch	N / A	5.22	188	9.66	40,366		At Standard
25	Provisioning	Order Completion Interval	Loop+Port Combination	N / A	Dec-99	Less than 10	Non-Dispatch	N / A	1.85	78	1.00	414,861	0.0066	Below Standard
26	Provisioning	Order Completion Interval	Switch Ports	N / A	Dec-99	Less than 10	Non-Dispatch	N / A	6.90	14	1.00	414,861	0.0007	Below Standard

	Domain	SQM	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench mark	CLEC Outcome	CLEC Count	BLS Outcome	BLS Count	p-value	Finding
27	Provisioning	Order Completion Interval	UNE Other Non-Design	N / A	Feb-00	Less than 10	Dispatch	N / A	5.42	12	8.28	49,344		At Standard
28	Provisioning	Order Completion Interval	2-W Analog Loop Design	N / A	Dec-99	Less than 10	Dispatch	N / A	6.4	30	9.6565	40,356		At Standard
29	Provisioning	Percent Jeopardies	Loop+Port Combination	N / A	Jan-00	N / A	N / A	N / A	0%	34	1%	604,795	1.0000	At Standard
30	Provisioning	Percent Jeopardies	Loop+Port Combination	N / A	Feb-00	N / A	N / A	N / A	5%	56	2%	611,324	0.0604	At Standard
31	Provisioning	Percent Jeopardies	Loop+Port Combination	N / A	Dec-99	N / A	N / A	N / A	4%	328	2%	509,359	0.0040	Below Standard
32	Provisioning	Percent Jeopardies	Switch Ports	N / A	Jan-00	N / A	N / A	N / A	0%	38	1%	604,795	1.0000	At Standard
33	Provisioning	Percent Jeopardies	Switch Ports	N / A	Feb-00	N / A	N / A	N / A	0%	38	2%	611,324	1.0000	At Standard
34	Provisioning	Percent Jeopardies	Switch Ports	N / A	Dec-99	N / A	N / A	N / A	0%	36	2%	509,359	1.0000	At Standard
35	Provisioning	Percent Jeopardies	UNE Other Non-Design	N / A	Jan-00	N / A	N / A	N / A	0%	12	1%	604,795	1.0000	At Standard
36	Provisioning	Percent Jeopardies	UNE Other Non-Design	N / A	Feb-00	N / A	N / A	N / A	0%	30	2%	611,324	1.0000	At Standard
37	Provisioning	Percent Jeopardies	2-W Analog Loop Design	N / A	Feb-00	N / A	N / A	N / A	12%	17	15%	65,263	0.7445	At Standard
38	Provisioning	Percent Jeopardies	2-W Analog Loop Design	N / A	Dec-99	N / A	N / A	N / A	0%	34	15%	55,875	1.0000	At Standard
39	Provisioning	Percent Jeopardies	2-W Analog Loop Non Design	N / A	Jan-00	N / A	N / A	N / A	17%	24	14%	59,112	0.4345	At Standard
40	Provisioning	Percent Jeopardies	2-W Analog Loop Non Design	N / A	Dec-99	N / A	N / A	N / A	63%	19	15%	55,875	0.0000	Below Standard
41	Provisioning	Average Jeopardy Notice Interval	Loop+Port Combination	N / A	Jan-00	N / A	N / A	95%	0%	34	N / A	N / A	0.0000	Below Standard

	Domain	SQM	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench mark	CLEC Outcome	CLEC Count	BLS Outcome	BLS Count	p-value	Finding
42	Provisioning	Average Jeopardy Notice Interval	Loop+Port Combination	N / A	Feb-00	N / A	N / A	95%	0%	56	N / A	N / A	0.0000	Below Standard
43	Provisioning	Average Jeopardy Notice Interval	Loop+Port Combination	N / A	Dec-99	N / A	N / A	95%	0%	328	N / A	N / A	0.0000	Below Standard
44	Provisioning	Average Jeopardy Notice Interval	Switch Ports	N / A	Jan-00	N / A	N / A	95%	0%	38	N / A	N / A	0.0000	Below Standard
45	Provisioning	Average Jeopardy Notice Interval	Switch Ports	N / A	Feb-00	N / A	N / A	95%	0%	38	N / A	N / A	0.0000	Below Standard
46	Provisioning	Average Jeopardy Notice Interval	Switch Ports	N / A	Dec-99	N / A	N / A	95%	0%	36	N / A	N / A	0.0000	Below Standard
47	Provisioning	Average Jeopardy Notice Interval	UNE Other Non-Design	N / A	Jan-00	N / A	N / A	95%	0%	12	N / A	N / A	0.0000	Below Standard
48	Provisioning	Average Jeopardy Notice Interval	UNE Other Non-Design	N / A	Feb-00	N / A	N / A	95%	0%	30	N / A	N / A	0.0000	Below Standard
49	Provisioning	Average Jeopardy Notice Interval	2-W Analog Loop Design	N / A	Feb-00	N / A	N / A	95%	0%	17	N / A	N / A	0.0000	Below Standard
50	Provisioning	Average Jeopardy Notice Interval	2-W Analog Loop Design	N / A	Dec-99	N / A	N / A	95%	0%	34	N / A	N / A	0.0000	Below Standard
51	Provisioning	Average Jeopardy Notice Interval	2-W Analog Loop Non Design	N / A	Jan-00	N / A	N / A	95%	0%	24	N / A	N / A	0.0000	Below Standard
52	Provisioning	Average Jeopardy Notice Interval	2-W Analog Loop Non Design	N / A	Dec-99	N / A	N / A	95%	0%	19	N / A	N / A	0.0000	Below Standard
53	Provisioning	Percent Missed Installation Appointments	Loop+Port Combination	N / A	Jan-00	Less than 10	Non-Dispatch	N / A	16%	19	0%	508,523	0.0000	Below Standard

	Domain	SQM	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench mark	CLEC Outcome	CLEC Count	BLS Outcome	BLS Count	p-value	Finding
54	Provisioning	Percent Missed Installation Appointments	Switch Ports	N / A	Jan-00	Less than 10	Non-Dispatch	N / A	14%	21	0%	508,523	0.0001	Below Standard
55	Provisioning	Percent Missed Installation Appointments	2-W Analog Loop Non Design	N / A	Jan-00	Less than 10	Dispatch	N / A	32%	22	20%	50,298	0.1450	At Standard
56	Provisioning	Percent Missed Installation Appointments	Loop+Port Combination	N / A	Feb-00	Less than 10	Non-Dispatch	N / A	9%	32	0%	520,067	0.0003	Below Standard
57	Provisioning	Percent Missed Installation Appointments	Switch Ports	N / A	Feb-00	Less than 10	Non-Dispatch	N / A	8%	24	0%	520,067	0.0046	Below Standard
58	Provisioning	Percent Missed Installation Appointments	Loop+Port Combination	N / A	Dec-99	Less than 10	Dispatch	N / A	15%	208	24%	46,763	0.6000	At Standard
59	Provisioning	Percent Missed Installation Appointments	Loop+Port Combination	N / A	Dec-99	Less than 10	Non-Dispatch	N / A	3%	88	0%	431,637	0.0075	Below Standard
60	Provisioning	Percent Missed Installation Appointments	Switch Ports	N / A	Dec-99	Less than 10	Non-Dispatch	N / A	33%	27	0%	431,637	0.0000	Below Standard
61	Provisioning	Percent Missed Installation Appointments	2-W Analog Loop Design	N / A	Dec-99	Less than 10	Dispatch	N / A	17%	30	24%	46,753	0.8851	At Standard
62	Maintenance & Repair	Missed Repair Appointments	2-W Analog Loop Design	N / A	Dec-99	N / A	Dispatch	N / A	33%	21	22%	52,179	0.1711	At Standard
63	Maintenance & Repair	Missed Repair Appointments	Loop+Port Combination	N / A	Jan-00	N / A	Non-Dispatch	N / A	2%	521	8%	87,489	1.0000	At Standard
64	Maintenance & Repair	Missed Repair Appointments	Loop+Port Combination	N / A	Dec-99	N / A	Non-Dispatch	N / A	0%	700	8%	62,524	1.0000	At Standard
65	Maintenance & Repair	Maintenance Average Duration	2-W Analog Loop Design	N / A	Dec-99	N / A	Dispatch	N / A	20.91	21	36.95	51,994		At Standard

	Domain	SQM	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Bench mark	CLEC Outcome	CLEC Count	BLS Outcome	BLS Count	p-value	Finding
66	Maintenance & Repair	Maintenance Average Duration	Loop+Port Combination	N / A	Dec-99	N / A	Non-Dispatch	N / A	0.96	700	14.66	62,157		At Standard
67	Maintenance & Repair	Out of Service more than 24 hours	2-W Analog Loop Design	N / A	Dec-99	N / A	Dispatch	N / A	33%	21	45%	30,329	0.9098	At Standard
68	Billing[9]	Mean Time to Deliver Invoices CRIS	N / A	N / A	Dec-99	N / A	N / A	N / A	3.35	85	3.52	1		At Standard
69	Billing[8]	Mean Time to Deliver Invoices CRIS	N / A	N / A	Jan-00	N / A	N / A	N / A	3.90	80	3.78	1	0.1014	At Standard
70	Billing[8]	Mean Time to Deliver Invoices CRIS	N / A	N / A	Feb-00	N / A	N / A	N / A	3.12	85	3.31	1		At Standard

[9]Given the sample sizes, the test plans specify permutation tests in this domain. However, these tests require transaction level data for both the test CLEC and BLS, and only summary data was available for BLS. Therefore, to perform parity comparisons, KCI modified the interval tests for this SQM. As with any interval test, if the test CLEC sample mean is better than or equal to the BLS mean, no further test is necessary. If the CLEC mean is greater than the BLS mean, KCI conducted one sample t-tests for the null hypothesis that the test CLEC mean is less than or equal to the BLS mean.

Table VIII-6.6 below displays the detailed results of the statistical analysis for the "Other" levels of disaggregation (levels that were neither Resale nor UNE).

Table VIII-6.6: Detail Of Results (Other)

	Domain	SQM	Product Description	Mechanization	Month	Circuit Interval	Dispatch Identity	Benchmark	CLEC Outcome	CLEC Count	BLS Outcome	BLS Count	p-value	Finding
1	Billing	Usage Data Delivery Completeness	N / A	N / A	Jan-00	N / A	N / A	N / A	99%	1,110	100%	5,420	0.0000	Below Standard
2	Billing	Usage Data Delivery Completeness	N / A	N / A	Feb-00	N / A	N / A	N / A	99%	713	100%	3,505	0.0726	At Standard
3	Billing	Usage Data Delivery Completeness	N / A	N / A	Dec-99	N / A	N / A	N / A	96%	559	95%	5,060	0.9540	At Standard
4	Billing	Usage Data Delivery Timeliness	N / A	N / A	Jan-00	N / A	N / A	N / A	78%	1,110	98%	5,420	0.0000	Below Standard
5	Billing	Usage Data Delivery Timeliness	N / A	N / A	Feb-00	N / A	N / A	N / A	79%	713	98%	3,505	0.0000	Below Standard
6	Billing	Usage Data Delivery Timeliness	N / A	N / A	Dec-99	N / A	N / A	N / A	72%	559	90%	5,060	0.0000	Below Standard
7	Billing	Mean Time to Deliver Usage	N / A	N / A	Jan-00	N / A	N / A	N / A	4.01	1,110	2.15	5,420	0.0000	Below Standard
8	Billing	Mean Time to Deliver Usage	N / A	N / A	Feb-00	N / A	N / A	N / A	3.79	713	2.36	3,505	0.0000	Below Standard
9	Billing	Mean Time to Deliver Usage	N / A	N / A	Dec-99	N / A	N / A	N / A	4.77	559	4.52	5,060	0.1690	At Standard